



Flora, Vegetation & Fauna Report

RAAF Pearce, Muchea

Prepared for PCB Asbestos and Demolition

January 2023

Limitations

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Executive Summary

PBC Asbestos and Demolition (PCB) commissioned Western Ecological to undertake an Ecological Assessment at RAAF Pearce Muchea Firing Range, which is located approximately 45 km to the north of Perth, WA.

Western Ecological understands the client is proposing to undertake asbestos remediation control works in seven small areas and as such requires a flora and fauna assessment to be undertaken prior to clearing of any native vegetation. The seven areas total 0.8 ha and consist of degraded vegetation surrounding disused areas of infrastructure, with some areas displaying evidence of recent fire.

A reconnaissance flora and vegetation survey and basic terrestrial fauna survey was requested to provide supporting information for project planning and to inform environmental approvals.

It is important to note that the area surveyed for this report, extends beyond the intended area to be cleared. Potential clearing of vegetation required to undertake the asbestos remediation control works will be very limited (less than 0.4 ha), the majority of which shall be close to the Defence Infrastructure (buildings/structures/hardstand areas). The successful clean up and removal of asbestos from the site will require minor clearing of native vegetation, much of which is classed as Degraded. As such, potential disturbance to flora and particularly fauna, is likely to be minimal.

Flora Summary

The flora desktop assessment gathered contextual information on the survey area, which was verified during the field survey, this included:

- Nine Threatened Ecological Communities (TECs) and five Priority Ecological Communities (PECs) within 20 kms of the survey area. Four of the significant ecological communities were considered to have a high likelihood of occurrence within the survey area:
 - Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain – Endangered (Cwth and WA)
 - Banksia Woodlands of the Swan Coastal Plain ecological community – Endangered (Cwth), Priority 3 (WA)
 - SCP21c - Low lying Banksia attenuata woodlands or shrublands – Endangered (Cwth), Priority 3 (WA)
 - SCP23b - Swan Coastal Plain Banksia attenuata - Banksia menziesii woodlands – Endangered (Cwth), Priority 3 (WA).
- 46 conservation significant flora species occur within 20 km of the survey area. Four species were considered to have a high likelihood of occurrence within the survey area:
 - *Darwinia foetida* – Critically Endangered (Cwth), Endangered (WA)
 - *Leucopogon squarrosus* subsp. *trigynus* – Priority 2
 - *Platysace ramosissima* – Priority 3
 - *Verticordia serrata* var. *linearis* – Priority 3

The flora and vegetation spring survey was completed in spring during November 2022. A summary of the flora and vegetation values of the survey area include:

- Flora:
 - No Threatened or Priority flora were recorded
 - No Declared Pests or Weeds of National Significance were recorded
 - 46 conservation significant flora identified in the desktop assessment, four were considered to have a high likelihood of occurrence
 - A total of 60 flora species were recorded including 44 (73%) native species and 16 (27%) introduced
- Vegetation:
 - One TECs occurred within the survey area
 - Banksia WL SCP - Banksia Woodlands of the Swan Coastal Plain ecological community – Endangered (Cwth), Priority 3 (WA)



- Ten TECs and PECs within 20km of the survey area were identified in the desktop assessment, four TECs (three of which are PECs) were considered to have a high likelihood of occurrence
- One vegetation type occurred in the survey area: Banksia woodland
- Condition was mainly Degraded.

The survey area is highly degraded, however the one TEC - *Banksia Woodlands of the Swan Coastal Plain ecological community* (Endangered (Cwth), Priority 3 (WA)) occurs partly within the survey area. To reduce from the project the following flora recommendations are suggested:

- Avoid clearing the *Banksia Woodlands of the Swan Coastal Plain ecological community* TEC
- Undertake weed control along the survey boundary.

It is important to note, that although the survey area does contain the Banksia Woodland TEC, the vegetation is highly degraded, much of which surrounds the Defence Infrastructure (buildings/structures/hardstand areas etc). Therefore, the very limited clearing that is to take place for the remedial works, will likely have limited impact.

Fauna Summary

The fauna desktop assessment involved searches of the DBCA Threatened Fauna Database, NatureMap and the EPBC Protected Matters Search Tool (EPBC PMST) which were undertaken to identify fauna species of conservation significance potentially occurring in the survey area. These searches were centred on the mid-point of the survey area with a 20 km buffer applied to the DBCA Threatened Fauna Database and a 10 km buffer applied to NatureMap and the EPBC PMST:

Results of the databases searches identified the following:

- DBCA Threatened Fauna Database – 33 conservation significant vertebrate fauna species (three reptile species, 22 bird species and eight mammal species).
- NatureMap – 438 vertebrate fauna species (13 amphibian species, 46 reptile species, 108 bird species and 13 mammal species).
- EPBC PMST - 31 threatened species, eight migratory species and 12 listed marine species.

The basic field survey was undertaken on 14th November 2022 by one qualified Zoologist. The field survey consisted of habitat assessments and opportunistic fauna observations, in order to define the fauna values of the survey area. A total of 20 fauna species were recorded during the field survey. A single species of conservation significance was indirectly recorded during the field survey; the Southern Brown Bandicoot, which is listed as Priority 4 under the BC Act. All other fauna species recorded are considered relatively common and widespread. A total of eight habitat assessments were undertaken during the field survey and one fauna habitat type was recorded; Banksia Woodland.

During the field survey, three fauna species of conservation significance were given particular consideration. These were as follows:

- Carnaby's Black Cockatoo (*Zanda latirostris*) listed as Endangered under the EPBC Act and BC Act.
- Baudin's Black Cockatoo (*Zanda baudinii*) listed as Vulnerable under the EPBC Act and BC Act.
- The Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) (FRTBC) listed as Vulnerable under the EPBC Act and BC Act.

Suitable habitat for Black Cockatoo species was present in the survey area in the form of Banksia Woodland (0.4 ha). Although very limited in the survey area itself, foraging habitat in the way of *Banksia attenuata* and *Banksia menziesii* was recorded, however no potential breeding habitat (Eucalyptus trees with a Diameter at Breast Height [DBH] > 500mm) was present. During the field survey, no Black Cockatoos were observed, and no foraging evidence was recorded.

it is important to note, that although the survey area does provide potential habitat for a number of fauna species, (including a number of conservation significant species), the limited clearing that is to take place for the remedial works, will likely have limited to no impact on these fauna species.

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1 Introduction

1.1 Background

PBC Asbestos and Demolition (PCB) commissioned Western Ecological to undertake an Ecological Assessment at RAAF Pearce Muchea Firing Range, which is located approximately 45 km to the north of Perth, WA.

Western Ecological understands the client is proposing to undertake asbestos remediation control works in seven small areas and as part of the scope requires a flora and fauna assessment to be undertaken prior to clearing of any native vegetation.

The seven areas total 0.8 ha and consist of degraded vegetation surrounding disused areas of infrastructure, with some areas displaying evidence of recent fire. It is important to note that the area surveyed for this report, extends beyond the intended area to be cleared. Potential clearing of vegetation required to undertake the asbestos remediation control works will be very limited (less than 0.4 ha), the majority of which shall be close to the Defence Infrastructure (buildings/structures/hardstand areas). The successful clean up and removal of asbestos from the site will require minor clearing of native vegetation, much of which is classed as Degraded or Completely Degraded. As such, potential disturbance to flora and particularly fauna, is likely to be minimal.

1.2 Scope and Objective

The scope of work (SoW) to be undertaken is understood to be as follows:

- Detailed Flora and Vegetation Survey
- Basic Fauna Survey
- Black Cockatoo Assessment
- Document the above in a concise report.

The objectives of the survey were to define the flora, vegetation and fauna values in the survey area, to support future project planning and inform environmental approvals.

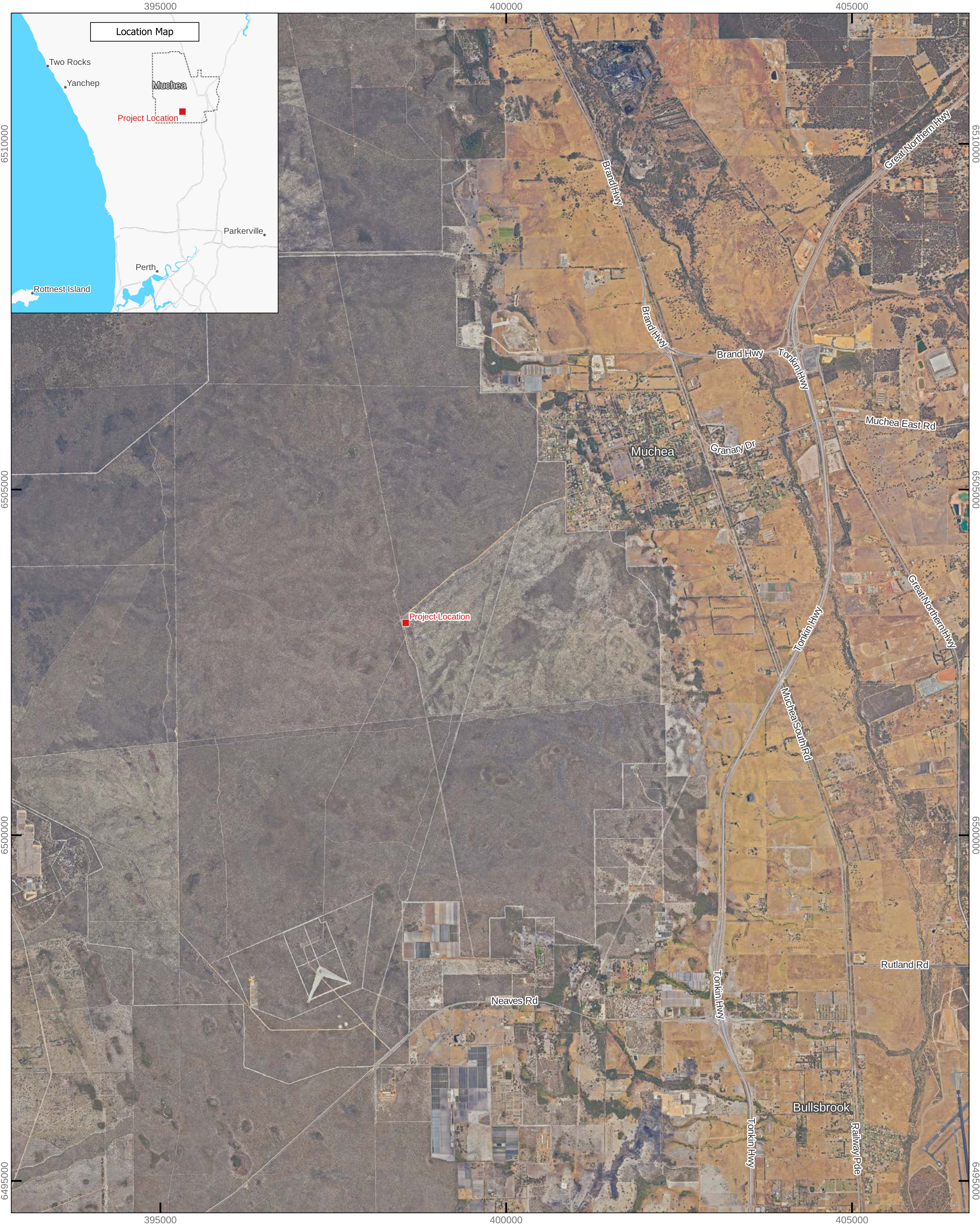


Figure 1: Survey Area Location



1.3 Legislative Context

Flora, fauna and ecological communities are protected formally and informally by various legislative and non-legislative measures, which are outlined below:

- Legislative Protection:
 - *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
 - *Western Australia (WA) Biodiversity Conservation Act (2016)* (BC Act)
 - *WA Environmental Protection Act 1986* (EP Act).
- Non-Legislative Protection:
 - WA Department of Biodiversity, Conservation and Attractions (DBCA) Priority lists.
 - Recognition of locally significant populations by DBCA.

A short description of each is given below. Other definitions, including species conservation categories, are provided in Appendix 1.

EPBC Act

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) aims to protect matters of national environmental significance, which are detailed in Appendix 1. Under the EPBC Act, the Commonwealth Department of Environment and Water (DEW) lists protected species and Threatened Ecological Communities (TECs) by criteria set out in the Act. Species are conservation significant if they are listed as Threatened (i.e., Critically Endangered, Endangered and Vulnerable) or Migratory.

Bird species protected as Migratory under the EPBC Act include those listed under international migratory bird agreements relating to the protection of birds, which migrate between Australia and other countries, for which Australia has agreed. This includes the Japan-Australia Migratory Bird Agreement (JAMBA), the China-Australia Migratory Bird Agreement (CAMBA), the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA) and the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention).

Some marine fauna or terrestrial fauna that use marine habitats are listed as Marine under the EPBC Act. These species are only considered conservation significant when a proposed development occurs in a Commonwealth marine area (i.e., any Commonwealth Waters or Commonwealth Marine Protected Area). Outside of such areas, the EPBC Act does not consider these species to be matters of national environmental significance, so are not protected under the Act.

BC Act

The *Biodiversity Conservation Act 2016* (BC Act) replaced both the *Wildlife Conservation Act 1950* and the *Sandalwood Act 1929* and came into effect on 1 January 2019. The aim of the new Act is to conserve and protect biodiversity and to promote the ecologically sustainable use of biodiversity components in the State, and will bring more activities within the scope of biodiversity laws.

Taxa listed as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1a, 1b, and 1c), or is a rediscovered species to be regarded as threatened species under section 26(2) of the BC Act. Other categories include extinct or extinct in the wild and they are listed under section 23 (1) of the BC Act (Appendix 1).

If species meet one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection, they are covered under section 13(1) of the BC Act and are called specially protected species. Species that are listed as threatened species (critically



endangered, endangered or vulnerable) or extinct species under the BC Act can't also be listed as Specially Protected species (see Appendix 1 for a more detailed description of each threat category).

Threatened Ecological Communities (TECs) are also covered under the BC Act and are placed into three categories of critically endangered, endangered or vulnerable under section 27(1a, 1b, and 1c) of the BC Act depending on their threat status.

DBCA Priority Species and Communities

DBCA lists species that are possibly threatened but that do not meet criteria for listing under the BC Act, or are otherwise data deficient, and adds them to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring. Consideration of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations (see Appendix 1 for more detail of the priority codes).

The DBCA also has a list of Priority Ecological Communities (PECs) that have scant information available to be considered a TEC, or which are rare but not currently threatened. Ecological communities that do not meet survey criteria or that are not sufficiently defined are added to the PEC list under priorities 1, 2 and 3. These three categories are ranked in order of priority for survey and/or definition of the community, and evaluation of conservation status, so that consideration can be given to their declaration as a TEC. Ecological communities that are adequately known, and are rare but not threatened or meet criteria for near threatened, or that have been recently removed from the threatened list, are placed in priority 4. These ecological communities require regular monitoring. Conservation dependent ecological communities are placed in priority 5.

Informal Recognition of Threatened Flora and Fauna

Certain populations or communities of flora and fauna may be of local significance or interest because of their patterns of distribution and abundance. For example, fauna may be locally significant because they are range extensions to the previously known distribution or are newly discovered species (and have the potential to be of conservation significance). In addition, many species are in decline as a result of threatening processes (land clearing, grazing, and changed fire regimes) and relict populations of such species assume local importance for DBCA. It is not uncommon for DBCA to make comment on these species of interest.

2 Methods

2.1 Requirements for Flora, Vegetation and Fauna Surveys

The flora, vegetation and fauna surveys were completed in accordance with the following Environmental Protection Authority (EPA) and DCCEE requirements for the environmental surveying and reporting of fauna surveys in WA, where relevant and practical, and as documented in:

- EPA Statement of Environmental Principles, Factors and Objectives (EPA 2018).
- EPA Technical Guidance: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016).
- EPA Technical Guidance: Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA 2020).
- Survey Guidelines for Australia's Threatened Birds. EPBC Act survey guidelines 6.2 (2010) (DSEWPaC).
- Survey Guidelines for Australia's Threatened Mammals. EPBC Act survey guidelines 6.5 (2011) (DSEWPaC).
- Survey Guidelines for Australia's Threatened Reptiles. EPBC Act survey guidelines 6.6 (2011) (DSEWPaC).
- DAWE 2022, Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black Cockatoo (DAWE 2022).
- EPBC Act referral guidelines for three threatened black cockatoo species (Department of Sustainability, Environment, Water, Population and Communities, 2012).
- Revised draft referral guideline for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black Cockatoo. Commonwealth of Australia, 2017.

2.2 Flora and Vegetation Desktop Assessment

A desktop assessment of available databases and spatial data was undertaken to identify potential conservation significant flora species, Threatened Ecological Communities (TECs) and Priority Ecological Communities (PECs) within 20 km of the survey area.

The relevant sources of data reviewed during the desktop assessment are listed in Table .

Table 1: Information reviewed during the desktop assessment.

Source	Databases and reports
Department of Biodiversity Conservation and Attractions (DBCA)	<ul style="list-style-type: none"> • Threatened and Priority Flora Database and Flora List (DBCA 2022a) • Western Australian Herbarium Specimen Database (DBCA 2022b) • Threatened and Priority Ecological Communities Database (DBCA 2022c)
Department of the Environment and Energy (DotEE)	<ul style="list-style-type: none"> • EPBC Act Protected Matters Search Tool (DotEE 2022a)

For the TECs, PECs, and conservation significant flora identified during the desktop assessment, their likelihood of occurrence within the survey area was determined based on the criteria outlined in Table 2. **Error! Reference source not found..**

Table 2: Criteria for likelihood of occurrence of conservation significant flora and ecological communities.

Likelihood of occurrence	Conservation significant flora	Threatened or Priority Ecological Communities
High likelihood to be present	Known populations occur within or adjacent ^a to the survey area	TEC/PEC occurs within or adjacent ^a to the survey area

Medium likelihood to be present	Known populations occur within the vicinity ^{^^} of the survey area and suitable habitat is likely to be present to support the species	TEC/PEC occurs within the vicinity ^{^^} of the survey area and similar vegetation may be present within or adjacent to the survey area
Low likelihood to be present	Known populations do not occur in the vicinity ^{^^} of the survey area, or known populations occur within the vicinity ^{^^} of the survey area, however suitable habitat is unlikely to be present to support the species	TEC/PEC does not occur within the vicinity ^{^^} of the survey area and similar vegetation is not present within or adjacent [^] to the survey area

[^] Adjacent – population or TEC/PEC occurs within 1 km of the survey area

^{^^} Vicinity – population or TEC/PEC occurs within 5 kms of the survey area

2.3 Flora and Vegetation Field Survey

The flora and vegetation survey involved a single-phase spring survey 14 November 2022 by Senior Botanist Catherine Krens (Flora Collecting Licence FB62000188). The survey followed the methods described in the Environmental Protection Authority (EPA) Technical Guide – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016a) and Environmental Factor Guideline – Flora and Vegetation (EPA 2016b).

The objective of the survey was to verify the desktop assessment results, characterise the flora and delineate the vegetation present. The survey involved:

- Confirming the findings of the desktop assessment
- Mapping the vegetation types
- Mapping the vegetation condition
- Compiling an inventory of flora species including weed species.

Data was collected from seven non-permanent 10 m x 10 m quadrats, as well as mapping notes, opportunistic flora collections, and observations across the survey area. Quadrats were established within mature intact vegetation and away from disturbed areas where possible with a minimum of three quadrats established within each perceived vegetation type. For each quadrat, the following information was collected:

- Site number
- GPS coordinate from the north-west corner
- Photograph from the north-west corner
- Landform
- Soil description
- Fire history
- Vegetation condition and description of disturbances
- Vegetation structure
- Species present: estimated height and estimated foliage cover.

All recorded flora species were collected for verification and identification with the Western Australian Herbarium specimens. Department of Biodiversity Conservation and Attractions (DBCA) taxonomists were consulted for identification of conservation significant species.

The vegetation types were described using the National Vegetation Information System (NVIS) standard to sub-association level (Commonwealth of Australia 2003). Floristic composition vegetation classification, as recommended in the Environmental Protection Authority (EPA 2016a) guidelines for detailed surveys, was used to analyse species composition within each quadrat. Multivariate comparative (cluster) analysis was performed to measure the similarity between quadrats.

Vegetation condition was mapped across the survey area and the condition rating used was based on the Keighery (1994) scale which is suitable for the South-West and Interzone Botanical Province in which the survey area occurs. The vegetation condition ratings relate to vegetation structure, the level of disturbance at each structural layer and the ability of the vegetation unit to regenerate (EPA 2016a). The vegetation condition scale is provided in **Error! Reference source not found.**

Table 3: Vegetation Condition Ratings (Keighery 1994).

Vegetation condition	Erremaean and Northern Botanical Regions
Pristine	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.
Very good	Vegetation structure altered and 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.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
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.

2.4 Vegetation Mapping

The vegetation types were described using the National Vegetation Information System (NVIS) standard to level V (Commonwealth of Australia 2003), which describes the three traditional strata (upper, mid, and ground). Vegetation mapping was completed by using QGIS 3.8 software with aerial imagery and quadrat data used to define vegetation units. Floristic composition vegetation classification, as recommended in the EPA guidelines (2016a) for detailed surveys, was used to analyse species composition within each quadrat.

Statistical analysis of floristic data using statistical package PC-Ord v7.0 was undertaken. Bray-Curtis nearest neighbour hierarchical cluster analysis was run for each quadrat against the comprehensive Keighery (2012) dataset.

To determine the presence of TECs and PECs the Bray-Curtis dissimilarity index was used to identify the most similar Keighery quadrats, and their associated Floristic Community Type (FCT). The Bray-Curtis dissimilarity measure is bounded between **0 and 1**, where 0 means the two sites have the same composition (that is they share all the species), and 1 means the two sites do not share any species. The lower the dissimilarity index the more similar sites are. The inverse of the dissimilarity index was used to calculate the percentage similarity of each quadrat to the Keighery sites.

2.5 Fauna Desktop Assessment

Searches of the DBCA Threatened Fauna Database, NatureMap and the EPBC Protected Matters Search Tool (EPBC PMST) were undertaken to identify fauna species of conservation significance potentially occurring in the survey area (DBCA 2022d, DBCA 2022e, CCEEW 2022). These searches were centred on the following co-ordinates with a 20 km buffer applied to the DBCA Threatened Fauna Database and 10km buffer applied to NatureMap and the EPBC PMST:

- 31° 36' 15.9" S, 115° 55' 51" E.

2.6 Fauna Field Survey

A basic field survey was undertaken on 14th November 2022 by one qualified Zoologist (Laura Stevens). As per the scope and proposal, the field survey consisted of habitat assessments and opportunistic fauna observations, in order to define the fauna values of the survey area.

2.6.1 Habitat Assessment

Habitat assessments were undertaken throughout the survey area. The fauna habitats were assessed for their potential to support species of conservation significance and the quality of habitat they provide to a wider suite of fauna. Fauna habitat assessments were undertaken to define and delineate the main broad fauna habitat types present. The habitat assessments were documented systematically for each habitat type on standardised field sheets. The habitat assessments consisted of the following:

- location of the broad habitat type within the survey area (GPS co-ordinate) and its relative percentage
- habitat condition was assessed at each assessment site as 'completely degraded' through to 'pristine', based on the scale given in Keighery (1994)
- landscape position
- dominant vegetation and structure (e.g., number of vegetation strata)
- hollow-bearing trees and dead stags (e.g., average size and abundance of hollows)
- description of any rock and rocky outcrops
- logs (e.g., abundance and size)
- substrate (e.g., leaf litter)
- wetlands, creeks, rivers, dams and other water bodies
- description of any observed nests and roosts (if present)
- subterranean roosts (e.g., caves, disused mineshafts and/or adits)
- associated fauna species observed using the habitat
- disturbance (e.g., cattle grazing, fire)
- photo showing a typical example of the broad habitat type.

2.6.2 Opportunistic Searches

Fauna was recorded opportunistically during the survey. The survey included looking through leaf litter, overturning rocks, and looking under decorticated bark (where present). Other recordings included visual sightings of active fauna such as reptiles and birds, signs of species presence such as burrows and scats of mammals and reptiles, and aural observations of amphibian and bird species. Observation (visual or heard) of species considered of conservation significance were recorded by means of a hand-held GPS if present.

2.6.3 Black Cockatoo Habitat Assessment

The survey area is in the known distributional range of Carnaby's Black Cockatoo (*Zanda latirostris*) and the Forest Red-tailed Black Cockatoo (FRTBC - *Calyptorhynchus banksii naso*), and at the very northern extremity of Baudin's Black Cockatoo (*Zanda baudinii*) distribution. Black Cockatoo distribution maps (DAWE 2022).

The Black Cockatoo habitat assessment was undertaken in suitable habitat and the survey methods were undertaken with reference to the referral guidelines for Black Cockatoos (DSEWPac 2012, DAWE 2022).

Breeding Assessment

Black Cockatoos breed in large hollow-bearing trees, generally in woodlands or forests. The size of the tree can be a useful indication of the hollow-bearing potential of the tree. During the survey trees considered to be suitable for breeding based on the following criteria were examined (habitat assessment sites will be utilised):

- Native trees (e.g., Marri, Jarrah, Flooded Gum etc.)
- Diameter at breast height (DBH) > 500 mm (300 mm for Wandoo and Salmon Gum)
- GPS co-ordinates were recorded using a GPS
- Suitable Black Cockatoo breeding hollows were assessed (from the ground) if present and based on the following:

- 120 mm diameter at entrance
- location of hollow (i.e., situated on main trunk)
- direction of hollow
- height of hollow
- depth of hollow (where possible to assess from the ground)
- evidence of breeding activity.

Foraging Assessment

The Black Cockatoo habitat assessment involved assessing the habitat for tree and shrub species known to be important dietary items e.g., Marri, Jarrah Banksia spp. and other Proteaceous species and included looking for the following (if present):

- Native trees and shrubs (e.g., Eucalypts, Banksia spp. and other Proteaceous species etc.)
- Evidence of feeding (chewed cones, seed and nut material)
- Opportunistic observations of Black Cockatoos in the survey area.

Foraging habitat quality criteria (semi quantitative) based on preferred known food items has been developed, their extent in an area being assessed and the condition of the habitat. Please note that we have attempted to keep this criterion simple, practicable and repeatable across habitats and regions where so that assessments are consistent as is practicable (see Table 4 below).

Table 4: Foraging habitat quality and the criteria it is assessed against.

Please note that the primary and secondary food sources have been identified in the literature and these will be cited in the results section.

Foraging Habitat Quality	Criteria
High Quality	<ul style="list-style-type: none"> • Primary food sources present and dominant (high relative abundance) in an area greater than 1 ha • Secondary food sources also present in medium to high relative abundance in an area greater than 1 ha • No recent extensive fire (>1 year) and limited to no signs of disease such as <i>Phytophthora cinnamomi</i> and or Marri canker
Medium Quality	<ul style="list-style-type: none"> • Primary food sources present but not dominant (medium relative abundance) in an area greater than 1 ha, and or • Secondary food sources also present in medium to high relative abundance in an area greater than 1 ha • No recent extensive fire (>1 year) and limited signs of disease such as <i>Phytophthora cinnamomi</i> and or Marri canker
Low Quality	<ul style="list-style-type: none"> • Very limited to no primary food sources present in an area, and or • Secondary food sources also present in low to medium relative abundance • Recent fire (<1 year) and or signs of disease such as <i>Phytophthora cinnamomi</i> and or Marri canker
Nil	Self-explanatory.

2.6.4 Taxonomy

For species identified in the desktop assessment, where there is doubt to their true taxonomy (through subsequent name changes or taxonomic reviews), an effort was made to determine the current scientific name for each taxon. In some cases, old scientific names were presented where correct nomenclature could not be determined due to name changes. Some taxon names may be followed by 'sp.', meaning that the species name was not given in the data source or the identification is in doubt. Where there are previously recorded taxa such as this that have the potential to be a conservation significant species, they are discussed specifically in the results and discussion sections.

Taxonomy and nomenclature in this report follows the accepted listing of published terrestrial vertebrate species, primarily the West Australian (WA) Museum (2020). In addition, the following are also considered; the listing for amphibians and reptiles is

consistent with Chapple *et al.* (2019), Wilson & Swan (2017) and (to a lesser extent) Cogger (2014); bird listings are consistent with Christidis & Boles (2008) and mammal listings are consistent with Woinarski *et al.* (2014).

2.6.5 Survey Limitations

Survey constraints are often difficult to predict, as is the extent to which they influence survey effort. Survey limitations and constraints of the flora and fauna survey are outlined below in Table 5.

Table 5: Limitations and constraints associated with the survey.

Variable	Impact on Survey Outcome
Availability of contextual information at a local and regional scale.	All contextual information was available at the time of survey. Database search results and desktop assessment was completed prior to commencing the survey.
Access	The survey area was accessible and traversed by vehicle and foot.
Experience	<p>The personnel who undertook the survey were practitioners suitably qualified in their respective fields with relevant experience as specified by:</p> <ul style="list-style-type: none"> EPA Technical Guidance: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016). EPA Technical Guidance: Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA 2020). <p>The personnel were as follows:</p> <ul style="list-style-type: none"> Catherine Krens (Principal Botanist) Laura Stevens (Principal Zoologist).
Timing, weather, season	<p>Flora and Vegetation Survey The survey was undertaken within spring (14th November 2022). Which is the recommended survey timing for the Swan Coastal Plain bioregion.</p> <p>Fauna Survey The fauna survey was conducted as a basic survey and therefore primarily about defining and describing habitats present, therefore timing, weather and season are not deemed a prime consideration.</p> <p>The fauna survey was undertaken on 14th November 2022. There were therefore no limitations to the fauna survey due to timing, weather or season.</p>
Scope	<p>The SoW to be undertaken was as follows:</p> <ul style="list-style-type: none"> Reconnaissance Flora and Vegetation Survey Basic Fauna Survey Black Cockatoo Assessment
Proportion of flora recorded and/or collected; identification issues	A specimen of all flora species recorded was collected for confirmation at the Western Australian Herbarium. All species observed were recorded including opportunistic records outside quadrats.
Completeness	<p>Flora Survey:</p> <p>The survey area was traversed on foot and a targeted survey was undertaken across the survey area. All vegetation types were surveyed with a minimum of three quadrats established.</p>

	<p>Fauna Survey:</p> <p>A basic fauna survey was conducted over the survey area.</p> <ul style="list-style-type: none"> • 8 habitat assessment were undertaken. • Approximately 0.8 ha were assessed • 20 fauna species were recorded in the survey area • One conservation significant fauna species was recorded during the survey
Disturbance	Disturbance in the way of tracks and cleared areas for old shooting-range infrastructure was recorded throughout the survey area.

3 Existing Environment

3.1 Climate

The closest long-term Bureau of Meteorology (BOM) weather station with a complete dataset is Pearce RAAF Weather Station (Station 9053), located approximately 11 km south east of the survey area. The long-term mean maximum temperature ranges from 17.9°C (July) to 33.6°C (January) (1940 to 2022) (Figure 2) (Bureau of Meteorology 2022).

The Pearce RAAF Weather Station recorded rainfall in the 12 months prior to the survey (November 2021 to October 2022), which was 40.9 mm above the long-term average of 665.7 mm (Bureau of Meteorology 2022). In the three months prior to the survey (August to October 2022), 370.8 mm of rainfall was recorded, which is 159.3 mm above the long-term average of 211.5 mm for the same time period (1940 to 2022) (Bureau of Meteorology 2022).

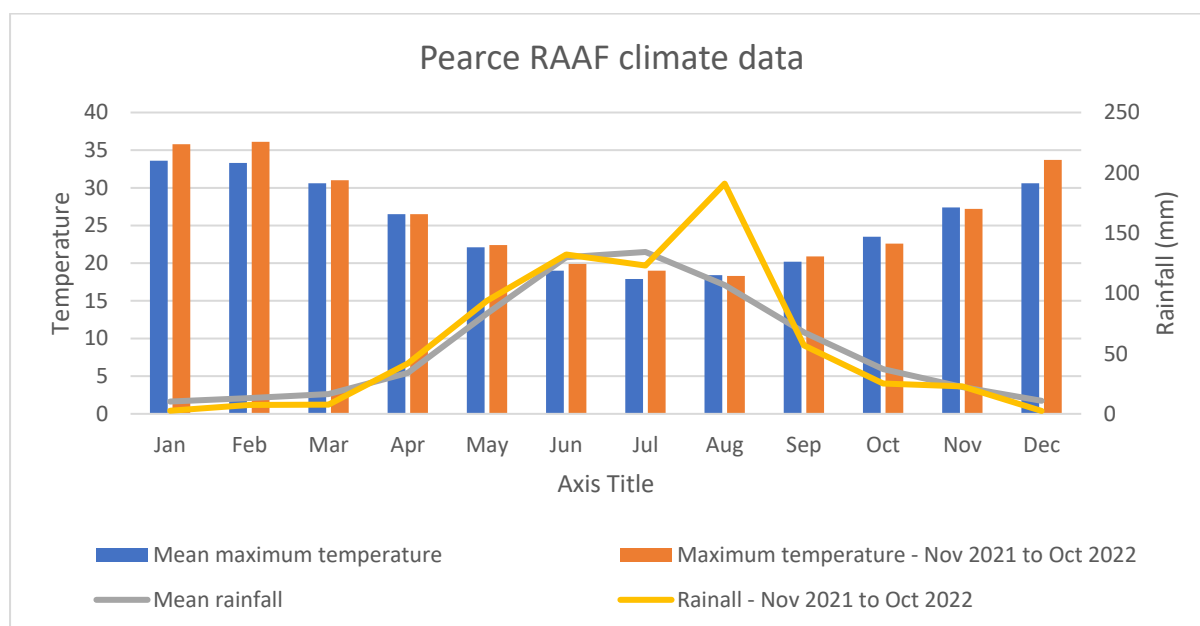


Figure 1: Climate data recorded at Albany City Weather Station (Rainfall and maximum temperature 12 months prior to survey and long-term average) (Bureau of Meteorology 2022).

3.2 IBRA Bioregion

The survey area occurs within the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) Bioregion and specifically the Perth Subregion (SWA01). The Perth subregion comprises colluvial and aeolian sands, alluvial river flats and coastal limestone. The vegetation consists of heath and/or Tuart woodlands on limestone, Banksia and Jarrah woodlands and Marri woodlands. The subregion also includes a complex series of seasonal wetlands (Mitchell *et al.* 2002).

3.3 Geology and Soils

The survey area occurs within two geological units as mapped by the 1:500,000 State interpreted bedrock geology (DPIRD 2018):

- Coolyena Group: Chalk, greensand, glauconitic sandstone, siltstone, marl; characteristically glauconitic
- Leederville Formation: Interbedded sandstone and siltstone; minor conglomerate; scattered thin coal seams.

Soil landscapes and land system mapping of Western Australia describes broad soil and landscape characteristics from regional to local scales. Two soil types are mapped across the survey area in Figure 3 (DPIRD 2017):

- Cps: Peaty Clay dark grey and black with variable sand content, of lacustrine origin
- S8: Sand - very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted, of eolian origin.

3.4 Vegetation

3.4.1 Pre-European Vegetation

Mapping of pre-European vegetation units within Western Australia is based on broad scale mapping by Beard (1976) at 1:3,000,000 which showed the distribution of 75 major categories of plants at the time of European settlement. Beard's mapping was re-assessed by Shepherd et al. (2002) with some larger vegetation units divided into smaller units. Together, this pre-European database contains a total of 819 vegetation types recognised within Western Australia.

Some vegetation types have been extensively cleared since European settlement and have been constrained by development. The EPA has an objective to seek to retain at least 30% of the pre-clearing extent of each ecological community and has a modified objective to seek to retain at least 10% of the pre-clearing extent of each ecological community for defined constrained areas (intensely developed) (DBCA 2019).

One broad vegetation type is mapped within the survey area. The vegetation type is described below and its representation at a local, regional, and state level is shown in Table 6. The broad vegetation type is well represented at the regional and local level with over 30% of the pre-European extent remaining across the state, Swan Coastal Plain Bioregion and Shire of Chittering.

- Bassendean 949: Low woodland or open low woodland of Acacia, Banksia, Eucalyptus and pine species.

Table 6: Broad vegetation types within the state, regional and local representation (DPIRD 2019b).

Vegetation type	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	Current extent managed in DBCA lands (%)
Representation across Western Australia				
Bassendean 949	115,119.14	69,992.31	60.8	31.94
Representation across the Swan Coastal Plain Bioregion				
Bassendean 949	115,119.14	69,992.31	60.8	31.94
Representation across the Shire of Chittering				
Bassendean 949	12,745.50	11,966.21	93.89	7.5

3.4.1 Pre-European Vegetation

The vegetation complexes of the south-west of Western Australia within the extent of the Darling System 6 region were mapped by Heddle et al. (1980) at a scale of 1:250,000 (DBCA 2018). The Heddle mapping shows the pre-1750 distribution of vegetation complexes characteristic of various landforms, soils, and rainfall across the Swan Coastal Plain.

One vegetation complex occurs within the survey area:

- Bassendean Complex-North Transition - low open forest and low woodland

The vegetation complexes are mapped in **Error! Reference source not found.**

3.5 Conservation Areas

Environmentally Sensitive Areas (ESAs) are declared to prevent degradation of important environmental values such as Threatened flora, TECs or significant wetlands. Exemptions contained in the Environmental Protection (Clearing of Native vegetation) Regulations 2004 for low impact land clearing do not apply in ESAs and a clearing permit is required.

Seven Conservation Category wetlands occur within 1 km of the survey area:

- UFI 8346 Dampland – within 500 m
- UFI 8347 Dampland – within 500 m
- UFI 8348 Dampland – within 500 m

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- UFI 8349 Dampland – within 1 km
- UFI 8350 Dampland – within 500 m
- UFI 8351 Dampland – within 1 km
- UFI 8580 Dampland – within 1 km.

4. Results

4.1 Flora Results

4.1.1 Flora Desktop Assessment

The desktop assessment identified 46 conservation significant flora species occurring within 20 km of the survey area. A break-down of the number of species within each conservation category is provided in Table 7.

Table 7: Number of species within each conservation category identified in the desktop assessment.

Conservation status	Commonwealth listed species	State listed species
Critically Endangered	2 [^]	6 ^{^^}
Endangered	14 [^]	7 ^{^^}
Vulnerable	5 [^]	7 ^{^^}
Priority 1		1
Priority 2		5
Priority 3		13
Priority 4		6

Note: [^]some species are also State listed
^{^^} some species are also Commonwealth listed

The potential occurrence of the conservation significant species within the survey area was determined as either 'High', 'Medium' or 'Low' likelihood to be present based on the criteria set out in Table 2. Seven species were considered to have a high likelihood of occurrence within the survey area:

- *Darwinia foetida* – Critically Endangered (Cwth), Endangered (WA)
- *Leucopogon squarrosus* subsp. *trigynus* – Priority 2
- *Platysace ramosissima* – Priority 3
- *Verticordia serrata* var. *linearis* – Priority 3

Ten species were considered to have a medium likelihood of occurrence within the survey area:

- *Grevillea althoferorum* subsp. *fragilis* – Endangered (Cwth), Critically Endangered (WA)
- *Macarthuria keigheryi* – Endangered (Cwth and WA)
- *Thelymitra stellata* – Endangered (Cwth and WA)
- *Calectasia elegans* – Priority 2
- *Stenanthemum sublineare* – Priority 2
- *Adenanthos cygnorum* subsp. *chamaephyton* – Priority 3
- *Guichenotia tuberculata* – Priority 3
- *Persoonia rudis* – Priority 3
- *Styphelia filifolia* – Priority 3
- *Schoenus griffinianus* – Priority 4

The remaining 32 conservation significant species were considered to have a 'Low' likelihood of occurrence in the survey area. The location of conservation significant species identified in the desktop assessment is mapped in Figure 5. A full description of all conservation significant species identified in the desktop assessment is provided in Appendix 2.

4.1.2 Flora Assessment

A total of 60 vascular flora species from 23 families were recorded within the survey area. This included 44 (73%) native species and 16 (27%) introduced or naturalised species. Species richness within each quadrat ranged from 17 to 27 species.

The families with the highest species representation were Myrtaceae (12 species), Poaceae (7 species), Proteaceae (6 species) and Fabaceae (5 species). The full list of vascular flora species recorded is presented in Appendix 3.

All 60 recorded species were collected for verification and identification at the Western Australian Herbarium. All species were able to be identified to species level.

All species recorded within the survey area occur within the Swan Coastal Plain bioregion and no species occurred outside of their population range.

4.1.3 Threatened and Priority Flora

No species listed as Declared Rare Flora or Threatened (T or X) under the WC Act or as Threatened under the EPBC Act were recorded within the survey area. No Priority flora species were recorded within the survey area.

A targeted survey was undertaken for the 46 species identified in the desktop assessment and species considered to have a 'High' and 'Medium' likelihood of occurrence within the survey area were the focus of the targeted survey.

One potential conservation significant species was initially thought to have been recorded; *Jacksonia sericea* (Priority 4), however, the specimen was confirmed at the Western Australian Herbarium to be the more common species *Jacksonia sternbergiana*.

None of the species recorded within the survey area were of conservation significance.

4.1.4 Weeds

A total of 16 introduced (weed) species were recorded within the survey area. None of the weeds are listed as a Declared Pest under the Biosecurity and Agricultural Management Act 2007 (BAM Act) or Weed of National Significance (WONS).

Of the 16 introduced species Poaceae (grasses) were best represented with six species recorded throughout the survey area. A summary of weed species is provided in Table 8. Weed cover was highest within the disturbed areas and adjacent to the track.

Table 8: Weed species recorded in the survey area.

Family	Species	Common name	Status
Asteraceae	<i>Hypochaeris glabra</i>	Smooth Cats-ear	Permitted [^]
Asteraceae	<i>Ursinia anthemoides</i>	Ursinia	Permitted [^]
Campanulaceae	<i>Wahlenbergia capensis</i>	Cape Bluebell	Permitted [^]
Geraniaceae	<i>Erodium botrys</i>	Long Storksbill	Permitted [^]
Geraniaceae	<i>Pelargonium × domesticum</i>	Regal Geranium	Permitted [^]
Geraniaceae	<i>Pelargonium capitatum</i>	Rose Pelargonium	Permitted [^]
Iridaceae	<i>Freesia alba × leichtlinii</i>	Freesia	Permitted [^]
Iridaceae	<i>Gladiolus caryophyllaceus</i>	Wild Gladiolus	Permitted [^]
Myrtaceae	<i>Corymbia citriodora</i>	Lemon scented gum	Permitted [^]
Poaceae	<i>Aira cupaniana</i>	Silvery Hairgrass	Permitted [^]
Poaceae	<i>Briza maxima</i>	Blowfly Grass	Permitted [^]
Poaceae	<i>Bromus diandrus</i>	Great Brome	Permitted [^]

Family	Species	Common name	Status
Poaceae	<i>Ehrharta calycina</i>	Perennial Veldt Grass	Permitted [^]
Poaceae	<i>Ehrharta longiflora</i>	Annual Veldt Grass	Permitted [^]
Poaceae	<i>Pentameris airoides</i>	False Hairgrass	Permitted [^]
Solanaceae	<i>Solanum nigrum</i>	Black Berry Nightshade	Permitted [^]

[^] Permitted under the BAM Act.

4.2 Vegetation Results

4.2.1 Vegetation Desktop Assessment

The desktop assessment identified ten conservation significant ecological communities and associated buffers occurring within 20 km of the survey area. A break-down of the number of significant ecological communities within each conservation category is provided in Table 9 and mapped in Figure 6.

Table 9: Number of ecological communities within each conservation category identified in the desktop assessment.

Conservation status	Commonwealth	State
TEC – Critically Endangered	2 [^]	2 ^{^^}
TEC – Endangered	7 [^]	1 ^{^^}
TEC – Vulnerable	0	1 ^{^^}
PEC		5 ^{^^}

Note: [^]some ecological communities are also State listed

^{^^} some ecological communities are also Commonwealth listed

Four significant ecological communities were considered to have a high likelihood of occurrence within the survey area:

- Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain – Endangered (Cwth and WA)
- Banksia Woodlands of the Swan Coastal Plain ecological community – Endangered (Cwth), Priority 3 (WA)
- SCP21c - Low lying *Banksia attenuata* woodlands or shrublands – Endangered (Cwth), Priority 3 (WA)
- SCP23b - Swan Coastal Plain *Banksia attenuata* - *Banksia menziesii* woodlands – Endangered (Cwth), Priority 3 (WA).

The remaining six significant ecological communities were considered to have a medium or low likelihood of occurrence within the survey area. The location of significant ecological communities is mapped in Figure 6. A full description of all conservation significant ecological communities identified in the desktop assessment is provided in Appendix 2.

4.2.2 Vegetation Types

Multivariate analysis of the seven quadrats was undertaken using the Bray-Curtis distance measure. Sorensen (Bray-Curtis) distance measure is the preferred distance measure for ecological data and is applied to presence-absence data. It retains sensitivity in more heterogeneous data sets and gives less weight to outliers.

The hierarchical cluster analysis dendrograms for the Sorenson distance measure method resulted in similarities between quadrats with two clear groups emerging, these represented the vegetation types (Table 10). The species occurring within each vegetation type is displayed in Appendix 4. The hierarchical cluster dendrogram is provided in Appendix 5.

Table 1: Distance measures and similarity percentage between quadrats and determined vegetation types.

Quadrat	Closest sites	Distance measure	% Similarity	Determined vegetation type
M01	M02	0.3818	62	VT1 – BaBmKgLe
	M06	0.4286	57	
M02	M01	0.3818	62	VT1 – BaBmKgLe


Quadrat	Closest sites	Distance measure	% Similarity	Determined vegetation type
M03	M05	0.3913	61	VT1 – BaBmKgLe
	M06	0.4545	55	
	M05	0.4737	53	
M04	M06	0.3333	67	VT1 – BaBmKgLe
	M05	0.4286	57	
M05	M02	0.3913	61	VT1 – BaBmKgLe
	M06	0.4	60	
M06	M04	0.3333	67	VT1 – BaBmKgLe
	M05	0.4	60	
M07	M06	0.4167	58	VT1 – BaBmKgLe
	M05	0.4286	57	

One determined vegetation type occurs within the survey area:

- VT1 – BaBmKgLe

A full description of the vegetation types is provided in Table 11 and mapped in Figure 3. Quadrat data is provided in Appendix 6.

Table 11: Vegetation types (VT) recorded in the survey area.

Code	Description	Details	Image
BaBmKgLe	Low open woodland of <i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Nuytsia floribunda</i> over tall open shrubland of <i>Adenanthos cygnorum</i> , <i>Kunzea glabrescens</i> and <i>Kunzea micrantha</i> over low open shrubland of <i>Hibbertia subvaginata</i> , <i>Jacksonia floribunda</i> and <i>Leptospermum erubescens</i>	Vegetation type: VT1 Species richness: 17 - 27 Quadrats: M01, M02, M03, M04, M05, M06, M07 Area: 0.395 ha	

4.2.3 Threatened and Priority Ecological Communities

One Threatened Ecological Community (TEC) and Priority Ecological Community (PEC) occurred within the survey area:

- *Banksia WL SCP - Banksia Woodlands of the Swan Coastal Plain ecological community* – Endangered (Cwth), Priority 3 (WA) (0.395 ha).

An assessment of the TECs and PECs determined to have a high likelihood of occurrence within the survey area was undertaken based on location and floristic composition and is provided in Table 12.

Table 12: Vegetation types (VT) recorded in the survey area.

Ecological Community	Conservation Status	Location	Vegetation	Alignment with Vegetation Type
<i>Banksia WL SCP - Banksia Woodlands of the Swan Coastal Plain ecological community</i>	TEC – Endangered (Cwth) PEC - Priority 3	Within the survey area	<i>Banksia attenuata</i> and <i>Banksia menziesii</i> woodland	Yes
<i>Muchea Limestone - Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain</i>	TEC – Endangered (Cwth and WA)	2.4 km east of the survey area	Shrublands and woodlands on black clay soils on limestone	No
<i>SCP21c - Low lying Banksia attenuata woodlands or shrublands</i>	TEC – Endangered (Cwth) PEC – Priority 3	3.5 km south-west of the survey area	<i>Banksia attenuata</i> woodlands	No
<i>SCP23b - Swan Coastal Plain Banksia attenuata - Banksia menziesii woodlands</i>	TEC – Endangered (Cwth) PEC – Priority 3	3.4 km south of the survey area	<i>Banksia attenuata</i> and <i>Banksia menziesii</i> woodlands	No

4.2.4 Vegetation Condition

The vegetation condition of the survey area ranged from Completely Degraded to Good. A high level of disturbance was present within the survey area including weeds, vegetation clearing, Defence Infrastructure (buildings/structures/hardstand areas etc) and tracks. Vegetation condition is mapped in Figure 8.

It is important to note therefore, the very limited clearing that is to take place for the remedial works, will likely have limited impact on the vegetation present within the survey area.

4.3 Fauna Results

4.3.1 Fauna Database results

Results of the databases searches can be seen in Appendix 7 and identified the following:

- DBCA – 33 conservation significant vertebrate fauna species (three reptile species, 22 bird species and eight mammal species).
- NatureMap – 438 vertebrate fauna species (13 amphibian species, 46 reptile species, 108 bird species and 13 mammal species).
- EPBC PMST - 31 threatened species, eight migratory species and 12 listed marine species.

The DBCA Threatened Fauna Database returned a total of 1098 conservation significant fauna records from within a 20 km buffer of the survey area. The closest conservation significant species record is the Black-striped Snake, approximately 3.5 km from the survey area. The most recent record is Carnaby's Back Cockatoo from 2020. The results of this database search can be seen in Figure 9.

Shorebirds, Migratory Marine birds and Waterbirds

A total of 17 conservation significant waterbird species were returned in the databases. These were a combination of waders/shorebirds, migratory marine birds, ocean birds and waterbirds. These wetland avifauna such as wading birds, including Plovers and Sandpipers inhabit estuaries, mudflats, saltmarshes, sandflats and beaches, with shallow water edges, where they feed on invertebrates such as worms, molluscs, insects and crustaceans (Garnett *et al.* 2011). Migratory marine birds such as Terns frequent freshwater waterways (Slater *et al.* 2009). Waterbirds such as various Duck species feed on the surface of the water, taking mainly seeds and insects as well as floating vegetation from on or just below the surface of the water (Slater *et al.* 2009). Or marine birds such as Shearwaters, which spend most of their time far out to sea and are often mis-identified.

Many of these DBCA records are from Jandabup Lake Nature Reserve, which is 20 km to the south-west of the survey area. Jandabup Lake Nature Reserve provides suitable habitat in the way of wetland/ water for various waterbird species, however this habitat is absent from the survey area itself. Therefore, these species have been omitted from any further discussion.

Now regionally extinct

A small number of species in the database searches were also known to be historical records of extinct and locally extinct species. For example, the Woylie (*Bettongia penicillata ogilbyi*), Burrowing Bettong (*Bettongia lesueur grail*) and Bilby (*Macrotis lagotis*). These species have therefore been omitted from any further discussion. In addition, those species with few records and very old/historical records in the DBCA database have also been omitted from further discussion (with a few exceptions). Particularly if these results are classed as uncertain (with regard to identification of species), or are from named locations or provide habitat not present in the survey area, such as the records of the Western Swamp Tortoise (*Pseudemydura umbrina*) from Twin Swamps Nature Reserve for example, which is 16 km to the south-east of the survey area.

Database errors and anomalies

Occasionally there are errors and/or anomalies in the database searches that are sourced from the various government departments and it is important to note that the EPBC PMST is not entirely based on point records, but also on broader information, including bioclimatic distribution models, whereas the DBCA threatened fauna database and NatureMap are. Consequently, the results of the EPBC PMST are in some cases less accurate, particularly at a local scale (e.g., the Malleefowl [*Leipoa ocellata*] and Ghost Bat [*Macroderma gigas*]). As a result, the EPBC PMST can include species that do not occur in the survey area because, for example, there is no habitat available or they are now known to be locally extinct. These species have therefore been omitted from any further discussion.

In addition, fauna is not distributed evenly across the landscape, are more abundant in some places than others, and consequently more detectable (Currie 2007). Furthermore, some small, common ground-dwelling reptile and mammal species tend to be habitat specific, and many bird species can occur as regular migrants, occasional visitors or vagrants. Therefore, all these species have been excluded from any further discussion.

Conservation Significant Fauna

With the aforementioned shorebirds, migratory marine birds, waterbirds, locally/regionally extinct and database errors species removed, a total of eight conservation significant species retrieved from the database searches are considered as either Recorded, Likely, Possible or Unlikely to occur in the survey area. Of these eight conservation significant species, one species was recorded during the assessment, three species are considered Likely to occur, one species is considered Possible and three species are considered Unlikely to occur in the survey area (Table 13). Recorded, Likely and possible species will be briefly discussed in section 5.3 below.

The Likelihood of each species is based on the following criteria:

- Recorded: Recorded during the field survey or site reconnaissance
- Likely: Suitable habitat is present in the survey area and the survey area is in the species' known distribution
- Possible: Limited or no suitable habitat is present in survey area, but is nearby. The species has good dispersal abilities and is known from the general area
- Unlikely: No suitable habitat is present in survey area but is nearby, the species has poor dispersal abilities, but is known from the general area; or suitable habitat is present, however the survey area is outside of the species' known distribution.

Table 13: Conservation significant fauna potentially occurring in the survey area.

CR = Critically Endangered under the EBPC Act, EN = Listed as Endangered under the EBPC Act, VU = Listed as Vulnerable under the EBPC Act, MI = Listed as Migratory under the EBPC Act, CD = Conservation Dependent under the EBPC Act, OS = Other specially protected species under the EBPC Act, IA = Migratory birds protected under an International Agreement, IUCN Threat categories (BC Act). P = Listed as Priority by the DBCA.

Common name	Species name	Conservation Status (EPBC Act)	Conservation Status (WA BC Act)	Likelihood
Reptiles				
Black-striped snake	<i>Neelaps calonotos</i>		P3	Likely
Birds				
Baudin's Cockatoo	<i>Zanda baudinii</i>	EN	EN	Possible
Carnaby's Cockatoo	<i>Zanda latirostris</i>	EN	EN	Likely
Forest Red-tailed Black Cockatoo	<i>Calyptorhynchus banksii naso</i>	VU	VU	Likely
Peregrine falcon	<i>Falco peregrinus</i>	OS		Unlikely
Mammals				
Southern Brown Bandicoot	<i>Isodon fusciventer</i>		P4	Recorded
Western Brush Wallaby	<i>Notamacropus irma</i>		P4	Unlikely
Western Quoll	<i>Dasyurus geoffroii</i>	VU	VU	Unlikely

4.3.2 Fauna Field Assessment Results

A total of 20 fauna species were recorded in the survey area. The majority of the fauna species recorded are considered relatively common and widespread. Species recorded can be seen in Table 14.

Table 14: Fauna species recorded during the field survey.

Common Name	Species Name
Reptiles	
Buchanan's snake-eyed skink	<i>Cryptoblepharus buechananii</i>
Sand Goanna	<i>Varanus gouldii</i>
Shingleback	<i>Tiliqua rugosa</i>
Variegated Dтеля	<i>Gehyra Variegata</i>
Birds	
Australia Ringneck	<i>Barnardius zonarius</i>
Australian Magpie	<i>Cracticus tibicen</i>
Brown Falcon	<i>Falco brigora</i>
Brown Honeyeater	<i>Lichmera indistincta</i>
Common Bronzewing	<i>Phaps chalcoptera</i>
Crested Bellbird	<i>Oreoica gutturalis</i>
New Holland Honeyeater	<i>Phylidonyris novaehollandiae</i>
Rufous Whistler	<i>Pachycephala rufiventris</i>
Singing Honeyeater	<i>Lichenostomus virescens</i>
Variegated Fairy-wren	<i>Malurus lamberti</i>
Weebill	<i>Smicromis brevisrostris</i>
White-cheeked Honeyeater	<i>Phylidonyris niger</i>
Willie-wagtail	<i>Rhipidura leucophrys</i>
Mammals	
European Rabbit	<i>Oryctolagus cuniculus</i>
Southern Brown Bandicoot	<i>Isodon obesulus</i>
Western Grey Kangaroo	<i>Macropus fuliginosus</i>

4.3.2.1 Fauna Assemblage

Amphibians

No wetland habitat was present in the survey area, no water was present during the survey and no amphibian species were recorded.

Reptiles

During the field survey, four reptile species were recorded, Buchanan's snake-eyed skink (*Cryptoblepharus buchanani*), Sand Goanna (*Varanus gouldii*), Shingleback (*Tiliqua rugosa*) and Variegated Dterra (*Gehyra Variegata*).

Birds

During the field survey, 13 bird species were recorded. All bird species recorded are considered relatively common and widespread.

Mammals

During the field survey three mammal species were recorded, a number of Western Grey Kangaroos (*Macropus fuliginosus*) were recorded throughout the survey area. The (Priority 4 listed) Southern Brown Bandicoot (*Isodon obesulus*) was recorded by diggings throughout the survey area and the European Rabbit (*Oryctolagus cuniculus*) was recorded through scats.

4.3.4 Fauna Habitat

A total of eight habitat assessments were undertaken during the field survey, the details of which can be seen in Table 15, and Figure 10, with an example provided in Appendix 8.

Table 15: Habitat Assessment Locations.

Habitat Assessment	Fauna Habitat Type	Northing	Easting
1	Banksia Woodland	6502623	398613
2	Banksia Woodland	6502640	398633
3	Banksia Woodland	6502711	398607
4	Banksia Woodland	6502916	398569
5	Banksia Woodland	6503033	398589
6	Banksia Woodland	6503115	398450
7	Banksia Woodland	6503039	398387
8	Banksia Woodland	6503543	398408

A single fauna habitat type was recorded in the survey area, Banksia Woodland (Plate 1). It is important to again note, the eight small areas that make up the survey area consist of 0.4 ha of Banksia Woodland in total, much of which consists of degraded vegetation surrounding disused areas of infrastructure.



Plate 1: Banksia Woodland.

Banksia Woodland habitat consisted of an overstory of *Banksia attenuata* and *Banksia menziesii*, over a mid-story of *Kunzea glabrescens* and *Adenanthos sericeus* over a ground story of *Leptospermum erubescens* on sandy soils.

4.3.5 Black Cockatoo Habitat Assessment

The survey area is in the known distributional range of Carnaby's Black Cockatoo (*Zanda latirostris*) and the Forest Red-tailed Black Cockatoo (FRTBC - *Calyptorhynchus banksii naso*), and at the very northern extremity of Baudin's Black Cockatoo (*Zanda baudinii*) distribution (see [DAWE 2022] Black Cockatoo distribution maps (Appendix 9). During the field survey, no Black Cockatoos were recorded directly, or indirectly by the way of foraging evidence (chewed Banksia cones for example).

Potential Breeding Habitat

During the assessment, no Black Cockatoo breeding habitat was recorded. In order to be considered breeding habitat, Eucalyptus trees with a DBH (≥ 500 mm), are required. The survey area did not contain any Eucalyptus trees with a DBH (≥ 500 mm).

Foraging Habitat

The Banksia Woodland can be considered Black Cockatoo foraging habitat. There is a total of 0.4 ha of foraging habitat, which consists of *Banksia attenuata*, *Banksia menziesii* and *Xanthorrhoea preissii* which are known foraging items of Black Cockatoos.

The survey area contains Black Cockatoo foraging habitat species as outlined below in Table 17. The quality of the foraging habitat varies depending on which Black Cockatoo species is being considered and the extent of the habitat present. Foraging habitat that contains Banksia provides the highest quality foraging habitat to Carnaby's Black Cockatoo and medium quality foraging habitat to Baudin's Black Cockatoo and FRTBC (an important dietary item to Baudin's Black Cockatoo and FRTBC but not its primary food source).

Foraging habitat that contains Marri and Jarrah (not recorded in the survey area) provides the highest quality foraging habitat to Baudin's Black Cockatoo and FRTBC (Marri is the primary food source for Baudin's Black Cockatoo and FRTBC) and medium quality foraging habitat to Carnaby's Black Cockatoo (an important dietary item to Carnaby's Black Cockatoo but not its primary food source). (DAWE 2022).

Again, it is important to note that the amount of clearing that is required, is minimal and so impact to any Black Cockatoo foraging habitat is considered to be very limited.

Table 17. Broad foraging habitat and quality for all three Black Cockatoo species in the survey area.

Foraging Habitat Quality				
Broad Foraging Habitat Type	BBC	CBC	FRTBC	References – some examples that identify food resources and their relative importance in the diet of BBC, CBC and FRTBC.
<i>Banksia attenuata</i> , <i>Banksia menziesii</i>	Med	High	Med	DAWE 2022, Cooper <i>et al.</i> 2002, DSEWPaC 2012, Groom 2011, Johnstone <i>et al.</i> 2011, Johnstone <i>et al.</i> 2013 (a&b), Saunders 1980, Shah 2006, Valentine & Stock 2008.
<i>Xanthorrhoea preissii</i>	Low	Low	Low	

5 Discussion

5.1 Flora

The detailed flora and vegetation survey was undertaken during spring in November 2022, which is at the end of the peak survey period for the Swan Coastal Plain bioregion. It would be expected that a late season survey would have a low presence of annuals and the majority of flora species would have finished flowering reducing the number of species able to be fully identified. However, all species were able to be identified to species level and annuals represented 26% (16 species) of the total species recorded. A higher-than-average rainfall leading up to the survey may have contributed to high annual representation and late flowering period.

One specimen collected was considered to potentially be *Jacksonia sericea* (Priority 4), as the plant had a similar low spreading form. It was confirmed at the Western Australian Herbarium to be a juvenile *Jacksonia furcellata*, which is a common Swan Coastal Plain species.

The survey area is located within former infrastructure areas which had been historically cleared and high weed cover was present throughout the survey area. The survey area is surrounded by very good condition Banksia woodland, the boundary of the survey area contains typical Swan Coastal Plain species, with some weeds spreading into the surrounding vegetation, which is expected to continue without weed control undertaken.

5.2 Vegetation

A single vegetation type; BaBmKgLe, was identified within the survey area representing a total of 0.395 ha. It mainly occurred on the survey boundary surrounding the disturbed infrastructure areas. Condition along the boundary was also slightly better and mainly in good condition.

BaBmKgLe is also Threatened Ecological Community - Banksia Woodlands of the Swan Coastal Plain ecological community (Endangered (Cwth), Priority 3 (WA)). The TEC has been mapped across the entire survey area by DBCA. The cleared disturbed areas do not represent the TEC (Figure 7). Therefore, clearing the asbestos and infrastructure areas will not disturb the TEC if clearing BaBmKgLe is avoided.

5.3 Fauna of Conservation Significance

A total of five conservation significant species (and relevant Listed species) retrieved from the database searches are considered as either Recorded, Likely or Possible to occur in the survey area. These species and their likelihood to occur in the survey area are discussed below.

5.3.1 Conservation Significant Fauna Recorded

A single conservation significant species was recorded in the survey area; the Southern Brown Bandicoot.

Southern Brown Bandicoot (Isoodon fusciventer)

The Southern Brown Bandicoot is listed as P4 under the DBCA Priority List. This species once occurred throughout south-west WA; it now occurs from Guilderton southwards on the Swan Coastal Plain, (including the Perth Metropolitan area), in Jarrah and Karri (*E. diversicolor*) forests and adjacent coastal vegetation complexes, east along the south coast to Cape arid National Park. The species inhabits scrubby, often swampy, vegetation with dense cover up to about 1 m high.

The Southern Brown Bandicoot is patchily distributed in suitable habitat, with populations inhabiting Jarrah and Wandoo forests usually associated with watercourses. The Southern Brown Bandicoot constructs nests under plants on the ground. They do not create burrows, but occasionally use the burrows of other species. It feeds in adjacent forest and woodland that is burnt on a regular basis and in areas of pasture and cropland lying close to dense cover. It is often associated with wetlands with dense vegetation where they feed on fruit, seeds and insects. They forage for food mainly by digging in the leaf-litter and soil to find insects, fungi, plant root nodules and bulbs (Woinarski *et al.* 2014).

Suitable habitat is present in the survey area in the way of scrubby vegetation in the Banksia Woodland habitat and Southern Brown Bandicoot diggings were recorded in a number of locations throughout the survey area. In addition, the DBCA threatened fauna database returned a total of 309 records of the Southern Brown Bandicoot in the vicinity of the survey area.

The closest record of the southern Brown Bandicoot is 5.3 km from the survey area and the most recent record is from 2020, approximately 11 km to the south-east of the survey area.

It is important to note that although the species was recorded during the field survey and survey area does provide habitat for the Southern Brown Bandicoot, the limited, clearing necessary for the required remedial works will have little impact on the species locally, but particularly at a regional level.

5.3.2 Conservation Significant Fauna Considered Likely to Occur

A total of three conservation significant species are considered as Likely to occur in the survey area.

Black-striped Snake (*Neelaps calonotos*)

The Black-striped Snake is listed as P3 under the DBCA priority list. This species is restricted to a 90 km sandy coastal strip near Perth from Mandurah to Lancelin. It occurs in dunes and sand-plains with heaths as well as eucalypt/banksia woodland (Cogger 2014). It is one of 71 reptile species occurring in the Perth region which make this area as diverse as any similar sized coastal region in Australia (How & Dell 1994). The Black-striped Snake is a burrowing species found in coastal heaths and low shrubland, where it feeds on lizards mostly of the burrowing skink genus *Lerista* (Cogger 2014), which were also returned in the desktop searches.

There were 25 records of the Black Striped Snake in the DBCA threatened fauna database in the vicinity of the survey area, all of which were from fauna surveys. The fauna surveys were generally from Ellenbrook, (approximately 20 km to the south of the survey area), or from Gngangara-Moore River State Forest. Gngangara-Moore River State Forest is approximately 16 to the north-west of the survey area, however, is it continuous bushland which provides connection to the survey area and a large area of suitable habitat for the species. The closest record of the Black-striped Snake is 3.5 km from the survey area and the most recent record is from 2017.

The Banksia Woodland habitat, which contains mixed banksia on deep sandy soils provide suitable habitat for the Black Striped Snake, the survey area is within the known distribution of the species and there are nearby records. As a result, the Black-striped Snake is considered as Likely to occur in the Survey Area.

Carnaby's Cockatoo (*Zanda latirostris*)

Carnaby's Cockatoo is listed as Endangered under the EPBC Act and the BC Act. is endemic to south-west WA, and is distributed from the Murchison River to Esperance and inland to Coorow, Kellerberrin and Lake Cronin (Cale 2003). The species was once common, but the population has declined significantly in the last half century, and is now locally extinct in some areas (Johnstone & Storr 1998; Shah 2006). In the last 45 years (prior to Cale 2003) the species has suffered a 50% reduction in its abundance (Cale 2003). More recent information suggests this decline has continued. This reduction is due to the clearing of core breeding habitat in the wheatbelt, the deterioration of nesting hollows, and clearing of food resources on the Swan Coastal Plain (SCP) (Cale 2003). The total population of Carnaby's Cockatoo was estimated to be 40,000 in 2008 (Johnstone & Kirkby 2008). Since then, trend analyses of the seven Great Cocky Counts 2010 – 2017 identified strong indications that the population of Carnaby's Black-Cockatoo inhabiting the Perth-Peel Coastal Plain continues to decline.

Carnaby's Cockatoos feed on seeds, nuts and flowers of a variety of native and exotic plants. Food plants include a variety of Eucalyptus species, such as Marri, Jarrah, Swan River Blackbutt (*Eucalyptus patens*), Coastal Blackbutt (*Eucalyptus tottiana*), Caesia (*Eucalyptus caesia*) and Salmon Gum, as well as Pine trees (*Pinus* sp.), Grevillea, Allocasuarina, and Hakea species (Shah 2006). Marri nuts that are damaged extensively, especially on the main body of the nut, are likely to have been chewed by Carnaby's Cockatoo. The 'levering' of Marri nuts by Carnaby's Cockatoos tends to leave different marks on the fruit casings, particularly in the location of indentations by the lower mandible and in the amount of damage caused to the rim of the fruit casing. Carnaby's Cockatoos also generally feed on green Marri nuts that are soft enough for their beaks to manipulate. The seeds from a variety of Banksia species and the cones of Pine trees provide the highest energetic yield (Cooper *et al.* 2002).

Breeding has been recorded from early July to mid-December, and primarily occurs in the wheatbelt in the semi-arid and subhumid interior (Johnstone & Storr 1998). However, this species is currently expanding its breeding range westward and south into the Jarrah-Marri forests of the Darling Scarp (e.g., Wungong Dam Catchment) and into the Tuart forests of the SCP including Yanchep, Baldavis, Lake Clifton and near Bunbury (Johnstone & Kirkby 2011).

Carnaby's Cockatoo display strong pair bonds and mate for life. They nest in hollows of smooth-barked eucalypts particularly Salmon Gum and Wandoo but nests have also been found in other Eucalypt species including York Gum (*Eucalyptus loxophleba*), Flooded Gum (*Eucalyptus rudis*), the rough-barked Marri and Tuart (Johnstone & Kirkby 2011). In most nests in Tuart, eggs are laid on a mat of wood chips at the bottom of a large hollow (mostly top entry hollows) ranging from a few cm's to five m deep (Johnstone & Kirkby 2011). Clutch size is 1–2 eggs, more typically two; only one young is reared (Saunders 1986). Incubation lasts for 29 days and only the female incubates and broods. The nestling is brooded by the female during which time both rely on food from the male. Once brooding is complete, the female then leaves the nest each day at dawn, sometimes returning mid-morning (with the male) to feed the chick (Johnstone & Kirkby 2011). After approximately three weeks she ceases to brood and the chick is fed by one or both parents in the morning and in the late evening (Johnstone & Kirkby 2011).

Approximately 87% (525,732 ha) of potential Carnaby's Cockatoo habitat (i.e., areas of vegetation that contain flora species and vegetation types that could support the species' breeding, feeding and night roosting activities) has been cleared in the wheatbelt since European settlement. The south-west region is now a severely fragmented landscape and the further loss of foraging habitat, the lack of suitable breeding sites, climate change, alterations in the landscape, changing forest structure with almost every part of the Jarrah-Marri forest logged in the past and with most trees too young to form hollows, and competition with exotic species, exacerbate the future conservation of Carnaby's Cockatoo (Johnstone & Kirkby 2011).

There were 571 records of Carnaby's Black Cockatoo records in the DBCA threatened fauna database in the vicinity of the survey area. The closest record of Carnaby's Black Cockatoo is 3.5 km from the survey area and the most recent record is from 2020. There were an additional 30 records of White-tailed Black Cockatoo, which could be Carnaby's or Baudin's as they look very similar and can be easily confused by those unfamiliar with the species, however, given the species known distributional range, these records are considered more likely to be Carnaby's Black Cockatoo.

The Banksia Woodland habitat, provides suitable foraging habitat for Carnaby's Black Cockatoo, the survey area is within the known distribution of the species and there are many nearby records. As a result, the Carnaby's Black Cockatoo is considered as Likely to occur in the Survey Area.

Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii*)

The FRTBC is listed as Vulnerable under the EPBC Act and the BC Act. It is distributed through the humid and subhumid south-west of WA from Gingin through the Darling Ranges to the south-west from Bunbury to Albany (primarily in the hilly interior) (Johnstone & Storr 1998, Johnstone *et al.* 2013a). In these areas, the FRTBC inhabits dense Jarrah, Karri, and Marri forests that receive more than 600 mm average annual rainfall (Johnstone & Storr 1998). However, in recent years the FRTBC has moved on to the SCP to forage in the Perth metropolitan area (Johnstone & Kirkby 2011). The FRTBC occurs in pairs or small flocks, or occasionally large flocks of up to 200 birds (Johnstone & Storr 1998).

The FRTBC feeds primarily on Marri and Jarrah fruit, but also Tuart and to a lesser extent on Blackbutt, Albany Blackbutt (*Eucalyptus staeri*), Karri, Sheoak (*Allocasuarina fraseriana*) and Snottygobble (*Persoonia longifolia*) (Johnstone *et al.* 2013b). The FRTBC can obtain energy faster when feeding on Marri and Jarrah than other food sources (Cooper *et al.* 2002), and these two-plant species make up most of their diet (Johnstone *et al.* 2013b).

FRTBC shear the base of Marri nuts at a 45° angle to remove seeds (the 'bottom slice' method), while Baudin's Cockatoos use their elongated upper mandible to pry seeds out, leaving the nut intact (the 'lever') (Johnstone & Kirkby 1999, Cooper *et al.* 2002). Carnaby's Cockatoos may use either technique to feed on Marri nuts, but generally with some modification, e.g., the 'slicing' of fruits may occur along the side of the fruit casing.

The FRTBC is monogamous and pairs nest in tree hollows from 6.5 – 33 m above ground and most nests are in large and old mature Marri, and these trees are the most important nesting tree throughout the FRTBC range (Johnstone *et al.* 2013a). Nest trees of the FRTBC have a mean circumference at breast height of 2.79 m, a mean estimated age of 222 years and a mean overall height of 20.24 m (Johnstone *et al.* 2013a).

Breeding has been recorded in all months, with peaks in April-June and August-October. Only one egg is laid, which the female incubates for 29 to 31 days, before a nestling hatches and weighs between 27 and 32 g. The female remains in the hollow during incubation and only leaves for a short period in the evening to be fed by the male, usually at dusk (Johnstone *et al.* 2013b). Brooding is for up to 10 days, after which the female leaves the nest between dawn and dusk. Pairs of birds appear to recognise each other by calls, not responding to calls by others in the area. Chicks only respond when the parent is heard and are fully feathered at 48 days (Johnstone *et al.* 2013b).

There were 26 records of the FRTBC in the DBCA threatened fauna database in the vicinity of the survey area. The closest record of the FRTBC is 4.5 km from the survey area and the most recent record is from 2018.

The Banksia Woodland habitat, provides suitable foraging habitat for the FRTBC (however Banksia is not this species primary food source), the survey area is within the known distribution of the species and there are nearby records. As a result, the FRTBC is considered as Likely to occur in the Survey Area.

5.3.3 Conservation Significant Fauna Considered Possibly Occurring

A single conservation significant species is considered as Possibly occurring in the survey area.

Baudin's Cockatoo (*Zanda baudinii*)

Baudin's Cockatoo is listed as Endangered under the EPBC Act and the BC Act. This species is distributed through the south-western humid and subhumid zones, from the northern Darling Range and adjacent far east of the SCP (south of the Swan River), south to Bunbury and across to Albany (Johnstone & Kirkby 2011). Baudin's Cockatoo rarely occurs near the coast north of Mandurah, and rarely occurs north of the Swan River (Johnstone & Kirkby 2008, Johnstone & Storr 1998). Baudin's Cockatoo usually occur in small flocks of up to 30, or occasionally up to 50 and rarely in aggregations of up to 1200 (Johnstone & Kirkby 2008). Baudin's Cockatoo is distinguished from Carnaby's Cockatoo by its longer bill and slightly different call.

This species forages primarily in Eucalypt forest, where it feeds on Marri seeds, flowers, nectar and buds. They also feed on a wide range of seeds of Eucalyptus, Banksia, Hakea and Pines (*Pinus* sp.) as well as fruiting apples and pears and beetle larvae from under the bark of trees (Johnstone & Kirkby 2008, Johnstone & Storr 1998). Baudin's Cockatoo forages at all levels of the forest, from the canopy to the ground, often feeding in the understorey on proteaceous trees and shrubs, especially Banksia, and in orchards both in trees and on dropped or fallen fruit on the ground.

The breeding biology of this species is poorly known. It has been recorded breeding in the deep south-west, north to the Whicher Range and Lowden and also isolated records at Wungong Catchment, Serpentine (hills area) and east to Kojonup and near Albany (Johnstone & Kirkby 2008). They nest in large, mostly vertical, hollows of Karri, Marri and Wandoo. Baudin's Cockatoos display strong pair bonds are monogamous and most likely mate for life (Johnstone & Kirkby 2008). The pair remains together all year round except when the female is incubating and brooding. Both adults play a part in selecting the nest hollow, but only the female is responsible for renovation and preparing the hollow for breeding. Preparation of the hollow consists of chewing around the entrance of the hollow and down one part of the interior wall. Pairs have also been recorded prospecting for hollows in most months and outside the breeding range (Johnstone & Kirkby 2008).

There was a single record of Baudin's Black Cockatoo in the DBCA threatened fauna database in the vicinity of the survey area. This record is from 2002 and is from Jandabup Lake, which is approximately 20 km to the south-west of the survey area.

The Banksia Woodland habitat, provides suitable foraging habitat for Baudin's Black Cockatoo (however Banksia is not this species primary food source). The species has good dispersal abilities, however, the survey area is at the very northern limit of the species known distribution. As a result, Baudin's Black Cockatoo is considered as Possibly occurring in the Survey Area.

5.4 Black Cockatoo Habitat Assessment

Potential Breeding Habitat

No eucalyptus trees were recorded in the survey area. As a result, no potential breeding habitat (trees with DBH > 500mm) is present in the survey area

Foraging Habitat

The Banksia Woodland can also be considered Black Cockatoo foraging habitat. There is a total of 0.4 ha of foraging habitat, which consists of *B. attenuata*, *B. menziesii* and *X. preissii* which are known forging items for Black Cockatoos (DAWE 2022)

It is important to note that although the survey area does provide some potential foraging habitat for Black Cockatoo species, the very limited clearing that is due to take place, will likely have little to near no impact on the species locally, but particularly at a regional level.

5.5 Fauna Habitat

During the fauna survey one broad fauna habitat type was identified in the survey area, with this based on vegetation structure (primarily the extent of vegetation cover in the various strata) and species composition (Figure 11).

Banksia Woodland

Banksia Woodland comprised 0.4 ha (50%) of the Survey Area and was considered to be Good to Degraded condition. The Banksia Woodland habitat consists of tall shrubs including *B. attenuata* and *B. menziesii*, over a mid-story of *X. preissii* *Kunzea glabrensis* and *Adenanthos sericeus*, over low mixed shrubs including *Leptospermum erubescens*, mixed herbs and grasses on sandy soils.

The Banksia provides foraging habitat for Black Cockatoo species and habitat for other larger bird species, including the Magpie and Australian Ringneck, as well as various Honeyeaters which were all recorded in this habitat. While the mid-stratum provides habitat for small bird species such as the Variegated Fairy-wren. The lower stratum, provides habitat for small reptile and bird species, and some mammal species such as the Southern Brown Bandicoot. Some areas contain leaf litter and woody debris, which provide microhabitat for some common reptile species (such as Buchanan's snake-eyed skink). The sandy soils provide habitat for burrowing species such as the Black- striped Snake discussed above.

Again, it is important to note, that although the survey area does provide potential habitat for a number of species, including a number of conservation significant species (section 5.3), the limited clearing that is to take place for the remedial works, will likely have limited to no impact on these fauna species.

6 Conclusion and Mitigation Measures

PBC is proposing to undertake asbestos remediation control works at RAAF Pearce Muchea Firing Range, in seven small areas. The seven areas total 0.8 ha and consist of degraded vegetation surrounding disused areas of Defence Infrastructure (buildings/structures/hardstand areas), with some areas displaying evidence of recent fire.

The area surveyed for this report, extends beyond the intended area to be cleared, with potential clearing of native vegetation expected to be very limited (less than 0.4 ha).

Although the survey area contains the Banksia Woodland TEC and provides habitat for a number of conservation significant fauna species, the limited clearing required for the project is likely to have minimal impact to both flora and fauna.

As stated, clearing will be limited, however, the following mitigation measures are to be implemented in order to limit impacts to native flora and fauna, as much as practically possible:

- Clearing of large Banksia will be avoided (where possible).
- Large Banksia can be demarcated prior to clearing (if required).
- Clearing of trees and large shrubs will be avoided (where possible).
- Manual clearing will be used where possible around mature trees.
- Workers will agitate the soil and bushes prior to clearing, working in a line and conduct clearing in one direction to allow dispersal of fauna.
- Any injuries or mortality to native fauna during site works will be recorded.
- No pets or firearms to be brought on to site by contractors.
- Ensure all vehicles and personnel remain within demarcated work areas or existing tracks/firebreaks.
- Comply with the requirements of the dieback management plan.



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FIGURES



Figure 3: Soil And Geology

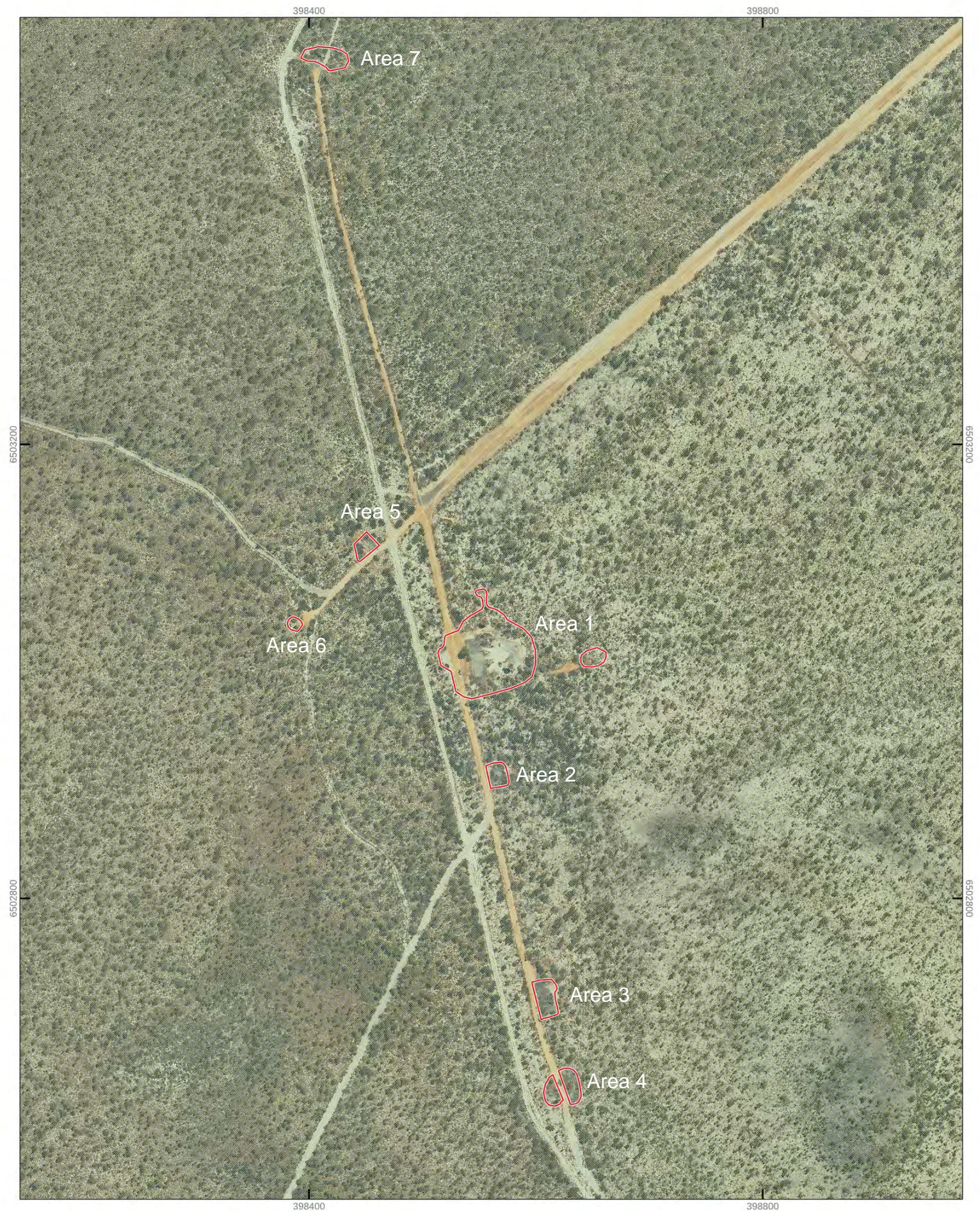
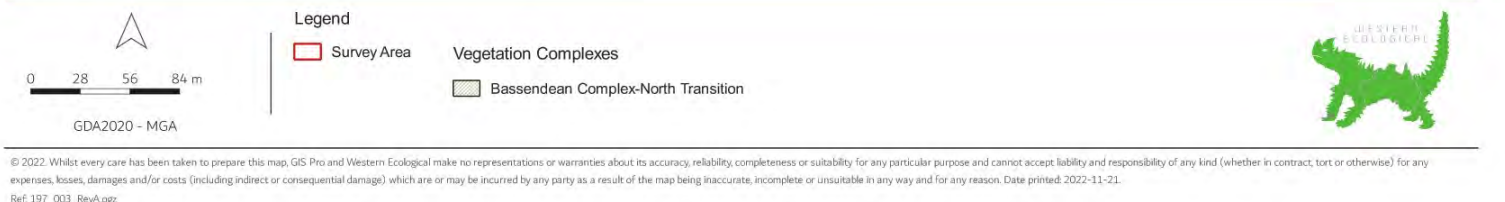


Figure 4: Vegetation complexes



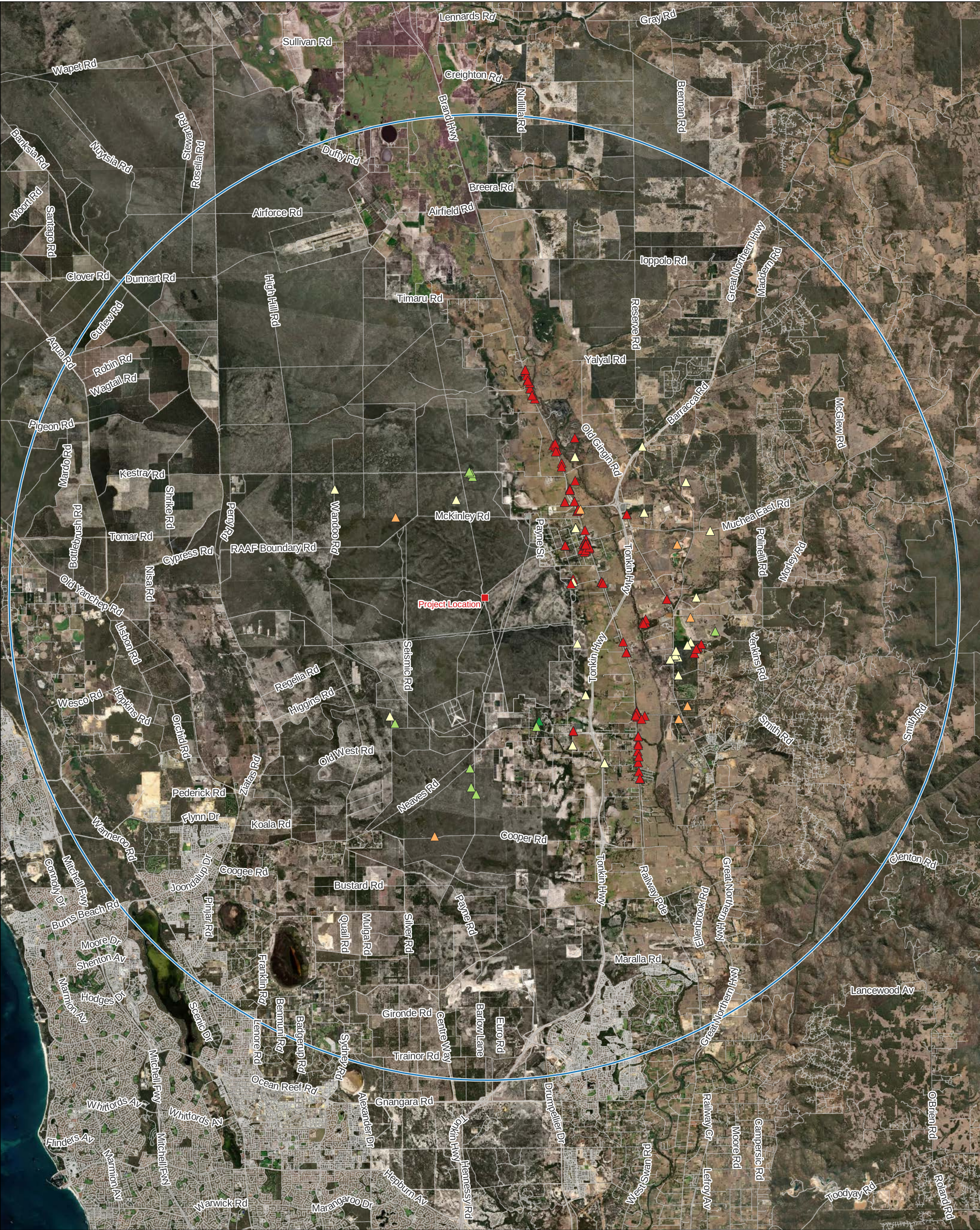


Figure 5: Desktop flora (DBCA Records)

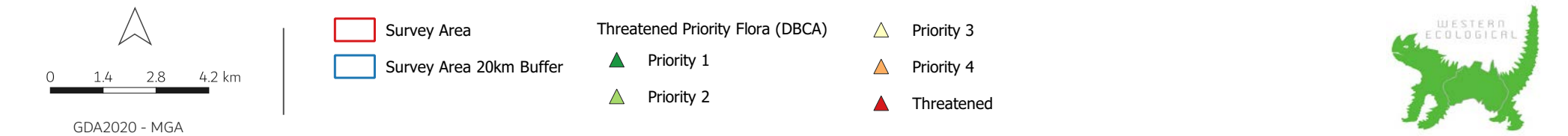
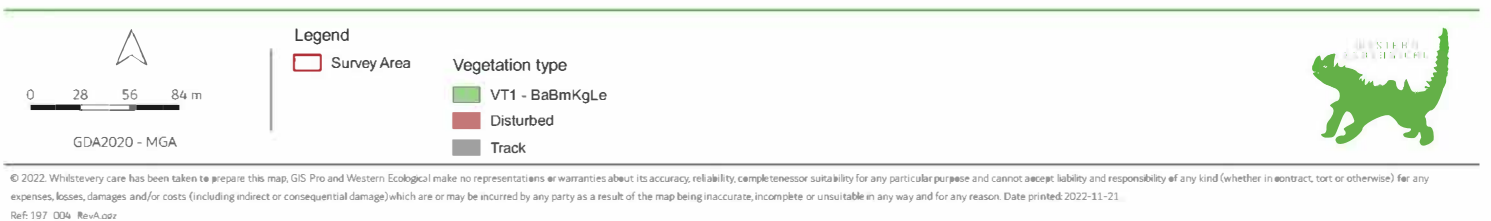




Figure 7: Vegetation types



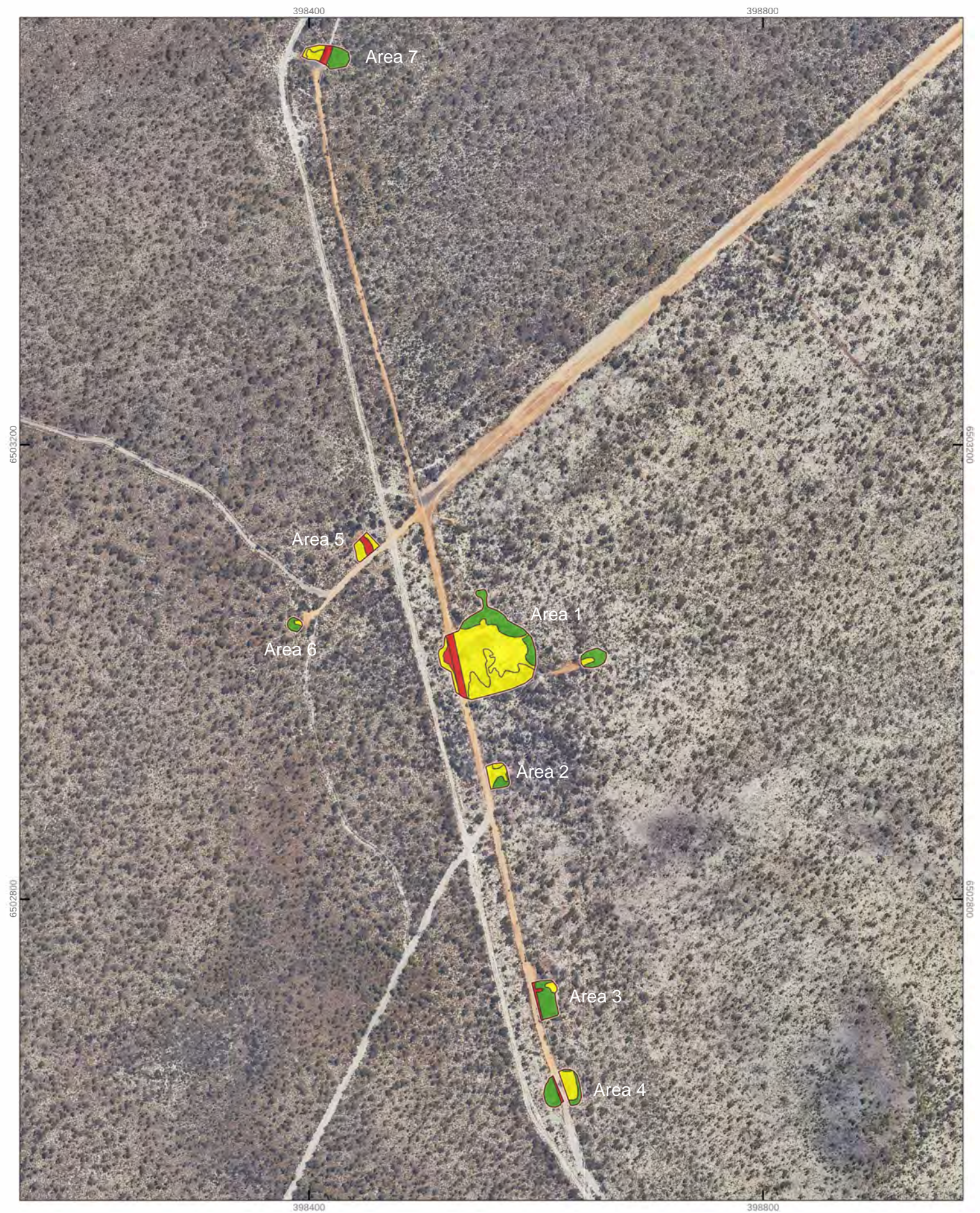
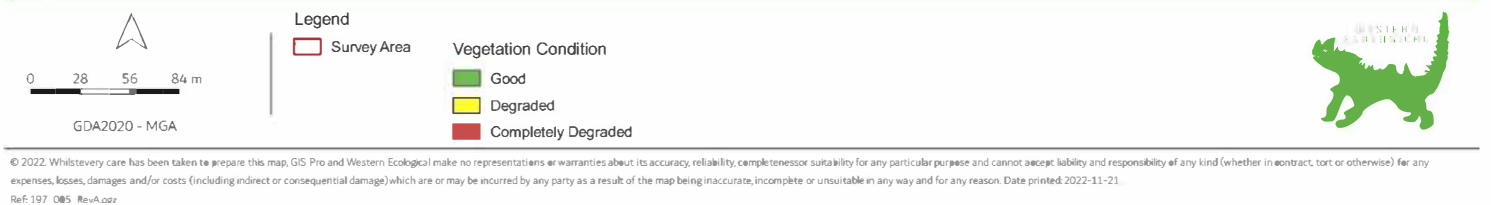


Figure 8: Vegetation Condition



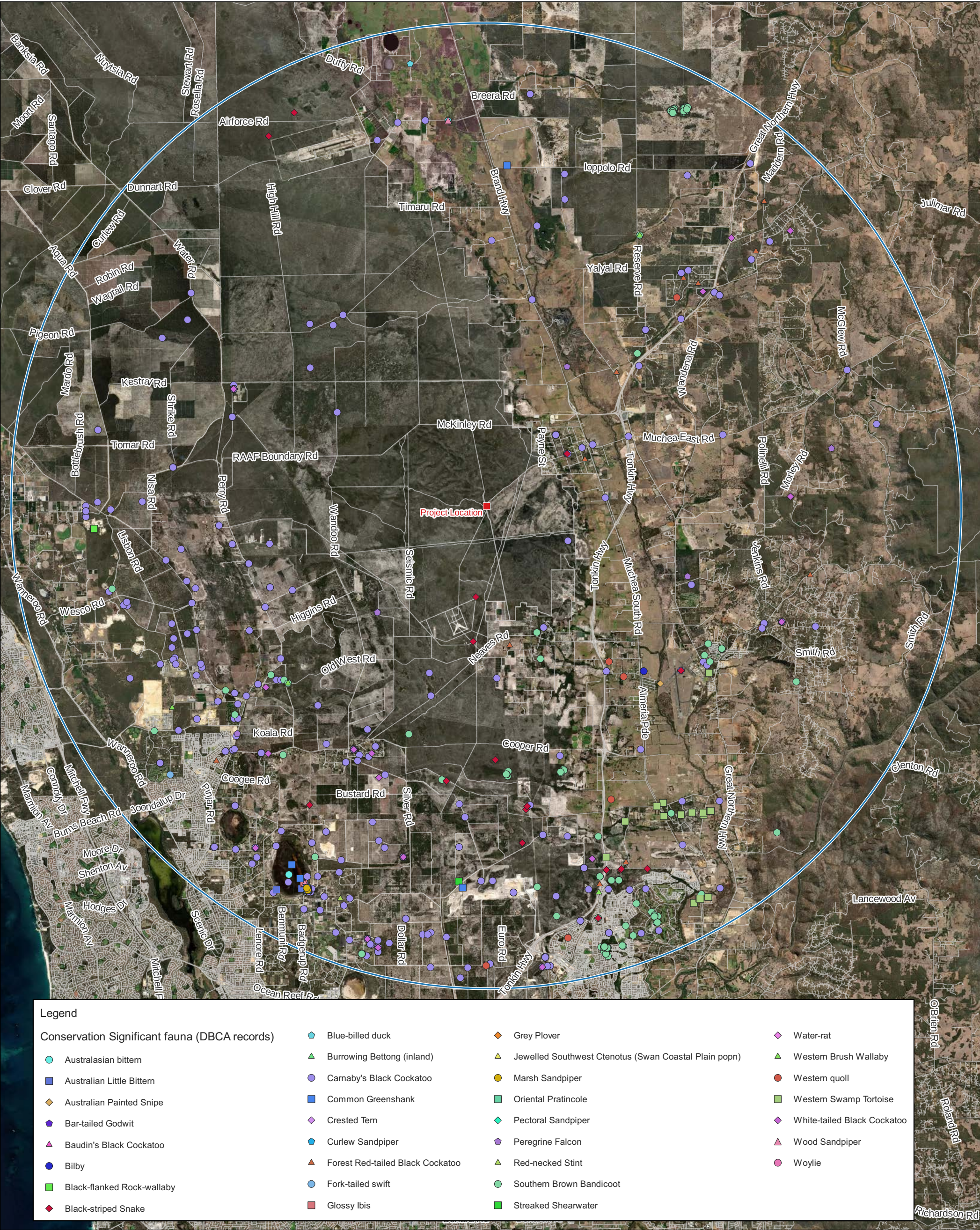


Figure 9: Conservation Significant Fauna Records (DBCA)



Figure 1\$: Fauna 5ggYgga Ybh@cVhcbg

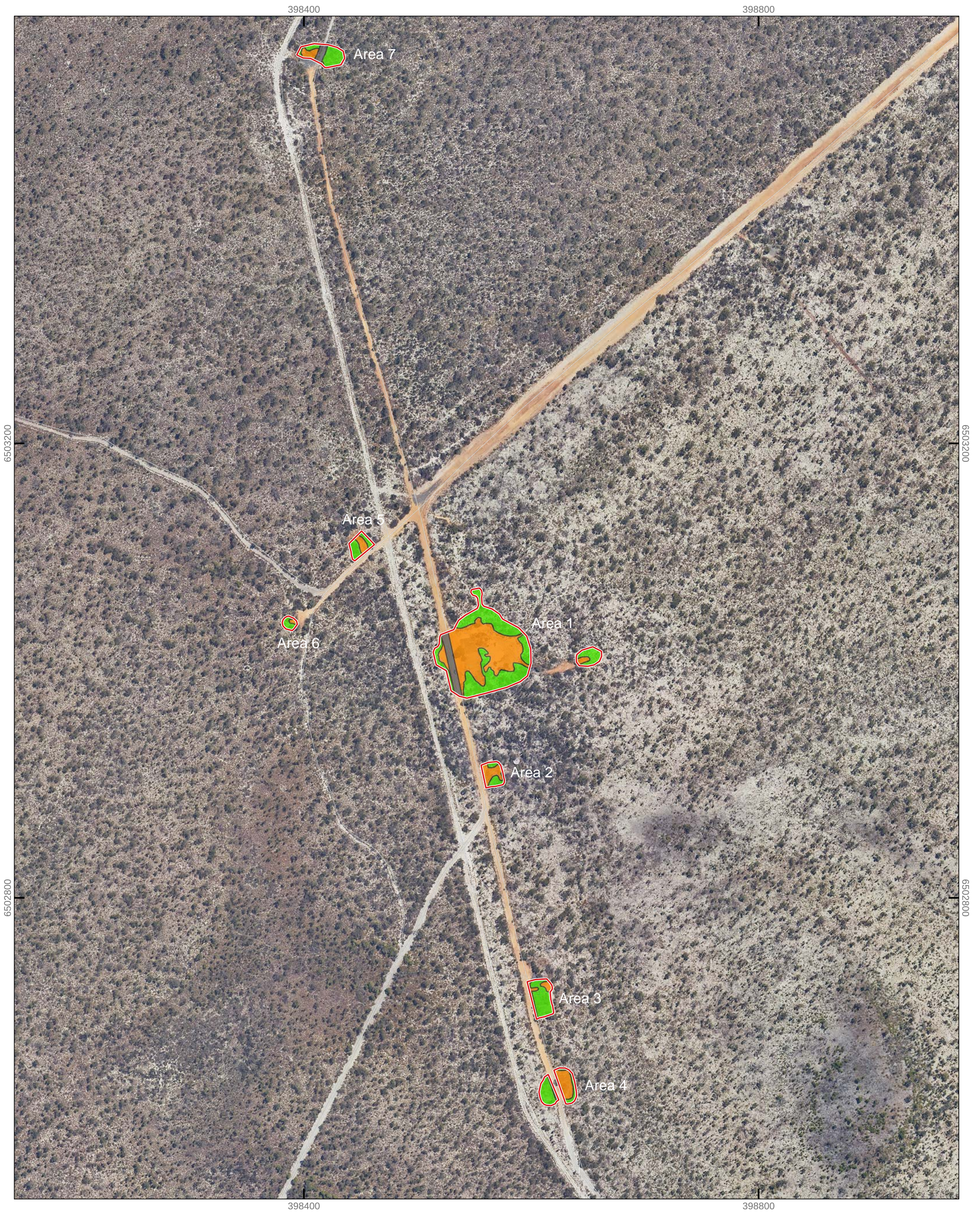


Figure 11: Fauna Habitat

APPENDICES

Appendix 1: Conservation Categories



Categories of Threatened Flora and Fauna Species under the EPBC Act

Conservation Code	Description
Ex	Extinct Taxa which at a particular time if, at the time, there is no reasonable doubt that the last member of the species has died.
ExW	Extinct in the Wild Taxa which is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
CE	Critically Endangered Taxa which at a particular time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
En	Endangered Taxa which is not critically endangered and it is facing a very high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
Vu	Vulnerable Taxa which is not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

Source: Environment Protection and Biodiversity Conservation Act 1999.

Categories of Threatened Flora and Fauna Species under the BC Act



Department of Biodiversity,
Conservation and Attractions

CONSERVATION CODES

For Western Australian Flora and Fauna

Threatened, Extinct and Specially Protected fauna or flora¹ are species² 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.

The *Wildlife Conservation (Specially Protected Fauna) Notice 2018* and the *Wildlife Conservation (Rare Flora) Notice 2018* have been transitioned under regulations 170, 171 and 172 of the *Biodiversity Conservation Regulations 2018* to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016*.

Categories of Threatened, Extinct and Specially Protected fauna and flora are:

T Threatened species

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR **Critically endangered species**

Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN **Endangered species**

Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

VU **Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species

Species where *"there is no reasonable doubt that the last member of the species has died"*, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that *"is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form"*, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

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.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

P Priority species

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

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

1 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. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

2 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. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

3 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. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

4 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.

¹The definition of flora includes algae, fungi and lichens

²Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

Appendix 2: Flora Desktop Assessment Results

Prepared for PCB

Results of the flora desktop assessment are presented below.

Table A1: Conservation significant flora species identified in the desktop assessment.

Species	Conservation status		Flowering time	Habitat	Distance to survey area	Likelihood
	Cwth	WA				
<i>Acacia anomala</i>	Vulnerable	Vulnerable	August to September	Lateritic soils. Slopes	4 km	Low
<i>Acacia drummondii</i> subsp. <i>affinis</i>		Priority 3	July to August	Lateritic gravelly soils	9 km	Low
<i>Adenanthos cygnorum</i> subsp. <i>chamaephyton</i>		Priority 3	July or September to December or January	Grey sand, lateritic gravel	10 km	Medium
<i>Andersonia gracilis</i>	Endangered	Vulnerable	September to November	White/grey sand, sandy clay, gravelly loam. Winter-wet areas, near swamps	20 km	Low
<i>Anigozanthos viridis</i> subsp. <i>terraspectans</i>	Vulnerable	Vulnerable	August to September	Grey sand, clay loam. Winter-wet depressions	20 km	Low
<i>Caladenia huegelii</i>	Endangered	Critically Endangered	September to October	Grey or brown sand, clay loam	20 km	Low
<i>Calectasia elegans</i>		Priority 2	September	Sand. Plains	7 km	Medium
<i>Caleana dixonii</i>	Endangered		October to December or January	Grey sand over granite	20 km	Low
<i>Chamaescilla gibsonii</i>		Priority 3	September	Clay to sandy clay. Winter-wet flats, shallow water-filled claypans	4.5 km	Low
<i>Chamelaucium</i> sp. Gingin (N.G.Marchant 6)	Endangered	Vulnerable			20 km	Low

Prepared for PCB

Species	Conservation status		Flowering time	Habitat	Distance to survey area	Likelihood
	Cwth	WA				
<i>Conospermum densiflorum</i> subsp. <i>unicephalatum</i>	Endangered	Endangered	September to November	Clay soils. Low-lying areas	20 km	Low
<i>Cyathochaeta teretifolia</i>		Priority 3		Grey sand, sandy clay. Swamps, creek edges	4 km	Low
<i>Darwinia foetida</i>	Critically Endangered	Endangered	August to November	Sand. Plains, slopes	4 km	High
<i>Diplolaena andrewsii</i>	Endangered	Endangered	July to October	Loam, clay. Granite outcrops & hillsides	20 km	Low
<i>Diuris drummondii</i>	Vulnerable	Vulnerable	November to December or January	Low-lying depressions, swamps	5.5 km	low
<i>Diuris micrantha</i>	Vulnerable	Vulnerable	September to October	Brown loamy clay. Winter-wet swamps, in shallow water	20 km	Low
<i>Diuris purdiei</i>	Endangered	Endangered	September to October	Grey-black sand, moist. Winter-wet swamps	20 km	Low
<i>Drakaea elastica</i>	Endangered	Critically Endangered	October to November	White or grey sand. Low-lying situations adjoining winter-wet swamps	20 km	Low
<i>Drosera occidentalis</i>		Priority 4	October to December or January	Clay. Swamps, winter wet depressions	9 km	Low
<i>Eleocharis keigheryi</i>	Vulnerable	Vulnerable	August to November	Clay, sandy loam. Emergent in freshwater: creeks, claypans	20 km	Low
<i>Eryngium pinnatifidum</i> subsp. <i>palustre</i> (G.J. Keighery 13459)		Priority 3	October	Sandy loam, clay. Winter wet flats	8.5 km	Low

Prepared for PCB

Species	Conservation status		Flowering time	Habitat	Distance to survey area	Likelihood
	Cwth	WA				
<i>Eucalyptus leprophloia</i>	Endangered	Endangered	August to October	White or grey sand over laterite. Valley slopes	20 km	Low
<i>Grevillea althoferorum</i> subsp. <i>fragilis</i>	Endangered	Critically Endangered	October	Sand, laterite. Plains	9 km	Medium
<i>Grevillea curviloba</i>	Endangered	Critically Endangered	August to October	Grey sand, sandy loam. Winter-wet heath	5 km	Low
<i>Guichenotia tuberculata</i>		Priority 3	August to October	Sand clay over laterite, sand	8.5 km	Medium
<i>Hibbertia helianthemoides</i>		Priority 4	July or September to October	Clayey sand over sandstone or loam over quartzite. Hills and scree slopes	5 km	Low
<i>Hydrocotyle lemnoides</i>		Priority 4	August to October	Swamps	8.5 km	Low
<i>Hydrocotyle striata</i>		Priority 1		Clay. Springs	5.5 km	Low
<i>Isotropis cuneifolia</i> subsp. <i>glabra</i>		Priority 3	September	Sand, clay loam. Winter-wet flats	5 km	Low
<i>Leucopogon squarrosus</i> subsp. <i>trigynus</i>		Priority 2	September	Sand. Slopes	5 km	High
<i>Macarthuria keigheryi</i>	Endangered	Endangered	September to December or February to March	White or grey sand	20 km	Medium
<i>Netrostylis</i> sp. Chandalia (G.J. Keighery 17055)		Priority 2	February	Black peat over clay. Mound springs	5.5 km	Low

Prepared for PCB

Species	Conservation status		Flowering time	Habitat	Distance to survey area	Likelihood
	Cwth	WA				
<i>Ornduffia submersa</i>		Priority 4			5.5 km	Low
<i>Persoonia rudis</i>		Priority 3	September to December or January	White, grey or yellow sand, often over laterite	9 km	Medium
<i>Platysace ramosissima</i>		Priority 3	October to November	Sandy soils	4.5 km	High
<i>Schoenus griffinianus</i>		Priority 4	September to October	White sand	10 km	Medium
<i>Stenanthemum sublineare</i>		Priority 2	October to December	Littered white sand. Coastal plain	6.5 km	Medium
<i>Stylidium aceratum</i>		Priority 3	October to November	Sandy soils. Swamp heathland	8 km	Low
<i>Stylidium paludicola</i>		Priority 3	October to December	Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland	6 km	Low
<i>Stylidium squamellosum</i>	-	Priority 2	October to November	Brown to red-brown clay loam. Winter-wet habitats and depressions, open woodland, shrubland	10 km	Low
<i>Styphelia filifolia</i>	-	Priority 3	June	Sand. Plains	6 km	Medium
<i>Synaphea grandis</i>	-	Priority 4	October to November	Laterite	8.5 km	Low

Prepared for PCB

Species	Conservation status		Flowering time	Habitat	Distance to survey area	Likelihood
	Cwth	WA				
<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)	Critically Endangered	Critically Endangered	October	Sandy with lateritic pebbles. Near winter-wet flats, in low woodland with weedy grasses	20 km	Low
<i>Thelymitra dedmaniarum</i>	Endangered	Critically Endangered	November to December or January	Granite	20 km	Low
<i>Thelymitra stellata</i>	Endangered	Endangered	October to November	Sand, gravel, lateritic loam	10 km	Medium
<i>Verticordia serrata</i> var. <i>linearis</i>		Priority 3	September to October	White sand, gravel. Open woodland	5 km	High

Table A-2: Conservation significant ecological communities identified in desktop assessment.

Ecological community	Conservation Status		Distance to survey area	Likelihood
	Cwth	WA		
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Priority 3	Within the survey area	High
Communities of Tumulus Springs (Organic Mound Springs, Swan Coastal Plain)	Endangered	Critically Endangered	1.5 km east	High
Shrublands and woodlands on Muchea Limestone of the Swan Coastal Plain	Endangered	Endangered	2.4 km east	High
SCP07 - Herb rich saline shrublands in clay pans (floristic community type 7 as originally described in Gibson et al. (1994))	Critically Endangered	Vulnerable	7.5 km southeast	Low
SCP21c - Low lying <i>Banksia attenuata</i> woodlands or shrublands	Endangered	Priority 3	3.5 km southwest	High
SCP21c - <i>Banksia ilicifolia</i> woodlands	Endangered	Priority 3	3.3 km southwest	Medium
SCP23b - Swan Coastal Plain <i>Banksia attenuata</i> - <i>Banksia menziesii</i> woodlands	Endangered	Priority 3	3.4 km south	High
SCP25 - Southern <i>Eucalyptus gomphocephala</i> - <i>Agonis flexuosa</i> woodlands	-	Priority 3	4 km east	Medium
SCP3c - <i>Corymbia calophylla</i> - <i>Xanthorrhoea preissii</i> woodlands and shrublands, Swan Coastal Plain (floristic community type 3c as originally described in Gibson et al. (1994))	Endangered	Critically Endangered	8.7 km southeast	Medium
Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	-	10 km	Low

Appendix 3: Flora Species List

Flora species recorded within the survey area.

Family	Species
Asteraceae	* <i>Hypochaeris glabra</i>
	<i>Podotheca gnaphalioides</i>
	* <i>Ursinia anthemoides</i>
Campanulaceae	* <i>Wahlenbergia capensis</i>
Crassulaceae	<i>Crassula colorata</i>
Dasypogonaceae	<i>Dasypogon bromeliifolius</i>
Dilleniaceae	<i>Hibbertia subvaginata</i>
Ericaceae	<i>Andersonia heterophylla</i>
	<i>Conostephium pendulum</i>
	<i>Styphelia propinqua</i>
Fabaceae	<i>Acacia pulchella</i>
	<i>Acacia saligna</i>
	<i>Bossiaea eriocarpa</i>
	<i>Jacksonia floribunda</i>
	<i>Jacksonia sternbergiana</i>
Geraniaceae	* <i>Erodium botrys</i>
	* <i>Pelargonium × domesticum</i>
	* <i>Pelargonium capitatum</i>
Goodeniaceae	<i>Scaevola glandulifera</i>
Haemodoraceae	<i>Anigozanthos humilis</i>
Iridaceae	* <i>Freesia alba × leichtlinii</i>
	* <i>Gladiolus caryophyllaceus</i>
	<i>Patersonia occidentalis</i>
Lauraceae	<i>Cassytha racemosa</i>
Loranthaceae	<i>Nuytsia floribunda</i>
Myrtaceae	<i>Calytrix sapphirina</i>
	<i>Corymbia calophylla</i>
	<i>Corymbia citriodora</i>
	<i>Eremaea pauciflora</i>
	<i>Hypocalymma angustifolium</i>

Family	Species
Myrtaceae	<i>Kunzea glabrescens</i>
	<i>Kunzea micrantha</i>
	<i>Kunzea recurva</i>
	<i>Leptospermum erubescens</i>
	<i>Melaleuca raphiophylla</i>
	<i>Melaleuca seriata</i>
	<i>Verticordia nitens</i>
Phyllanthaceae	<i>Lysiandra calycina</i>
Poaceae	* <i>Aira cupaniana</i>
Poaceae	<i>Aristida contorta</i>
	* <i>Briza maxima</i>
	* <i>Bromus diandrus</i>
	* <i>Ehrharta calycina</i>
	* <i>Ehrharta longiflora</i>
	* <i>Pentameris airoides</i>
Primulaceae	* <i>Lysimachia arvensis</i>
Proteaceae	<i>Adenanthos cygnorum</i>
	<i>Banksia attenuata</i>
	<i>Banksia menziesii</i>
	<i>Banksia sessilis</i>
	<i>Petrophile linearis</i>
	<i>Stirlingia latifolia</i>
Solanaceae	* <i>Solanum nigrum</i>
Stylidiaceae	<i>Stylidium araeophyllum</i>
	<i>Stylidium diuroides</i>
	<i>Stylidium repens</i>
Xanthorrhoeaceae	<i>Xanthorrhoea preissii</i>

* Denotes a weed species

Appendix 4: Flora Species Within the Vegetation Types

Species within each vegetation type.

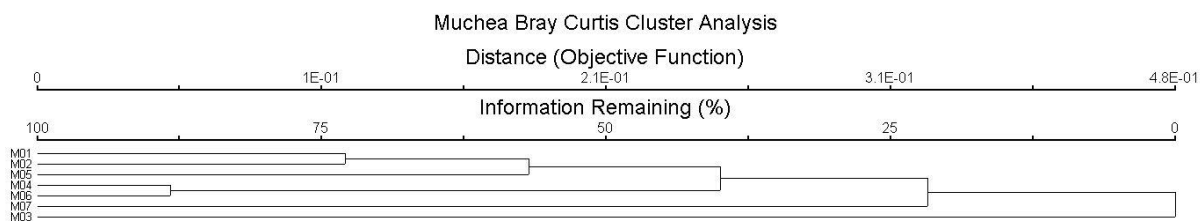
Species	VT1 – BaBmKgLe	Opportunistic
<i>Acacia pulchella</i>	X	
<i>Acacia saligna</i>	X	
<i>Adenanthos cygnorum</i>	X	
* <i>Aira cupaniana</i>	X	
<i>Andersonia heterophylla</i>	X	
<i>Anigozanthos humilis</i>	X	
<i>Aristida contorta</i>	X	
<i>Banksia attenuata</i>	X	
<i>Banksia menziesii</i>	X	
<i>Banksia sessilis</i>	X	
<i>Bossiaea eriocarpa</i>	X	
* <i>Briza maxima</i>	X	
* <i>Bromus diandrus</i>	X	
<i>Calytrix sapphirina</i>	X	
<i>Cassytha racemosa</i>	X	
<i>Conostephium pendulum</i>	X	
<i>Corymbia calophylla</i>	X	
<i>Corymbia citriodora</i>		X
<i>Crassula colorata</i>	X	
<i>Dasypogon bromeliifolius</i>	X	
<i>Daucus glochidiatus</i>	X	
* <i>Ehrharta calycina</i>	X	
* <i>Ehrharta longiflora</i>	X	
<i>Eremaea pauciflora</i>	X	
* <i>Erodium botrys</i>	X	
* <i>Freesia alba</i> × <i>leichtlinii</i>	X	
* <i>Gladiolus caryophyllaceus</i>	X	
<i>Hibbertia subvaginata</i>	X	
<i>Hyalosperma cotula</i>	X	
<i>Hypocalymma angustifolium</i>	X	

Species	VT1 – BaBmKgLe	Opportunistic
* <i>Hypochaeris glabra</i>	X	
<i>Jacksonia floribunda</i>	X	
<i>Jacksonia sternbergiana</i>		X
<i>Kunzea glabrescens</i>	X	
<i>Kunzea micrantha</i>	X	
<i>Kunzea recurva</i>		X
<i>Leptospermum erubescens</i>	X	
<i>Lysiandra calycina</i>	X	
* <i>Lysimachia arvensis</i>	X	
<i>Melaleuca raphiophylla</i>		X
<i>Melaleuca seriata</i>	X	
<i>Nuytsia floribunda</i>	X	
<i>Patersonia occidentalis</i>	X	
* <i>Pelargonium × domesticum</i>	X	
* <i>Pelargonium capitatum</i>	X	
* <i>Pentameris airoides</i>	X	
<i>Petrophile linearis</i>	X	
<i>Podotheca gnaphalioides</i>	X	
<i>Scaevola glandulifera</i>	X	
* <i>Solanum nigrum</i>		X
<i>Stirlingia latifolia</i>	X	
<i>Stylidium araeophyllum</i>	X	
<i>Stylidium diuroides</i>	X	
<i>Stylidium repens</i>	X	
<i>Styphelia propinqua</i>	X	
<i>Thysanotus manglesianus</i>	X	
* <i>Ursinia anthemoides</i>	X	
<i>Verticordia nitens</i>	X	
* <i>Wahlenbergia capensis</i>	X	
<i>Xanthorrhoea preissii</i>	X	

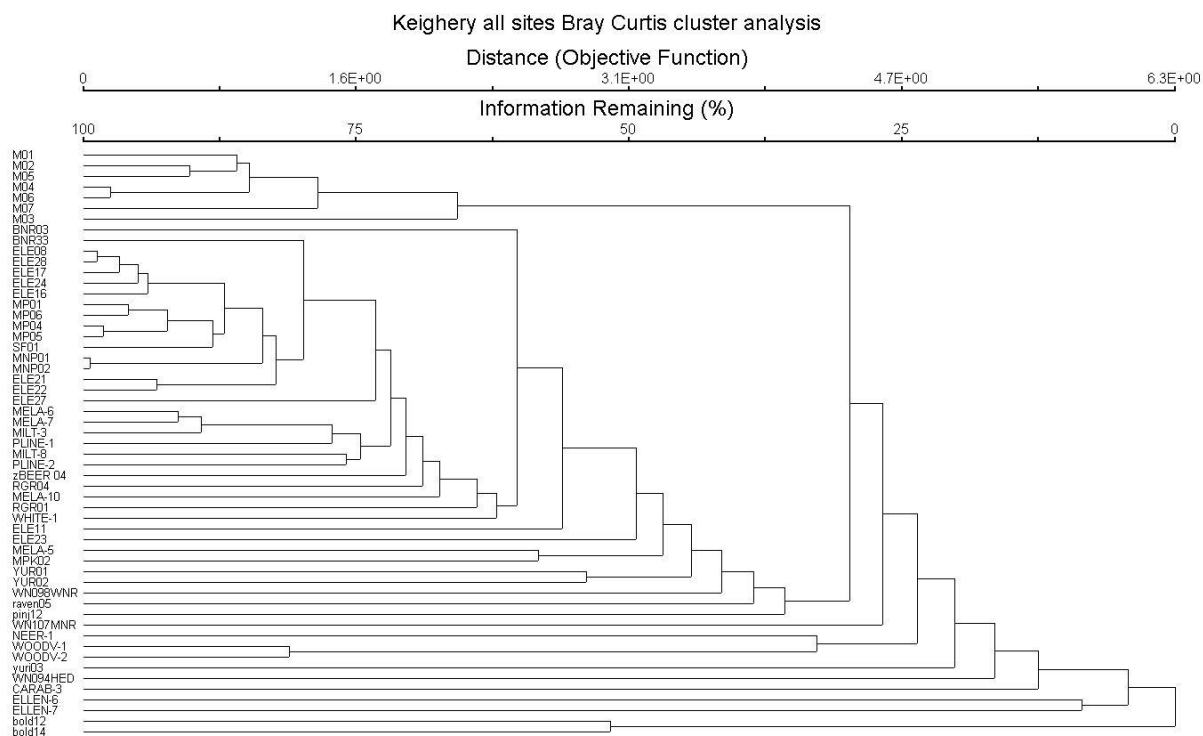
* Denotes a weed species

Appendix 5: Flora Statistical Analysis

Cluster analysis dendrogram showing similarities between survey sites.



Cluster analysis dendrogram showing similarities between closest Keighery (2012) quadrats and survey sites



Appendix 6: Flora Quadrat Data

Site M01

Date:	14/11/2022	Botanist:	CK
Waypoint:	1014		
NW corner latitude:	-31.606985	NW corner longitude:	115.931268
Landform:	Undulating plain	Slope and aspect:	Gentle
Soil colour:	Grey	Soil texture:	Sand
Rock type:	None	Rock cover:	NA
Condition:	Good – Degraded	Fire history:	> 3 yrs
Disturbance:	Weeds, tracks, old infrastructure		
Vegetation description:	VT1 – BaKgLe Low open woodland of <i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Nuytsia floribunda</i> over tall open shrubland of <i>Kunzea glabrescens</i> and <i>Kunzea micrantha</i> over low sparse shrubland of <i>Hibbertia subvaginata</i> and <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Acacia pulchella</i>	Shrub (0-1 m)	< 1
* <i>Aira cupaniana</i>	Grass	< 1
<i>Banksia attenuata</i>	Tree (<10 m)	5 – 9
<i>Banksia menziesii</i>	Tree (<10 m)	1 – 4
<i>Bossiaea eriocarpa</i>	Shrub (0-1 m)	< 1
* <i>Bromus diandrus</i>	Grass	< 1
<i>Calytrix sapphirina</i>	Shrub (0-1 m)	< 1
<i>Conostephium pendulum</i>	Shrub (0-1 m)	< 1
<i>Hibbertia subvaginata</i>	Shrub (0-1 m)	1 – 4
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	< 1
<i>Kunzea glabrescens</i>	Shrub (1-2 m)	1 – 4
<i>Kunzea micrantha</i>	Shrub (>2 m)	5 – 9
<i>Leptospermum erubescens</i>	Shrub (0-1 m)	1 – 4
<i>Nuytsia floribunda</i>	Tree (<10 m)	Assoc.
<i>Patersonia occidentalis</i>	Shrub (0-1 m)	< 1
<i>Petrophile linearis</i>	Shrub (0-1 m)	< 1
<i>Podotheca gnaphalioides</i>	Herb	< 1
<i>Scaevola glandulifera</i>	Shrub (0-1 m)	< 1
<i>Stirlingia latifolia</i>	Shrub (0-1 m)	< 1
<i>Stylidium araeophyllum</i>	Herb	< 1
<i>Stylidium diuroides</i>	Herb	< 1
<i>Stylidium repens</i>	Herb	< 1
<i>Thysanotus manglesianus</i>	Herb	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1

* Denotes an introduced species

Site M02

Date:	14/11/2022	Botanist:	CK
Waypoint:	1016		
NW corner latitude:	-31.606266	NW corner longitude:	115.931252
Landform:	Undulating plain	Slope and aspect:	Gentle
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Good - Degraded	Fire history:	> 3 yrs
Disturbance:	Weeds, tracks, clearing, old infrastructure, asbestos, litter, potential dieback		
Vegetation description:	VT1 – BaKgLe Low open woodland of <i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Nuytsia floribunda</i> over tall sparse shrubland of <i>Kunzea glabrescens</i> over low sparse shrubland of <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Adenanthos cygnorum</i>	Shrub (>2 m)	< 1
* <i>Aira cupaniana</i>	Grass	< 1
<i>Banksia attenuata</i>	Tree (<10 m)	5 – 9
<i>Banksia menziesii</i>	Tree (<10 m)	5 – 9
* <i>Bromus diandrus</i>	Grass	< 1
<i>Calytrix sapphirina</i>	Shrub (0-1 m)	< 1
<i>Corymbia calophylla</i>	Tree (<10 m)	Assoc.
<i>Daucus glochidiatus</i>	Herb	< 1
* <i>Freesia alba</i> × <i>leichtlinii</i>	Herb	< 1
<i>Hibbertia subvaginata</i>	Shrub (0-1 m)	< 1
<i>Hyalosperma cotula</i>	Herb	1 – 4
* <i>Hypochaeris glabra</i>	Herb	< 1
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	< 1
<i>Kunzea glabrescens</i>	Shrub (>2 m)	1 – 4
<i>Kunzea micrantha</i>	Shrub (1-2 m)	< 1
<i>Leptospermum erubescens</i>	Shrub (0-1 m)	1 – 4
* <i>Lysimachia arvensis</i>	Herb	< 1
<i>Melaleuca seriata</i>	Shrub (0-1 m)	< 1
<i>Nuytsia floribunda</i>	Tree (<10 m)	1 – 4
* <i>Pelargonium capitatum</i>	Herb	< 1
* <i>Pentameris airoides</i>	Grass	< 1
<i>Podotheca gnaphalioides</i>	Herb	< 1
<i>Scaevola glandulifera</i>	Shrub (0-1 m)	< 1
<i>Stirlingia latifolia</i>	Shrub (0-1 m)	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1
<i>Verticordia nitens</i>	Shrub (0-1 m)	< 1

* Denotes an introduced species

Site M03

Date:	14/11/2022	Botanist:	CK
Waypoint:	1017		
NW corner latitude:	-31.60447	NW corner longitude:	115.930736
Landform:	Undulating plain	Slope and aspect:	Negligible
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Degraded	Fire history:	2 - 3 yrs
Disturbance:	Weeds, asbestos, old infrastructure		
Vegetation description:	VT1 – BmKgLe Low open woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> over tall open shrubland of <i>Acacia saligna</i> and <i>Kunzea glabrescens</i> over low sparse shrubland of <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Acacia saligna</i>	Shrub (>2 m)	1 – 4
<i>Adenanthos cygnorum</i>	Shrub (1-2 m)	< 1
<i>Banksia attenuata</i>	Tree (<10 m)	1 – 4
<i>Banksia menziesii</i>	Tree (<10 m)	5 – 9
* <i>Briza maxima</i>	Grass	< 1
* <i>Bromus diandrus</i>	Grass	< 1
<i>Dasypogon bromeliifolius</i>	Shrub (0-1 m)	Assoc.
<i>Daucus glochidiatus</i>	Herb	< 1
* <i>Ehrharta longiflora</i>	Grass	1 – 4
* <i>Gladiolus caryophyllaceus</i>	Shrub (0-1 m)	< 1
<i>Hypocalymma angustifolium</i>	Shrub (0-1 m)	< 1
<i>Kunzea glabrescens</i>	Shrub (>2 m)	10 – 24
<i>Kunzea micrantha</i>	Shrub (1-2 m)	< 1
<i>Leptospermum erubescens</i>	Shrub (0-1 m)	1 – 4
<i>Lysiandra calycina</i>	Shrub (0-1 m)	< 1
* <i>Lysimachia arvensis</i>	Herb	< 1
<i>Melaleuca raphiophylla</i>	Tree (<10 m)	Assoc.
* <i>Pentameris airoides</i>	Grass	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1
<i>Verticordia nitens</i>	Shrub (0-1 m)	< 1
<i>Xanthorrhoea preissii</i>	Shrub (0-1 m)	Assoc.

* Denotes an introduced species

Site M04

Date:	14/11/2022	Botanist:	CK
Waypoint:	1018		
NW corner latitude:	-31.603265	NW corner longitude:	115.930649
Landform:	Undulating plain	Slope and aspect:	Gentle
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Degraded	Fire history:	>3 yrs
Disturbance:	Weeds, asbestos, old infrastructure, tracks, potential dieback		
Vegetation description:	VT1 – BaAcLe Low open woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> over tall sparse shrubland of <i>Adenanthos cygnorum</i> over low sparse shrubland of <i>Jacksonia floribunda</i> , <i>Leptospermum erubescens</i> and <i>Pelargonium ×domesticum</i>		

Photo



Species	Height (m)	Cover (%)
<i>Adenanthos cygnorum</i>	Shrub (>2 m)	5 – 9
<i>Aristida contorta</i>	Grass	< 1
<i>Banksia attenuata</i>	Tree (<10 m)	1 – 4
<i>Banksia menziesii</i>	Tree (<10 m)	1 – 4
<i>Bossiaea eriocarpa</i>	Shrub (0-1 m)	< 1
<i>Calytrix sapphirina</i>	Shrub (0-1 m)	< 1
<i>Corymbia citriodora</i>	Tree (10-30 m)	Assoc.
<i>Crassula colorata</i>	Herb	< 1
* <i>Ehrharta calycina</i>	Grass	< 1
<i>Eremaea pauciflora</i>	Shrub (1-2 m)	< 1
* <i>Erodium cygnorum</i>	Herb	< 1
<i>Hibbertia subvaginata</i>	Shrub (0-1 m)	< 1
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	1 – 4
<i>Kunzea micrantha</i>	Shrub (1-2 m)	< 1
<i>Kunzea recurva</i>	Shrub (0-1 m)	< 1
<i>Leptospermum erubescens</i>	Shrub (1-2 m)	5 – 9
<i>Lysiandra calycina</i>	Shrub (0-1 m)	< 1
* <i>Lysimachia arvensis</i>	Herb	< 1
* <i>Pelargonium *domesticum</i>	Shrub (0-1 m)	1 – 4
* <i>Pentameris airoides</i>	Grass	< 1
<i>Petrophile linearis</i>	Shrub (0-1 m)	< 1
<i>Podotheca gnaphalioides</i>	Herb	< 1
<i>Styphelia propinqua</i>	Shrub (0-1 m)	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1

* Denotes an introduced species

Site M05

Date:	14/11/2022	Botanist:	CK
Waypoint:	1019		
NW corner latitude:	-31.602571	NW corner longitude:	115.929603
Landform:	Undulating plain	Slope and aspect:	Negligible
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Good - Degraded	Fire history:	>3 yrs
Disturbance:	Weeds, asbestos, potential dieback, old infrastructure		
Vegetation description:	VT1 – AcLe Tall sparse shrubland of <i>Adenanthos cygnorum</i> over low sparse shrubland of <i>Kunzea recurva</i> and <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Adenanthos cygnorum</i>	Shrub (>2 m)	5 – 9
<i>Banksia attenuata</i>	Tree (<10 m)	< 1
<i>Banksia menziesii</i>	Tree (<10 m)	< 1
<i>Banksia sessilis</i>	Tree (<10 m)	< 1
* <i>Bromus diandrus</i>	Grass	< 1
* <i>Erodium cygnorum</i>	Herb	< 1
* <i>Hypochaeris glabra</i>	Herb	< 1
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	< 1
<i>Kunzea micrantha</i>	Shrub (1-2 m)	1 – 4
<i>Leptospermum erubescens</i>	Shrub (1-2 m)	5 – 9
* <i>Lysimachia arvensis</i>	Herb	< 1
* <i>Pelargonium capitatum</i>	Shrub (0-1 m)	1 – 4
* <i>Pentameris airoides</i>	Grass	1 – 4
<i>Podotheca gnaphalioides</i>	Herb	< 1
<i>Styphelia propinqua</i>	Shrub (0-1 m)	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1
<i>Verticordia nitens</i>	Shrub (0-1 m)	< 1

* Denotes an introduced species

Site M06

Date:	14/11/2022	Botanist:	CK
Waypoint:	1020		
NW corner latitude:	-31.603235	NW corner longitude:	115.928877
Landform:	Undulating plain	Slope and aspect:	Negligible
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Good	Fire history:	>3 yrs
Disturbance:	Weeds, asbestos, potential dieback		
Vegetation description:	VT1 – BaKgLe Low open woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> over tall sparse shrubland of <i>Adenanthos cygnorum</i> and <i>Kunzea glabrescens</i> over low sparse shrubland of <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Acacia pulchella</i>	Shrub (0-1 m)	< 1
<i>Adenanthos cygnorum</i>	Shrub (>2 m)	1 – 4
<i>Banksia attenuata</i>	Tree (<10 m)	5 – 9
<i>Banksia menziesii</i>	Tree (<10 m)	5 – 9
<i>Bossiaea eriocarpa</i>	Shrub (0-1 m)	< 1
<i>Cassytha racemosa</i>	Vine	< 1
<i>Eremaea pauciflora</i>	Shrub (0-1 m)	< 1
* <i>Erodium cygnorum</i>	Herb	< 1
* <i>Gladiolus caryophyllaceus</i>	Shrub (0-1 m)	< 1
<i>Hibbertia subvaginata</i>	Shrub (0-1 m)	< 1
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	< 1
<i>Kunzea glabrescens</i>	Shrub (>2 m)	1 – 4
<i>Kunzea micrantha</i>	Shrub (0-1 m)	< 1
<i>Leptospermum erubescens</i>	Shrub (0-1 m)	1 – 4
<i>Lysiandra calycina</i>	Shrub (0-1 m)	< 1
* <i>Lysimachia arvensis</i>	Herb	< 1
* <i>Pentameris airoides</i>	Grass	1 – 4
<i>Petrophile linearis</i>	Shrub (0-1 m)	< 1
<i>Scaevola glandulifera</i>	Shrub (0-1 m)	< 1
<i>Stylidium repens</i>	Herb	< 1
<i>Styphelia propinqua</i>	Shrub (0-1 m)	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1
<i>Verticordia nitens</i>	Shrub (0-1 m)	< 1

* Denotes an introduced species

Site M07

Date:	14/11/2022	Botanist:	CK
Waypoint:	1021		
NW corner latitude:	-31.598792	NW corner longitude:	115.929188
Landform:	Undulating plain	Slope and aspect:	Negligible
Soil colour:	Grey	Soil texture:	Sand
Rock type:	Laterite gravel	Rock cover:	<10%
Condition:	Degraded	Fire history:	1 - 2 yrs
Disturbance:	Weeds, asbestos, old infrastructure, fire		
Vegetation description:	VT1 – BmKgLe Low open woodland of <i>Banksia attenuata</i> and <i>Banksia menziesii</i> over tall sparse shrubland of <i>Kunzea glabrescens</i> over low sparse shrubland of <i>Leptospermum erubescens</i>		

Photo



Species	Height (m)	Cover (%)
<i>Adenanthos cygnorum</i>	Shrub (1-2 m)	< 1
<i>Andersonia heterophylla</i>	Shrub (0-1 m)	< 1
<i>Anigozanthos humilis</i>	Shrub (0-1 m)	< 1
<i>Aristida contorta</i>	Grass	< 1
<i>Banksia attenuata</i>	Tree (<10 m)	1 – 4
<i>Banksia menziesii</i>	Tree (<10 m)	5 – 9
<i>Bossiaea eriocarpa</i>	Shrub (0-1 m)	< 1
<i>Crassula colorata</i>	Herb	< 1
<i>Daucus glochidiatus</i>	Herb	< 1
* <i>Gladiolus caryophyllaceus</i>	Shrub (0-1 m)	< 1
<i>Jacksonia floribunda</i>	Shrub (0-1 m)	< 1
<i>Kunzea glabrescens</i>	Shrub (>2 m)	1 – 4
<i>Leptospermum erubescens</i>	Shrub (0-1 m)	1 – 4
* <i>Lysimachia arvensis</i>	Herb	< 1
* <i>Pelargonium capitatum</i>	Shrub (0-1 m)	< 1
* <i>Pentameris airoides</i>	Grass	< 1
<i>Podotheca gnaphalioides</i>	Herb	< 1
<i>Stirlingia latifolia</i>	Shrub (0-1 m)	< 1
<i>Stylidium repens</i>	Herb	< 1
<i>Styphelia propinqua</i>	Shrub (0-1 m)	< 1
* <i>Ursinia anthemoides</i>	Herb	< 1
<i>Verticordia nitens</i>	Shrub (0-1 m)	< 1
* <i>Wahlenbergia capensis</i>	Herb	< 1

* Denotes an introduced species

Appendix 7: Fauna Database Results

FAMILY	SCI NAME	SUB SP	COM NAME	WA status	EPBC status	YEAR	CERTAINTY	OBS METHOD	OBS TYPE	SITE	ACCURACY M
Apodidae	Apus pacificus		Fork-tailed swift	MI	MI	2009				Killplaw Loop	0
Potoroidae	Bettongia lesueur graii	graii	Burrowing bettong (inland)	EX	EX	0	Certain	Historical (written)	Fossil	Abandoned limestone quarry (Dunstan's Lime Kiln Quarries) located 9 miles (=14.4 km) N of Wanneroo.	10000
Potoroidae	Bettongia penicillata ogilbyi	ogilbyi	Brush-tailed bettong	CR	EN	0	Certain	Historical (written)	Fossil	Abandoned limestone quarry (Dunstan's Lime Kiln Quarries) located 9 miles (=14.4 km) N of Wanneroo.	10000
Ardeidae	Botaurus poiciloptilus		Australasian bittern	EN	EN	1982	Certain	Opportunistic sighting	Sighting	Lake Jandabup	1000
Ardeidae	Botaurus poiciloptilus		Australasian bittern	EN	EN	1983	Certain	Opportunistic sighting	Sighting	Lake Jandabup	1000
Ardeidae	Botaurus poiciloptilus		Australasian bittern	EN	EN	1983	Certain	Survey	Day sighting	Jandabup Lake	1000
Ardeidae	Botaurus poiciloptilus		Australasian bittern	EN	EN	1983	Certain	Survey	Day sighting	Lake Jandabup	1000
Ardeidae	Botaurus poiciloptilus		Australasian bittern	EN	EN	1983	Certain	Survey	Day sighting	Lake Jandabup	1000
Scolopacidae	Calidris ferruginea		curlew sandpiper	CR	MI	1978				MELALEUCA	18000
Scolopacidae	Calidris melanotos		Pectoral Sandpiper	MI	MI	1992					30
Scolopacidae	Calidris ruficollis		Red-necked stint	MI	MI	1981				MELALEUCA	18000
Scolopacidae	Calidris ruficollis		Red-necked stint	MI	MI	2002				Lake Gngangara	500
Scolopacidae	Calidris ruficollis		Red-necked stint	MI	MI	1978				MELALEUCA	18000
Procellariidae	Calonectris leucomelas		streaked shearwater	MI	MI	2010	Moderately certain	Community survey	Secondary sign	Centre Way Cnr Blackboy Rd (previously East of Silver Road/North of Warbrook)	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2018	Certain		sighting	Bullsbrook college bushland	200
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2018	Certain		sighting	Bullsbrook college bushland	200
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2018	Certain		sighting	Bullsbrook college bushland	200
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2017	Certain		sighting	Bullsbrook college bushland	200
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2017	Certain		sighting	Bullsbrook college bushland	200
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2013	Moderately certain	Survey	Day sighting	Lot 403 Dampiera Court Chittering WA 6804, 20km north of Bullsbrook	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2006	Certain	Community survey	Day sighting	Blackboy Ridge	10000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2013	Certain	Community survey	Day sighting	Bullsbrook Bridle Trail, Chittering Road.	10000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2009	Certain	Community survey	Day sighting	Burley Park, Corner of Chittering Rd & Quinn Rd	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2011	Certain	Community survey	Day sighting	Maddern Rd North	10000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2017	Moderately certain	Community survey	Sighting	Sugar Gum Drive, Lot 689/rural number 82. Site Code: CHICHIR001	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2017	Moderately certain	Community survey	Sighting	west of boundary road, in lots norths of Facey Road. Site Code: WANGNAR005	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2017	Moderately certain	Community survey	Sighting	Muchea Nature Reserve, cnr Carl and Arbuckle. Site Code: CHIMUCR001	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2017	Moderately certain	Community survey	Sighting	Between Galah & Krake Rd east of Mulga - new loaction NE of Silver & Warbrook Roads. Site Code: SWAMELR001	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2015	Certain	Opportunistic sighting		Maddern South Road	10000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	0	Certain	Opportunistic sighting		End of Rocky Creek, along Great Northern Hwy	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2015	Certain	Opportunistic sighting		Corner Old Gingin Road and Great Northern Hwy	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2016	Certain	Opportunistic sighting	Sighting	22 Bindarree Terrace	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2018	Certain	Community survey	Sighting	2018 site code SWABULR005; 35 Sawpit Rd	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2012	Certain	Community survey	Sighting	2018 site code WANMARR002; Capron-Maringup-Garden Park Drive-Dundebur Road-Franklin Road (possible roost)	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2018	Certain	Community survey	Sighting	2018 site code SWABULR002; Jess/Smith Rd Bullsbrook - reported 2012 as between Kingsford Place and Jess Road on the bridle trail	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2018	Certain	Community survey	Sighting	2018 site code SWAMELR001; Between Galah & Krake Rd east of Mulga	1000
Cacatuidae	Calyptorhynchus banksii naso	naso	forest red-tailed black cockatoo	VU	VU	2019	Moderately certain	Opportunistic sighting	Day sighting	31 Frond Circuit	50
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2014	Certain	Survey	Unknown	Maralla, TS1	100
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2014	Certain	Survey	Unknown	Maralla, TS6	100
Cacatuidae	Calyptorhynchus banksii naso	naso	Forest red-tailed black cockatoo	VU	VU	2017		Survey		Calyptorhynchus banksii subsp. naso 15/09/2017	200
Cacatuidae	Calyptorhynchus baudinii		Baudin's cockatoo	EN	EN	2002				Jandabup Lake	100
Cacatuidae	Calyptorhynchus latirostris		Carnaby's cockatoo	EN	EN	2013	Very Certain	Targeted survey	Remote sensing	South of Warbrook Rd, East of Barlow Rd	30
Cacatuidae	Calyptorhynchus latirostris		Carnaby's cockatoo	EN	EN	2013	Very Certain	Targeted survey	Remote sensing	804 Cooper Rd	30
Cacatuidae	Calyptorhynchus latirostris		Carnaby's cockatoo	EN	EN	2013	Very Certain	Targeted survey	Remote sensing	169 Halden Rd and 893 Warbrook Rd	30

Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Very Certain	Targeted survey	Remote sensing	E and W sides of Drumpellier Dr at N end	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Very Certain	Targeted survey	Remote sensing	Krake Rd, E of Mulga Rd	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Very Certain	Targeted survey	Remote sensing	1139 Old Yanchep Rd	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Very Certain	Targeted survey	Remote sensing	S of Nisa Rd (Pine plantation)	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Very Certain	Targeted survey	Remote sensing	Intersection of Nisa Rd and Perry Rd	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Very Certain	Targeted survey	Remote sensing	311 Wattle Av	30
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003	Certain	Opportunistic sighting	Day sighting	Caporn Park, Pinjar Rd (26542) (Site Number 36)	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003	Certain	Opportunistic sighting	Day sighting	Edgar Griffiths Park, Garden Park Dr (36601) (Site Number 76)	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Survey	Day sighting	Site 1	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Survey	Day sighting	Site2	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Survey	Day sighting	Site3	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Survey	Day sighting	Site 5	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2007	Certain	Survey	Day sighting	Site 1 Old West Rd	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004	Not sure	Monitoring	Secondary sign	Gnangara Pine Planataion	10000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Anderson Road (possible roost), gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Between Galah & Krake Rd east of Mulga	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Conductor Rt - synonomous with HF23 (QB 06/05/10), gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	Conductor Rt - synonomous with HF23 (QB 06/05/10), gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	Ellenbrook	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	Gironde Rd between Dollar and Silver Rd Gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	Pine Plantation	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Secondary sign	Hawkins Road North (possible roost), GNANGARA	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Lot 21, gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Near Pinjara Power Station, Yanchep	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	north and south of Amarante Road (west of Quail Raod), gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Opposite Damian Park Damian Rd, Jandabup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Regalia Road-Dasypogon Road area, gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Sydney Road (possible roost), gnangara, 2018 site code WANGNAR004	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Timely Hostess Mews, Marijinup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Waneroo Golf Course (possible roost), gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	West of Alf Barbagallo Raceway	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2010	Moderately certain	Community survey	Day sighting	Ziatus-Chitty Road, gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005	Certain	Targeted survey	Day sighting	Gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Opportunistic sighting	Day sighting	bushland northeast of the intersection of Joondalup Drive, Old Yanchep Road and Neaves Road, Pinjar.	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Opportunistic sighting	Day sighting	Gnangara-Moore River SF - 65	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005	Certain	Targeted survey	Day sighting	bushland northeast of the intersection of Joondalup Drive, Old Yanchep Road and Neaves Road, Pinjar.	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Gnangara-Moore River SF - 65	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	4 The Embankment, Joondalup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Pinjar Pine Plantation	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Hawkins Rd, Wanneroo	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	66 Casuarina Way, Wanneroo	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Neaves Rd, Melaleuca Park	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Caporn Park, Edward St, Mariginiup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	1 Facey Rd, Gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Gnangara Hill, Bullsbrook	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Mulga Road, Jandabup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Gnangara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Melaleuca Park, Neaves Rd	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Wattle Ave East, Pinjar (150m N of Firetower)	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006	Certain	Targeted survey	Day sighting	Carabooda Hill, Old Quarry	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2011	Certain	Community survey	Day sighting	2013 Site code is SWABULR002	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Certain	Community survey	Day sighting	2013 Site code is SWABULR002	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Certain	Community survey	Day sighting	2013 Site code is SWABULR002	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Community survey	Day sighting	2013 Site code is SWABULR002	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2011	Certain	Community survey	Day sighting	2013 Site code is SWABULR002	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Community survey	Day sighting	2013 Site code is SWAMELR001	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Community survey	Day sighting	2013 Site code is SWAMELR001	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2013	Certain	Community survey	Day sighting	2013 Site code is SWAMELR001	1000

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Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Moderately certain	Community survey	Day sighting	Jess/Smith Rd Bullsbrook - reported 2012 as between Kingsford Place and Jess Road on the bridle trail (see comments)	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	west of boundary road, in lots norths of Facey Road	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	Timely Hostess Mews	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	526 Neaves Road (HF23) and 87 Conductor Retreat (WS07)	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	at the Pinjar Power Station	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	S & E areas, Nisa, Cypress and Perry Rds, below the Pinjar Power Station/Water Plant	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	Neerabup	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Community survey	Day sighting	Near Pinjar Power Station	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Moderately certain	Community survey	Day sighting	Salmon Gum Cr, tree hollow CHIT Rise 159 GG	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Moderately certain	Community survey	Day sighting	Great Northern Hwy, tree hollow DONCHIT Great Northern Hwy	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2011	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2011	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Certain	Opportunistic sighting	Secondary sign	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Certain	Opportunistic sighting	Night sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2014	Certain	Opportunistic sighting	Night sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Opportunistic sighting	Day sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Opportunistic sighting	Night sighting	Lot 221 Ghost Gum Ridge, Chittering Rise WA 6084	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Drumpellier Drive, Lexia. Pine on E & W sides of road	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	PP on Knight Rd, Gngara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Private properties west of Steel Rd roost	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	S end of Gngara SF, pine block E of Steel Rd, Gngara	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Gngara SF, pine block E of Turkey Rd. South end	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	N end of Gngara SF, pine block E of Steel Rd	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Gngara SF surrounding Steel Rd roost	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Pinjar Motorcycle Area, Gngara-Moore River SF, b/w Orchid & Henderson Rds.	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Very Certain (photo, spec	Regular monitoring	Remote sensing	Pinjar Motorcycle Area, Gngara-Moore River SF, W of Orchid Rd.	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Certain	Monitoring	Remote sensing	pine block east of Steel Rd	50
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Certain	Survey	Remote sensing	Facey Road	50
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2018	Certain	Monitoring	Sighting	Silver Rd pine plantation	50
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2018	Certain	Monitoring	Sighting	Gngara pines, Chapman Rd	50
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2018	Certain	Community survey	Sighting	2018 site code WANMARR006; Neaves Rd and Via Vista Road, Mariginiup.	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2018	Certain	Community survey	Sighting	2018 site code WANNOWR003; North of Wattle Avenue East	1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2019	Certain	Community survey	Sighting	2018 site code WANNOWR004; Old Yanchep-Pinjar Road (South of Wescoe)	1000

Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1997	Certain	Monitoring	Secondary sign	4km NE of the townsite 50m west of the corner of Muchea East Road and McGlew Street Lower Chittering on the shoulder of the road	50
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2020	Very Certain (photo, spec	Opportunistic sighting	Taken into care		1000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2015	Certain	Survey	Sighting	Chittering, Wilson	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2016	Certain	Survey	Caught or trapped	Lexia 86	3000
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Devon Way, Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Devon Way, Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Devon Way, Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Devon Way, Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Barracca Nature Reserve	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Burns Beach Road, Joondalup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2012				Breera Road1010	0
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2000				Lake Chandala	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Burley Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003				Chequers Golf Club North	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Chequers Golf Club North	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Chequers Golf Club North	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Chequers Golf Club North	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2004				Jess Road Bushland	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Viridian Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006				Viridian Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2006				Pinjar Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2005				Viridian Park	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lake Jandabup	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lake Jandabup	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2001				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Lake Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Hawkins Road	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Hopkins Road Bushland	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Jandabup Lake	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Jandabup Lake	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Hawkins Rd, Jandabup	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002				Jandabup lake	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003				Hawkins Rd, Jandabup	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003				Hopkins Road	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003				Jandabup Lake	0
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003				Jandabup Lake	100

Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2002			Neerabup	0
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	2003			Barbagallo Raceway	500
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Lake Chandala Nature Reserve	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Lot 129 Devon Way, via Bullsbrook	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	100
Cacatuidae	Calyptorhynchus latirostris	Carnaby's cockatoo	EN	EN	1999			Chittering Valley	

[illegible]

Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2003 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2003 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2003 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2003 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped	Ellen Brook Reserve, Maralla Rd bushland	1000
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4	2004 Certain	Survey	Caught or trapped		

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[illegible]

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Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2009					30
Peramelidae	Isoodon fusciventer	Southwestern brown bandicoot	P4		2					

Elapidae	Neelaps calonotos		Black-striped Snake	P3	2009		Survey		5513GAA	30	
Elapidae	Neelaps calonotos		Black-striped Snake	P3	2012		Monitoring		5928GAA	30	
Elapidae	Neelaps calonotos		Black-striped Snake	P3	2017		Survey		Neelaps calonotos 25/10/2017	1000	
Macropodidae	Notamacropus irma		western brush wallaby	P4	1996	Certain	Survey	Night sighting	Lexia Wetlands, 1 km S of Maralla Rd.	1000	
Macropodidae	Notamacropus irma		western brush wallaby	P4	2003	Certain	Opportunistic sighting	Day sighting	240 Flynn Dr and 34 Mather Dr (Site Number 52)	500	
Macropodidae	Notamacropus irma		western brush wallaby	P4	2006	Certain	Survey	Day sighting	Site 4	1000	
Macropodidae	Notamacropus irma		western brush wallaby	P4	1969	Certain	Survey	Caught or trapped		10000	
Anatidae	Oxyura australis		Blue-billed duck	P4	1981				MELALEUCA	18000	
Anatidae	Oxyura australis		Blue-billed duck	P4	1978				MELALEUCA	18000	
Anatidae	Oxyura australis		Blue-billed duck	P4	1992					30	
Anatidae	Oxyura australis		Blue-billed duck	P4	1992					30	
Macropodidae	Petrogale lateralis lateralis	lateralis	Black-flanked Rock-wallaby	EN	EN	0	Certain	Historical (written)	Fossil	Abandoned limestone quarry (Dunstan's Lime Kiln Quarries) located 9 miles (=14.4 km) N of Wanneroo.	10000
Threskiornithidae	Plegadis falcinellus		Glossy ibis	MI	MI	2001				Lake Jandabup	100
Threskiornithidae	Plegadis falcinellus		Glossy ibis	MI	MI	2000				Jandabup Lake Nature Reserve	500
Threskiornithidae	Plegadis falcinellus		Glossy ibis	MI	MI	2002				Lake Jandabup	100
Threskiornithidae	Plegadis falcinellus		Glossy ibis	MI	MI	1979				MELALEUCA	18000
Threskiornithidae	Plegadis falcinellus		Glossy ibis	MI	MI	2000				Jandabup Lake Nature Reserve	500
Charadriidae	Pluvialis squatarola		Grey plover	MI	MI	1978				MELALEUCA	18000
										Warbrook, crossing road in sub-swampy country	
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1953	Certain	Survey	Caught or trapped	between railway line and Great Northern Hwy	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1963	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1964	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1965	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1966	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1967	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1968	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1969	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1970	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1970	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1971	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1972	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1973	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1974	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1975	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1976	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1977	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1978	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1979	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1980	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1981	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1982	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1983	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1984	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1985	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1990	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1992	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1994	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1995	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1996	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1997	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1998	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1999	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	2000	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	2001	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	2002	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	2003	Certain	Survey	Caught or trapped	Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	2003	Certain	Survey	Caught or trapped	Dam of NE-swamp at Twin Swamps NR	1000
										Warbrook, between railway line and Great Northern Highway	
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1954	Certain	Survey	Caught or trapped		1000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1953	Certain	Historical (written)	Caught or trapped	Potato farm 30 km North of Perth	10000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1995	Certain	Opportunistic sighting	Caught or trapped	Property west of NR	10000
Cheluidae	Pseudemydura umbrina		western swamp tortoise	CR	CR	1994	Certain	Opportunistic sighting	Sighting	93 Ellenbrook Road, Bullsbrook	1000

Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	2019	Not sure	Opportunistic sighting	Sighting	one of the sewerage ponds located at the base	50
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1967	Certain	Opportunistic sighting	Sighting	West of Ellen Brook Nature Reserve	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1965	Certain	Opportunistic sighting	Sighting	West of Ellen Brook Nature Reserve	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1963	Certain	Opportunistic sighting	Caught or trapped	On bitumen road adjacent to Lot 9	500
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1962	Certain	Opportunistic sighting	Caught or trapped	Backyard of Lot 9	500
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1963	Certain	Opportunistic sighting	Caught or trapped	Road way fronting the Research Station	500
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1978	Certain	Opportunistic sighting	Taken into care	Crossing Ellen Brook Road 0.7km south of Warbrook Road	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1982	Certain	Opportunistic sighting	Taken into care	Railway Road 300-500 south of railway/Warbrook Road crossing	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1990	Certain	Opportunistic sighting	Caught or trapped	Private property in clay pan about 1km east of TSNR	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1990	Certain	Opportunistic sighting	Caught or trapped	Private property in clay pan about 1km east of TSNR	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1994	Certain	Opportunistic sighting	Dead	Edge of clay pan about 1km east of TSNR	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1994	Certain	Opportunistic sighting	Caught or trapped	1km east of Twin Swamps Nature Reserve	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1994	Certain	Opportunistic sighting	Sighting	Sproxtton clay plan about 1km east of TSNR	1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1962	Certain	Opportunistic sighting	Sighting		1000
Cheluidae	Pseudemydura umbrina	western swamp tortoise	CR	CR	1963	Certain	Opportunistic sighting	Dead	West of TSNR	1000
Rostratulidae	Rostratula australis	Australian painted snipe	EN	EN	2012	Certain		Day sighting	in reeds at the RAAF Base Pearce, Bullsbrook	1000
Laridae	Thalasseus bergii	Crested tern	MI	MI	1978				MELALEUCA	18000
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	1981				MELALEUCA	18000
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Lake Jandabup	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	2002				Lake Jandabup	100
Scolopacidae	Tringa glareola	Wood sandpiper	MI	MI	1992					30
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Lake Jandabup	100
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	1981				MELALEUCA	18000
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Lake Jandabup	100
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Lake Jandabup	100
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Lake Jandabup	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	1978				MELALEUCA	18000
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2008				Jandabup Lake southeast	0
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2010				Jandabup Lake southeast	0
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	2011				Jandabup Lake southeast	0
Scolopacidae	Tringa nebularia	Common greenshank	MI	MI	1991					30
Scolopacidae	Tringa stagnatilis	Marsh sandpiper	MI	MI	2001				Jandabup Lake Nature Reserve	500
Scolopacidae	Tringa stagnatilis	Marsh sandpiper	MI	MI	2011				Jandabup Lake southeast	0

NatureMap Database

TAXON	CLASS	CONS	KINGDOM	TAXON	CLASS	CONS	KINGDOM
Tachybaptus novaehollandiae subsp. novaehollandiae	BIRD		Animalia	Litoria adelaidensis	AMPHI		Animalia
Poliocephalus poliocephalus	BIRD		Animalia	Limnodynastes dorsalis	AMPHI		Animalia
Fulica atra subsp. australis	BIRD		Animalia	Litoria adelaidensis	AMPHI		Animalia
Cygnus atratus	BIRD		Animalia	Limnodynastes dorsalis	AMPHI		Animalia
Tachybaptus novaehollandiae subsp. novaehollandiae	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Biziura lobata	BIRD		Animalia	Ctenotus fallens	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Fulica atra subsp. australis	BIRD		Animalia	Echiopsis curta	REPTILE		Animalia
Charadrius ruficapillus	BIRD		Animalia	Brachyurophis semifasciatus	REPTILE		Animalia
Tadorna tadornoides	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Ardea alba subsp. modesta	BIRD		Animalia	Limnodynastes dorsalis	AMPHI		Animalia
Anas superciliosa	BIRD		Animalia	Brachyurophis semifasciatus	REPTILE		Animalia
Phalacrocorax melanoleucos	BIRD		Animalia	Strophurus spinigerus subsp. spinigerus	REPTILE		Animalia
Cygnus atratus	BIRD		Animalia	Neelaps calonotos	REPTILE	P3	Animalia
Anas gracilis	BIRD		Animalia	Pseudonaja mengdeni	REPTILE		Animalia
Ardea alba subsp. modesta	BIRD		Animalia	Ramphotyphlops australis	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Ctenotus fallens	REPTILE		Animalia
Anas rhynchotis	BIRD		Animalia	Menetia greyii	REPTILE		Animalia
Anas gracilis	BIRD		Animalia	Ctenotus fallens	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Platalea flavipes	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Himantopus himantopus	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Anas gracilis	BIRD		Animalia	Strophurus spinigerus subsp. spinigerus	REPTILE		Animalia
Ardea novaehollandiae	BIRD		Animalia	Underwoodisaurus milii	REPTILE		Animalia
Fulica atra subsp. australis	BIRD		Animalia	Neelaps calonotos	REPTILE	P3	Animalia
Poliocephalus poliocephalus	BIRD		Animalia	Limnodynastes dorsalis	AMPHI		Animalia
Tachybaptus novaehollandiae subsp. novaehollandiae	BIRD		Animalia	Lucasium alboguttatum	REPTILE		Animalia
Ardea novaehollandiae	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Fulica atra subsp. australis	BIRD		Animalia	Pseudemydura umbrina	REPTILE	CR	Animalia
Ardea novaehollandiae	BIRD		Animalia	Lerista praepedita	REPTILE		Animalia
Charadrius melanops	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Fulica atra subsp. australis	BIRD		Animalia	Menetia greyii	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Threskiornis molucca	BIRD		Animalia	Simoselaps bertholdi	REPTILE		Animalia
Gerygone fusca	BIRD		Animalia	Menetia greyii	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Pletholax gracilis subsp. gracilis	REPTILE		Animalia
Malurus splendens	BIRD		Animalia	Heleioporus inornatus	AMPHI		Animalia
Cacomantis pallidus	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Accipiter fasciatus	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Smicrornis brevirostris	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Todiramphus sanctus	BIRD		Animalia	Chelodina coliei	REPTILE		Animalia
Coracina novaehollandiae	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Lichmera indistincta	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Pardalotus striatus	BIRD		Animalia	Morethia lineoocellata	REPTILE		Animalia
Rhipidura albiscapa	BIRD		Animalia	Morethia obscura	REPTILE		Animalia
Threskiornis molucca	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Cacatua pastinator	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Pachycephala rufiventris	BIRD		Animalia	Cryptoblepharus buchananii	REPTILE		Animalia
Anthochaera carunculata	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Parasuta gouldii	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Neelaps calonotos	REPTILE	P3	Animalia
Falco longipennis	BIRD		Animalia	Pygopus lepidopodus	REPTILE		Animalia
Colluricincla harmonica	BIRD		Animalia	Delma fraseri	REPTILE		Animalia
Malurus splendens	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Hirundo neoxena	BIRD		Animalia	Brachyurophis fasciolatus subsp. fasciolatus	REPTILE		Animalia
Petrochelidon nigricans	BIRD		Animalia	Delma fraseri	REPTILE		Animalia
Sericornis frontalis	BIRD		Animalia	Underwoodisaurus milii	REPTILE		Animalia
Grallina cyanoleuca	BIRD		Animalia	Egernia napoleonis	REPTILE		Animalia
Pachycephala rufiventris	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Cacatua pastinator	BIRD		Animalia	Neobatrachus pelobatoides	AMPHI		Animalia
Gerygone fusca	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Calyptorhynchus banksii	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Falco cenchroides	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Delma grayii	REPTILE		Animalia
Cracticus torquatus	BIRD		Animalia	Limnodynastes dorsalis	AMPHI		Animalia

Malurus pulcherrimus	BIRD		Animalia	Pseudonaja affinis subsp. affinis	REPTILE		Animalia
Rhipidura albiscapa	BIRD		Animalia	Lerista praepedita	REPTILE		Animalia
Streptopelia senegalensis	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Phylidonyris novaehollandiae	BIRD		Animalia	Lerista praepedita	REPTILE		Animalia
Lichenostomus virescens	BIRD		Animalia	Ctenotus fallens	REPTILE		Animalia
Phylidonyris novaehollandiae	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Lichmera indistincta	BIRD		Animalia	Strophurus spinigerus subsp. spinigerus	REPTILE		Animalia
Lichenostomus virescens	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Anthochaera carunculata	BIRD		Animalia	Egernia napoleonis	REPTILE		Animalia
Cacatua galerita	BIRD		Animalia	Pygopus lepidopodus	REPTILE		Animalia
Malurus pulcherrimus	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Dacelo novaeguineae	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Crinia insignifera	AMPHI		Animalia
Rhipidura albiscapa	BIRD		Animalia	Heleioporus barycragus	AMPHI		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Delma fraseri	REPTILE		Animalia
Cacomantis flabelliformis	BIRD		Animalia	Ramphotyphlops australis	REPTILE		Animalia
Ocyphaps lophotes	BIRD		Animalia	Lerista praepedita	REPTILE		Animalia
Petroica boodang	BIRD		Animalia	Parasuta nigriceps	REPTILE		Animalia
Cacomantis pallidus	BIRD		Animalia	Pygopus lepidopodus	REPTILE		Animalia
Smicrornis brevirostris	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Coracina novaehollandiae	BIRD		Animalia	Echiopsis curta	REPTILE		Animalia
Podargus strigoides	BIRD		Animalia	Pogona minor subsp. minor	REPTILE		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Pygopus lepidopodus	REPTILE		Animalia
Rhipidura leucophrys	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Phylidonyris novaehollandiae	BIRD		Animalia	Neobatrachus pelobatoides	AMPHI		Animalia
Smicrornis brevirostris	BIRD		Animalia	Heleioporus eyrei	AMPHI		Animalia
Gerygone fusca	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Hirundo neoxena	BIRD		Animalia	Morethia obscura	REPTILE		Animalia
Threskiornis molucca	BIRD		Animalia	Cryptoblepharus buchananii	REPTILE		Animalia
Chenonetta jubata	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Grallina cyanoleuca	BIRD		Animalia	Elapognathus coronatus	REPTILE		Animalia
Malurus splendens	BIRD		Animalia	Menetia greyii	REPTILE		Animalia
Rhipidura albiscapa	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Lichmera indistincta	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Pardalotus striatus	BIRD		Animalia	Simoselaps bertholdi	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Eolophus roseicapillus	BIRD		Animalia	Pygopus lepidopodus	REPTILE		Animalia
Cracticus torquatus	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Hirundo neoxena	BIRD		Animalia	Morethia lineoocellata	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Brachyurophis semifasciatus	REPTILE		Animalia
Barnardius zonarius	BIRD		Animalia	Lialis burtonis	REPTILE		Animalia
Lichmera indistincta	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Hirundo neoxena	BIRD		Animalia	Echiopsis curta	REPTILE		Animalia
Artamus cinereus	BIRD		Animalia	Heleioporus eyrei	AMPHI		Animalia
Zosterops lateralis	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Tadorna tadornoides	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Trichoglossus haematodus	BIRD		Animalia	Brachyurophis semifasciatus	REPTILE		Animalia
Petrochelidon nigricans	BIRD		Animalia	Heleioporus barycragus	AMPHI		Animalia
Rhipidura albiscapa	BIRD		Animalia	Heleioporus albopunctatus	AMPHI		Animalia
Barnardius zonarius	BIRD		Animalia	Elapognathus coronatus	REPTILE		Animalia
Smicrornis brevirostris	BIRD		Animalia	Heleioporus barycragus	AMPHI		Animalia
Acanthiza chrysorrhoa	BIRD		Animalia	Brachyurophis semifasciatus	REPTILE		Animalia
Lichenostomus ornatus	BIRD		Animalia	Egernia napoleonis	REPTILE		Animalia
Corvus coronoides	BIRD		Animalia	Delma fraseri	REPTILE		Animalia
Ocyphaps lophotes	BIRD		Animalia	Acritoscincus trilineatus	REPTILE		Animalia
Petrochelidon nigricans	BIRD		Animalia	Crinia insignifera	AMPHI		Animalia
Cracticus tibicen	BIRD		Animalia	Aprasia repens	REPTILE		Animalia
Egretta novaehollandiae	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Falco peregrinus	BIRD	OS	Animalia	Notechis scutatus	REPTILE		Animalia
Cygnus atratus	BIRD		Animalia	Ctenotus australis	REPTILE		Animalia
Falco cenchroides	BIRD		Animalia	Pygopus lepidopodus	REPTILE		Animalia
Anas superciliosa	BIRD		Animalia	Rhipidura leucophrys	BIRD		Animalia
Anthochaera carunculata	BIRD		Animalia	Cacatua pastinator	BIRD		Animalia
Cracticus tibicen	BIRD		Animalia	Anthochaera lunulata	BIRD		Animalia
Strophurus spinigerus	REPTILE		Animalia	Zosterops lateralis	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Pardalotus striatus	BIRD		Animalia
Hirundo neoxena	BIRD		Animalia	Cracticus torquatus	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia

Anas gracilis	BIRD		Animalia	Lichmera indistincta	BIRD		Animalia
Anthochaera carunculata	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Lichmera indistincta	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Calyptorhynchus sp.	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Cacomantis pallidus	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Petroica goodenovii	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Lichenostomus virescens	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Acanthiza inornata	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Zosterops lateralis	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Falco longipennis	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Rhipidura albiscapa	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Gerygone fusca	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Platalea flavipes	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Cracticus tibicen	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Malurus splendens	BIRD		Animalia
Crinia georgiana	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Gerygone fusca	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Cracticus tibicen	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Cracticus tibicen	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Pardalotus striatus	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Egretta novaehollandiae	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Malurus splendens	BIRD		Animalia
Notechis scutatus	REPTILE		Animalia	Accipiter fasciatus	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Phylidonyris niger	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Pardalotus striatus	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Rhipidura leucophrys	BIRD		Animalia
Isoodon obesulus	MAMMAL		Animalia	Anthochaera carunculata	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Rhipidura leucophrys	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Phylidonyris niger	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Aquila audax	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Gerygone fusca	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Grallina cyanoleuca	BIRD		Animalia
Anas superciliosa	BIRD		Animalia	Purpureicephalus spurius	BIRD		Animalia
Phalacrocorax melanoleucos	BIRD		Animalia	Lichmera indistincta	BIRD		Animalia
Malurus splendens	BIRD		Animalia	Threskiornis spinicollis	BIRD		Animalia
Acanthorhynchus superciliosus	BIRD		Animalia	Pachycephala rufiventris	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Rhipidura albiscapa	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Pardalotus striatus	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Petrochelidon nigricans	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Dacelo novaeguineae	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Gerygone fusca	BIRD		Animalia
Pletholax gracilis	REPTILE		Animalia	Rhipidura albiscapa	BIRD		Animalia
Anilius australis	REPTILE		Animalia	Anthochaera carunculata	BIRD		Animalia
Chenonetta jubata	BIRD		Animalia	Cracticus tibicen	BIRD		Animalia
Ardea novaehollandiae	BIRD		Animalia	Gerygone fusca	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Zosterops lateralis	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Petrochelidon nigricans	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Purpureicephalus spurius	BIRD		Animalia
Chenonetta jubata	BIRD		Animalia	Coracina novaehollandiae	BIRD		Animalia
Pseudophryne guentheri	AMPHI		Animalia	Chenonetta jubata	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Acanthiza inornata	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Artamus cinereus	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Barnardius zonarius	BIRD		Animalia
Acritoscincus trilineatum	REPTILE		Animalia	Cracticus tibicen	BIRD		Animalia
Chenonetta jubata	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Purpureicephalus spurius	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Chenonetta jubata	BIRD		Animalia

Tachybaptus novaehollandiae	BIRD		Animalia	Zosterops lateralis	BIRD		Animalia
Falco peregrinus	BIRD	OS	Animalia	Pachycephala rufiventris	BIRD		Animalia
Cacatua tenuirostris	BIRD		Animalia	Petroica boodang	BIRD		Animalia
Cacatua roseicapilla	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Chrysococcyx lucidus	BIRD		Animalia	Rhipidura albiscapa	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Grallina cyanoleuca	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Pardalotus striatus	BIRD		Animalia
Hemiergis quadrilineata	REPTILE		Animalia	Petrochelidon nigricans	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Anas superciliosa	BIRD		Animalia
Pseudophryne guentheri	AMPHI		Animalia	Cracticus tibicen	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Cacatua sanguinea	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Pachycephala rufiventris	BIRD		Animalia
Ctenotus fallens	REPTILE		Animalia	Petrochelidon nigricans	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Grallina cyanoleuca	BIRD		Animalia
Pogona minor	REPTILE		Animalia	Coracina novaehollandiae	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Lichenostomus virescens	BIRD		Animalia
Strophurus spinigerus	REPTILE		Animalia	Anthochaera lunulata	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Ctenotus fallens	REPTILE		Animalia	Petroica goodenovii	BIRD		Animalia
Ctenotus fallens	REPTILE		Animalia	Threskiornis molucca	BIRD		Animalia
Malurus splendens	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Anthochaera carunculata	BIRD		Animalia
Lichmera indistincta	BIRD		Animalia	Petroica boodang	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Ramphotyphlops australis	REPTILE		Animalia	Rhipidura leucophrys	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Hirundo neoxena	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Falco cenchroides	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Barnardius zonarius	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Pardalotus striatus	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Anthochaera carunculata	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Chenonetta jubata	BIRD		Animalia	Malurus splendens	BIRD		Animalia
Ardea novaehollandiae	BIRD		Animalia	Petrochelidon nigricans	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Petrochelidon nigricans	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Anthochaera lunulata	BIRD		Animalia
Morethia obscura	REPTILE		Animalia	Rhipidura leucophrys	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Zosterops lateralis	BIRD		Animalia
Acritoscincus trilineatum	REPTILE		Animalia	Lichenostomus virescens	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Lichmera indistincta	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Colluricincla harmonica	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Zosterops lateralis	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Gerygone fusca	BIRD		Animalia
Neelaps bimaculatus	REPTILE		Animalia	Malurus splendens	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Rhipidura albiscapa	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Cracticus tibicen	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Cracticus tibicen	BIRD		Animalia
Chelodina colliciei	REPTILE		Animalia	Petroica goodenovii	BIRD		Animalia
Charadrius melanops	BIRD		Animalia	Rhipidura albiscapa	BIRD		Animalia
Himantopus himantopus	BIRD		Animalia	Ocyphaps lophotes	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Cincloramphus cruralis	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Cracticus torquatus	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Petroica boodang	BIRD		Animalia
Morethia obscura	REPTILE		Animalia	Malurus splendens	BIRD		Animalia
Pogona minor	REPTILE		Animalia	Malurus splendens	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Anas superciliosa	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Coracina novaehollandiae	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Ocyphaps lophotes	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Coracina novaehollandiae	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Anthochaera lunulata	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Malurus splendens	BIRD		Animalia

Crinia insignifera	AMPHI		Animalia	Cacomantis pallidus	BIRD		Animalia
Lucasium alboguttatus	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Phylidonyris niger	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Acanthagenys rufogularis	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Lichenostomus virescens	BIRD		Animalia
Charadrius melanops	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Anthochaera carunculata	BIRD		Animalia
Pseudomys albocinereus	MAMMAL		Animalia	Phaps chalcoptera	BIRD		Animalia
Phaps chalcoptera	BIRD		Animalia	Cracticus tibicen	BIRD		Animalia
Grallina cyanoleuca	BIRD		Animalia	Manorina flavigula	BIRD		Animalia
Rhipidura fuliginosa	BIRD		Animalia	Cacatua galerita	BIRD		Animalia
Rhipidura leucophrys	BIRD		Animalia	Grallina cyanoleuca	BIRD		Animalia
Cracticus tibicen	BIRD		Animalia	Coracina novaehollandiae	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Strophurus spinigerus	REPTILE		Animalia	Rhipidura albiscapa	BIRD		Animalia
Acritoscincus trilineatum	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Falco cenchroides	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Accipiter cirrocephalus	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Falco cenchroides	BIRD		Animalia
Ctenotus fallens	REPTILE		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Elanus axillaris	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Acanthiza inornata	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Ardea novaehollandiae	BIRD		Animalia	Purpureicephalus spurius	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Petroica boodang	BIRD		Animalia
Tachybaptus novaehollandiae	BIRD		Animalia	Smicronis brevirostris	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Streptopelia senegalensis	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Dacelo novaeguineae	BIRD		Animalia
Ramphotyphlops australis	REPTILE		Animalia	Acanthiza apicalis	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Merops ornatus	BIRD		Animalia
Pletholax gracilis	REPTILE		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Ctenotus fallens	REPTILE		Animalia	Artamus cyanopterus	BIRD		Animalia
Platycercus zonarius	BIRD		Animalia	Anthochaera carunculata	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Malurus splendens	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Acanthiza inornata	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Cracticus tibicen	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Barnardius zonarius	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Rhipidura albiscapa	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Anas superciliosa	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Cracticus tibicen	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Zosterops lateralis	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Pachycephala rufiventris	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Pachycephala rufiventris	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Anthochaera carunculata	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Charadrius melanops	BIRD		Animalia	Daphoenositta chrysoptera	BIRD		Animalia
Ctenophorus adelaidensis	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Threskiornis molucca	BIRD		Animalia	Pardalotus striatus	BIRD		Animalia
Circus approximans	BIRD		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Chenonetta jubata	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Threskiornis spinicollis	BIRD		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Acanthiza chrysorrhoa	BIRD		Animalia	Grallina cyanoleuca	BIRD		Animalia
Lichmera indistincta	BIRD		Animalia	Pachycephala rufiventris	BIRD		Animalia
Zosterops lateralis	BIRD		Animalia	Eolophus roseicapillus	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Litoria moorei	AMPHI		Animalia	Rhipidura leucophrys	BIRD		Animalia
Pachycephala rufiventris	BIRD		Animalia	Malurus splendens	BIRD		Animalia
Gerygone fusca	BIRD		Animalia	Petrochelidon nigricans	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Anas superciliosa	BIRD		Animalia	Anthochaera carunculata	BIRD		Animalia
Pseudophryne guentheri	AMPHI		Animalia	Gerygone fusca	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Barnardius zonarius	BIRD		Animalia

Anas gracilis	BIRD		Animalia	Daphoenositta chrysoptera	BIRD		Animalia
Tadorna tadornoides	BIRD		Animalia	Glyciphila melanops	BIRD		Animalia
Tachybaptus novaehollandiae	BIRD		Animalia	Petroica boodang	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Barnardius zonarius	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Corvus coronoides	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Falco cenchroides	BIRD		Animalia
Tadorna tadornoides	BIRD		Animalia	Pardalotus striatus	BIRD		Animalia
Anas superciliosa	BIRD		Animalia	Eolophus roseicapillus	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Tadorna tadornoides	BIRD		Animalia
Cracticus torquatus	BIRD		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Malurus splendens	BIRD		Animalia
Anilius australis	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Platalea flavipes	BIRD		Animalia	Grallina cyanoleuca	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Rhipidura leucophrys	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Aprasia repens	REPTILE		Animalia	Cracticus tibicen	BIRD		Animalia
Lichenostomus virescens	BIRD		Animalia	Petrochelidon nigricans	BIRD		Animalia
Phylidonyris novaehollandiae	BIRD		Animalia	Barnardius zonarius	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Zosterops lateralis	BIRD		Animalia
Anas superciliosa	BIRD		Animalia	Pachycephala rufiventris	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Phylidonyris niger	BIRD		Animalia
Charadrius melanops	BIRD		Animalia	Phylidonyris niger	BIRD		Animalia
Rhipidura fuliginosa	BIRD		Animalia	Petroica boodang	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Pachycephala rufiventris	BIRD		Animalia
Myobatrachus gouldii	AMPHI		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Tachybaptus novaehollandiae	BIRD		Animalia	Cracticus tibicen	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Cacomantis flabelliformis	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Zosterops lateralis	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Egretta novaehollandiae	BIRD		Animalia
Platycercus zonarius	BIRD		Animalia	Lichmera indistincta	BIRD		Animalia
Anthochaera lunulata	BIRD		Animalia	Lichenostomus virescens	BIRD		Animalia
Corvus coronoides	BIRD		Animalia	Coracina novaehollandiae	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Rhipidura albiscapa	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Cracticus tibicen	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Lichmera indistincta	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Phaps chalcoptera	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Mus musculus	MAMMAL		Animalia	Corvus coronoides	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Strepera versicolor	BIRD		Animalia
Acritoscincus trilineatum	REPTILE		Animalia	Colluricincla harmonica	BIRD		Animalia
Anilius australis	REPTILE		Animalia	Coracina novaehollandiae	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Tachybaptus novaehollandiae	BIRD		Animalia	Aquila audax	BIRD		Animalia
Egernia napoleonis	REPTILE		Animalia	Todiramphus sanctus	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Anthochaera carunculata	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Phaps chalcoptera	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Anthochaera lunulata	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Lichmera indistincta	BIRD		Animalia
Anas gracilis	BIRD		Animalia	Dacelo novaeguineae	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Dromaius novaehollandiae	BIRD		Animalia
Neelaps bimaculatus	REPTILE		Animalia	Anthochaera carunculata	BIRD		Animalia
Anilius australis	REPTILE		Animalia	Acanthiza apicalis	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Cracticus torquatus	BIRD		Animalia
Heleioporus eyrei	AMPHI		Animalia	Zosterops lateralis	BIRD		Animalia
Crinia glauerti	AMPHI		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Tiliqua rugosa subsp. rugosa	REPTILE		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Litoria moorei	AMPHI		Animalia	Lichenostomus virescens	BIRD		Animalia
Petroica multicolor	BIRD		Animalia	Corvus coronoides	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Corvus coronoides	BIRD		Animalia
Isodon fusciventer	MAMMA	P4	Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Ocyphaps lophotes	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Cracticus tibicen	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Corvus coronoides	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia

Calyptorhynchus latirostris	BIRD	EN	Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Pardalotus striatus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Rhipidura albiscapa	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Petroica goodenovii	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Corvus coronoides	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Rhipidura albiscapa	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Rhipidura leucophrys	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Petrochelidon nigricans	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Anthochaera carunculata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthiza apicalis	BIRD		Animalia
Calyptorhynchus banksii subsp. naso	BIRD	VU	Animalia	Eolophus roseicapillus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Isodon fusciventer	MAMMA	P4	Animalia	Falco peregrinus	BIRD	OS	Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Colluricincla harmonica	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Rhipidura albiscapa	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Hirundo neoxena	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Gerygone fusca	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Purpureicephalus spurius	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthagenys rufogularis	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Cacomantis pallidus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Dacelo novaeguineae	BIRD		Animalia
Dasyurus geoffroii	MAMMA	VU	Animalia	Lichenostomus virescens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Anthochaera carunculata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Petroica goodenovii	BIRD		Animalia
Dasyurus geoffroii	MAMMA	VU	Animalia	Hirundo neoxena	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Pardalotus striatus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthiza apicalis	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Malurus splendens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Threskiornis molucca	BIRD		Animalia
Neelaps calonotos	REPTILE	P3	Animalia	Anthochaera carunculata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Barnardius zonarius	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Coracina novaehollandiae	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Lichmera indistincta	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Zosterops lateralis	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Cracticus torquatus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Anthochaera carunculata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Lichmera indistincta	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Gerygone fusca	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Malurus splendens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Pachycephala rufiventris	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Barnardius zonarius	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Corvus coronoides	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Malurus splendens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Anthochaera lunulata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Gerygone fusca	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Barnardius zonarius	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthiza inornata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Anthochaera lunulata	BIRD		Animalia
Neelaps calonotos	REPTILE	P3	Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Chenonetta jubata	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Petroica goodenovii	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Tadorna tadornoides	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Colluricincla harmonica	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Cracticus tibicen	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Coracina novaehollandiae	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Malurus splendens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Lichenostomus virescens	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Cacomantis flabelliformis	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Lichmera indistincta	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Phaps chalcoptera	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Rhipidura albiscapa	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Lichmera indistincta	BIRD		Animalia
Calyptorhynchus latirostris	BIRD	EN	Animalia	Acanthiza inornata	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Barnardius zonarius	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Lichenostomus virescens	BIRD		Animalia

Ctenophorus adelaidensis	REPTILE		Animalia	Acanthiza apicalis	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Barnardius zonarius	BIRD		Animalia
Tachyglossus aculeatus	MAMMAL		Animalia	Phaps chalcoptera	BIRD		Animalia
Morethia obscura	REPTILE		Animalia	Cracticus tibicen	BIRD		Animalia
Ctenophorus adelaidensis	REPTILE		Animalia	Threskiornis spinicollis	BIRD		Animalia
Delma fraseri	REPTILE		Animalia	Purpureicephalus spurius	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Gerygone fusca	BIRD		Animalia
Merops ornatus	BIRD		Animalia	Petrochelidon nigricans	BIRD		Animalia
Corvus coronoides subsp. perplexus	BIRD		Animalia	Hirundo neoxena	BIRD		Animalia
Heleioporus albopunctatus	AMPHI		Animalia	Gerygone fusca	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Strepera versicolor	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Lichmera indistincta	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Pachycephala rufiventris	BIRD		Animalia
Aprasia repens	REPTILE		Animalia	Lichmera indistincta	BIRD		Animalia
Litoria adelaidensis	AMPHI		Animalia	Anthochaera lunulata	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Simoselaps bertholdi	REPTILE		Animalia	Anthochaera carunculata	BIRD		Animalia
Neelaps bimaculatus	REPTILE		Animalia	Barnardius zonarius	BIRD		Animalia
Pygopus lepidopodus	REPTILE		Animalia	Rhipidura leucophrys	BIRD		Animalia
Acanthorhynchus superciliosus	BIRD		Animalia	Grallina cyanoleuca	BIRD		Animalia
Phalacrocorax varius	BIRD		Animalia	Purpureicephalus spurius	BIRD		Animalia
Cacatua galerita subsp. galerita	BIRD		Animalia	Pachycephala rufiventris	BIRD		Animalia
Platycercus spurius	BIRD		Animalia	Rhipidura leucophrys	BIRD		Animalia
Phalacrocorax melanoleucos subsp. melanoleucos	BIRD		Animalia	Pachycephala rufiventris	BIRD		Animalia
Gavicalis virescens	BIRD		Animalia	Artamus cinereus	BIRD		Animalia
Elanus caeruleus subsp. axillaris	BIRD		Animalia	Lichmera indistincta	BIRD		Animalia
Gavicalis virescens	BIRD		Animalia	Colluricincla harmonica	BIRD		Animalia
Cacatua galerita subsp. galerita	BIRD		Animalia	Heleioporus eyrei	AMPHI		Animalia
Cacatua galerita subsp. galerita	BIRD		Animalia	Lerista elegans	REPTILE		Animalia
Phalacrocorax sp.	BIRD		Animalia	Mus musculus	MAMMAL		Animalia
Botaurus poiciloptilus	BIRD	EN	Animalia	Tarsipes rostratus	MAMMAL		Animalia
Pseudomys albocinereus	MAMMAL		Animalia	Acanthiza inornata	BIRD		Animalia
Nyctophilus gouldi	MAMMAL		Animalia	Lerista elegans	REPTILE		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Malurus splendens	BIRD		Animalia
Isoodon obesulus subsp. fusciventer	MAMMAL		Animalia	Anilius australis	REPTILE		Animalia
Macropus fuliginosus	MAMMAL		Animalia	Heleioporus eyrei	AMPHI		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Ardea novaehollandiae	BIRD		Animalia
Phylidonyris nigra subsp. gouldii	BIRD		Animalia	Grallina cyanoleuca	BIRD		Animalia
Merops ornatus	BIRD		Animalia	Malurus splendens	BIRD		Animalia
Chrysococcyx lucidus subsp. plagosus	BIRD		Animalia	Ctenophorus adelaidensis	REPTILE		Animalia
Isoodon obesulus subsp. fusciventer	MAMMAL		Animalia	Acanthiza apicalis	BIRD		Animalia
Malurus splendens	BIRD		Animalia	Rhipidura leucophrys	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Gerygone fusca	BIRD		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Lerista elegans	REPTILE		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Charadrius melanops	BIRD		Animalia
Phascogale tapoatafa subsp. tapoatafa	MAMMAL		Animalia	Lerista elegans	REPTILE		Animalia
Isoodon obesulus subsp. fusciventer	MAMMAL		Animalia	Litoria moorei	AMPHI		Animalia
Simoselaps bertholdi	REPTILE		Animalia	Limnodynastes dorsalis	AMPHI		Animalia
Tarsipes rostratus	MAMMAL		Animalia	Tadorna tadornoides	BIRD		Animalia
Delma fraseri	REPTILE		Animalia	Grallina cyanoleuca	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Cacatua pastinator	BIRD		Animalia
Nyctophilus geoffroyi subsp. geoffroyi	MAMMAL		Animalia	Gerygone fusca	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Anthochaera carunculata	BIRD		Animalia
Menetia greyii	REPTILE		Animalia	Ninox novaeseelandiae subsp. boobook	BIRD		Animalia
Rattus rattus	MAMMAL		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Anas castanea	BIRD		Animalia
Cryptoblepharus buchananii	REPTILE		Animalia	Ctenophorus adelaidensis subsp. adelaidensis	REPTILE		Animalia
Crinia insignifera	AMPHI		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Morethia lineoocellata	REPTILE		Animalia	Litoria adelaidensis	AMPHI		Animalia
Simoselaps bertholdi	REPTILE		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Aprasia repens	REPTILE		Animalia	Neelaps calonotos	REPTILE	P3	Animalia
Lerista praepedita	REPTILE		Animalia	Pseudophryne guentheri	AMPHI		Animalia
Crinia glauerti	AMPHI		Animalia	Corvus coronoides	BIRD		Animalia
Lerista elegans	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Simoselaps bertholdi	REPTILE		Animalia	Acanthorhynchus superciliosus	BIRD		Animalia
Ctenophorus adelaidensis	REPTILE		Animalia	Gerygone fusca	BIRD		Animalia
Ctenophorus adelaidensis	REPTILE		Animalia	Barnardius zonarius	BIRD		Animalia
Limnodynastes dorsalis	AMPHI		Animalia	Cacomantis pallidus	BIRD		Animalia

Pygopus lepidopodus	REPTILE		Animalia	Pachycephala rufiventris	BIRD		Animalia
Ctenophorus adalaidensis	REPTILE		Animalia	Artamus cinereus	BIRD		Animalia
Echiopsis curta	REPTILE		Animalia	Merops ornatus	BIRD		Animalia
Brachyurophis semifasciatus	REPTILE		Animalia	Tadorna tadornoides	BIRD		Animalia
Neelaps bimaculatus	REPTILE		Animalia	Acanthiza chrysorrhoa	BIRD		Animalia
Lerista praepedita	REPTILE		Animalia	Phylidonyris novaehollandiae	BIRD		Animalia
Lialis burtonis	REPTILE		Animalia	Corvus coronoides	BIRD		Animalia
Crinia insignifera	AMPHI		Animalia	Morethia lineoocellata	REPTILE		Animalia
Morethia obscura	REPTILE		Animalia	Cryptoblepharus buehananii	REPTILE		Animalia
Morethia obscura	REPTILE		Animalia	Simoselaps bertholdi	REPTILE		Animalia
Delma fraseri	REPTILE		Animalia	Ctenotus fallens	REPTILE		Animalia
Lerista elegans	REPTILE		Animalia	Ctenotus australis	REPTILE		Animalia
Lerista lineopunctulata	REPTILE		Animalia	Cryptoblepharus buehananii	REPTILE		Animalia
Ramphotyphlops australis	REPTILE		Animalia	Calyptorhynchus latirostris	BIRD	EN	Animalia
Ctenotus fallens	REPTILE		Animalia				



Australian Government

Department of Climate Change, Energy,
the Environment and Water

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. Please see the caveat for interpretation of information provided here.

Report created: 15-Nov-2022

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment 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 (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	31
Listed Migratory Species:	8

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 <https://www.dcceew.gov.au/parks-heritage/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 Lands:	71
Commonwealth Heritage Places:	None
Listed Marine Species:	12
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	4
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	12
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[Resource Information]

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

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Assemblages of plants and invertebrate animals of tumulus (organic mound) springs of the Swan Coastal Plain	Endangered	Community known to occur within area	In buffer area only
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area	In feature area
Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain	Endangered	Community known to occur within area	In buffer area only
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species

[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding known to occur within area	In feature area
FISH			
Galaxiella nigrostriata Blackstriped Dwarf Galaxias, Black-stripe Minnow [88677]	Endangered	Species or species habitat likely to occur within area	In feature area
INSECT			
Hesperocolletes douglasi Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat known to occur within area	In feature area
MAMMAL			
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In buffer area only
OTHER			
Westralunio carteri Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat may occur within area	In buffer area only
PLANT			
Acacia anomala Grass Wattle, Chittering Grass Wattle [8153]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat likely to occur within area	In feature area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area	In feature area
Caleana dixonii listed as Paracaleana dixonii Sandplain Duck Orchid [87944]	Endangered	Species or species habitat may occur within area	In feature area
Chamelaucium sp. Gingin (N.G.Marchant 6) Gingin Wax [88881]	Endangered	Species or species habitat likely to occur within area	In feature area
Conospermum densiflorum subsp. unicephalum One-headed Smokebush [64871]	Endangered	Species or species habitat may occur within area	In buffer area only
Darwinia foetida Muchea Bell [83190]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area	In feature area
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leafed Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area	In feature area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eucalyptus argutifolia Yanchep Mallee, Wabling Hill Mallee [24263]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Grevillea curviloba subsp. curviloba Curved-leaf Grevillea [64908]	Endangered	Species or species habitat known to occur within area	In feature area
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat known to occur within area	In buffer area only
Macarthuria keigheryi Keighery's Macarthuria [64930]	Endangered	Species or species habitat may occur within area	In feature area
Synaphea sp. Fairbridge Farm (D. Papenfus 696) Selena's Synaphea [82881]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Thelymitra dedmaniarum Cinnamon Sun Orchid [65105]	Endangered	Species or species habitat may occur within area	In buffer area only
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Listed Migratory Species

[[Resource Information](#)]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Commonwealth Lands

[[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.

Commonwealth Land Name	State	Buffer Status
Defence		
Defence - MUCHEA ARMAMENT RANGE [50076]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50057]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50058]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50056]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50059]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50078]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50072]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50075]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50071]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50084]	WA	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - MUCHEA ARMAMENT RANGE [50087]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50080]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50074]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50081]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50079]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50091]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50086]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50090]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50092]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50093]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50095]	WA	In feature area
Defence - MUCHEA ARMAMENT RANGE [50070]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50085]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50077]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50062]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50063]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50083]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50082]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50089]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50088]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50061]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50094]	WA	In feature area
Defence - MUCHEA ARMAMENT RANGE [50060]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50067]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50066]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50065]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50064]	WA	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - MUCHEA ARMAMENT RANGE [50069]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50068]	WA	In buffer area only
Defence - MUCHEA ARMAMENT RANGE [50073]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50051]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50053]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50052]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50055]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50054]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50042]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50037]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50036]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50035]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50040]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50049]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50019]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50044]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50020]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50030]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50028]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50038]	WA	In buffer area only

Commonwealth Land Name	State	Buffer Status
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50025]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50033]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50043]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50046]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50021]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50027]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50034]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50024]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50023]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50022]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50041]	WA	In buffer area only
Defence - PEARCE - AP19 HF RECEIVER STATION BULLSBROOK [50026]	WA	In buffer area only
Defence - PEARCE - AP8 BORE SITES [50005]	WA	In buffer area only
Unknown		
Commonwealth Land - [50856]	WA	In buffer area only

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In buffer area only

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Neaves Road	Nature Reserve	WA	In buffer area only
Unnamed WA02336	Nature Reserve	WA	In buffer area only
Unnamed WA44622	Nature Reserve	WA	In buffer area only
Yeal	Nature Reserve	WA	In buffer area only

EPBC Act Referrals					[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
Samphire Offshore Wind Farm	2022/09306		Assessment	In buffer area only	

Controlled action				
Alkimos Seawater Desalination	2019/8453	Controlled Action	Assessment Approach	In buffer area only
Great Northern Highway Muchea to Wubin Upgrade Stage 2 - Muchea North, WA	2016/7656	Controlled Action	Post-Approval	In buffer area only
Muchea Industrial Precinct, Part of Lot 102 Great Northern Highway, Muchea, WA	2017/8119	Controlled Action	Post-Approval	In buffer area only
Natural Gas Pipeline Expansion	2006/2813	Controlled Action	Post-Approval	In buffer area only
Perth-Darwin National Highway alignment (Swan Valley Section), WA	2013/7042	Controlled Action	Post-Approval	In buffer area only
Sand quarry development, Lot 2, Bingham Road, Bullsbrook, WA	2017/8104	Controlled Action	Assessment Approach	In buffer area only

Not controlled action				
Construction of an International Rifle Range	2011/6068	Not Controlled Action	Completed	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
Transmission Line Rebuild and Extension	2009/5105	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Referral decision				
Boundary Road Sand Quarry	2019/8560	Referral Decision	Completed	In buffer area only
Transmission Line Rebuild and Extension	2009/4972	Referral Decision	Completed	In buffer area only

Appendix 8: Fauna Habitat Assessment (example)

FAUNA HABITAT ASSESSMENT SHEET

(South West)

Location: RAAF Pearce

Site Number: HA 1

Project Number: ME/PCB 01



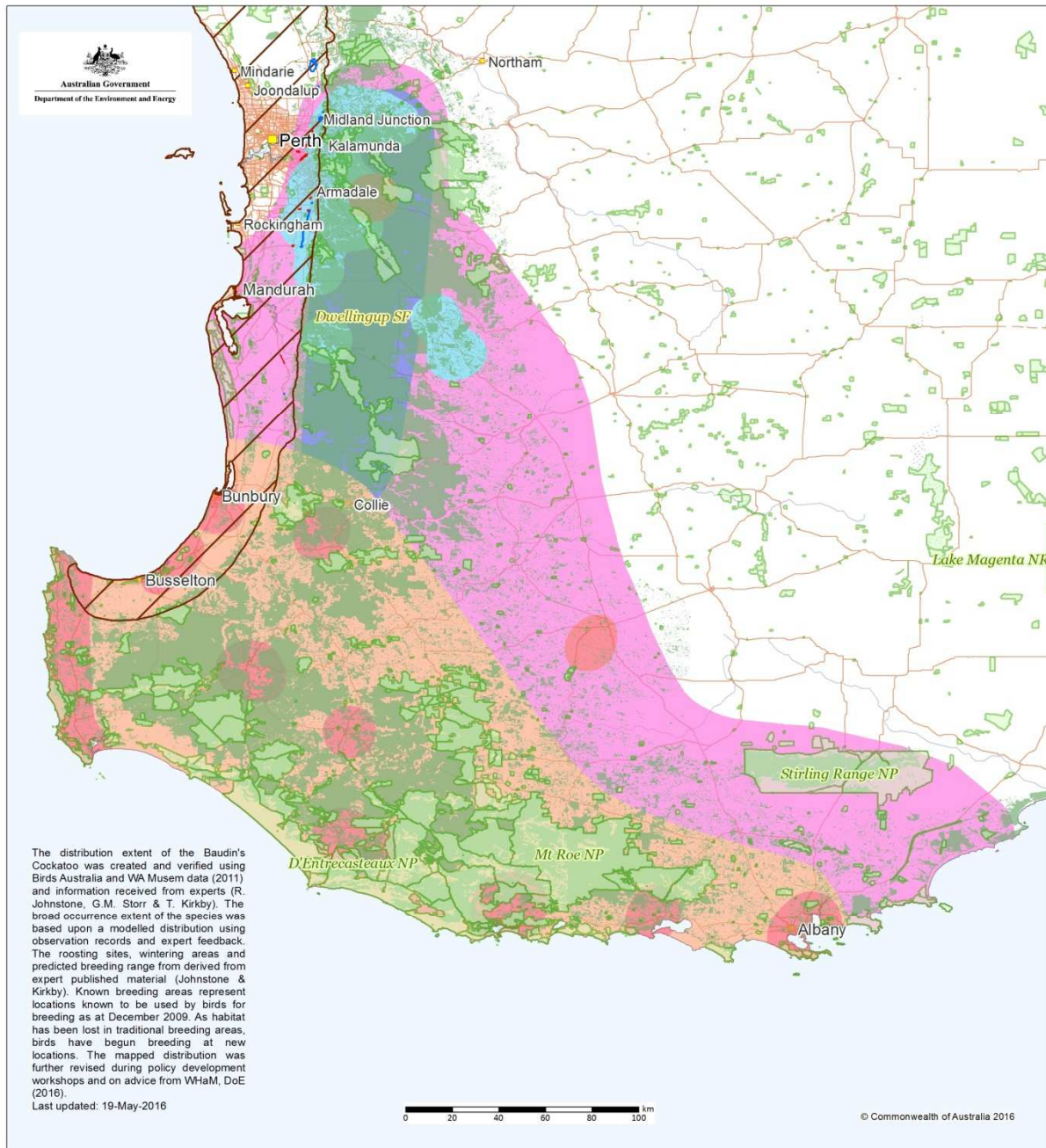
Date: 14 November 2022		Easting: 398613		Aspect	N	E	S	W		
		Northing: 6502623			NW	NE	SW	SE		
Quadrat Size: 50 x 50 m					N/A	Notes:				
Soil Texture	sand	sandy-loam	loam	cracking clay		clay				
VEGETATION										
Vegetation Description	Hummock Grassland	Other: Coastal Heath		Average Height	Cover					
	Acacia Shrubland	Stratum			Scattered Plants	Sparse	Moderate	Thick		
	Riverine Woodland	Overstorey	<i>Banksia attenuata</i> , <i>B. mensezii</i>	6	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%		
	Sandplain	Midstorey	<i>Melaleuca</i> , <i>Kunzea glabrensis</i> , <i>Adenanthos sericeus</i>	4	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%		
	Rocky Outcrop									
	Low Woodland	Ground Cover	<i>Leptospermum erubescens</i> , mixed herbs and grasses	1	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%		
CONDITION					LAST FIRE					
Scale:	5 Pristine	4 Excellent	3 Very Good	2 Good	1 Degraded	0 Completely Degraded	0 <1 year	1 1-3 Yr	2 4-5 Yr	3 >5 Yr
Notes:										

DISTURBANCE										
(general)					(cattle)					
	0 heavy	1 medium	2 mild	3 none		0 heavy	1 medium	2 mild	3 none	
Notes: previous bildings/ infrastructure										
GROUND COVER										
Bare Ground	0 <5% COVER	1 <20% COVER	2 20-60%	3 100%		Hummock Grass	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%
Rock	0 <5% COVER	1 <20% COVER	2 20-60%	3 100%		Other Grass	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%
Leaf Litter	0 <5% COVER	1 <20% COVER	2 20-60%	3 100%		Herbs	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%
Hollow logs	0 <5% COVER	1 <20% COVER	2 20-60%	3 100%		Other:	0 <5% COVER	1 <20% COVER	2 20-60%	3 60-100%
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stoney	2 Sandy Loam	3 Sand	Peeling Bark	0 none	1 rare	2 moderate	3 common	
Pebbles Stones	0 <5%	1 <20%	2 60%	3 60-100%	Large Hollows >100mm	0 none	1 rare	2 moderate	3 common	
Exfoliating Slabs	0 <5%	1 <20%	2 60%	3 60-100%	Small Hollows <100 mm	0 none	1 rare	2 moderate	3 common	
Rock Crevices	0 <5%	1 <20%	2 60%	3 60-100%	Water Prescence	0 none	1 rare	2 moderate	3 common	
Boulders	0 <5%	1 <20%	2 60%	3 60-100%	Distance to Water	0 >5km	1 2-5km	2 500m - 2km	3 <500m	
Suitability for Bats	YES		NO		Termite Mounds	0 none	1 rare	2 moderate	3 common	
Caves	Absent		Present		Woody Debris	0 none	1 rare	2 moderate	3 common	
Species:										
Birds				Mammals				Reptiles		
Singing Honeyeater				Grey Kangaroo				Shingleback		

Appendix 9: Black Cockatoo Distribution Maps

Appendix A – Distribution maps for the three black cockatoos

Map 2: Modelled distribution for Baudin's Cockatoo
(*Calyptorhynchus baudinii*)



Produced by:
Environmental Resources Information Network 2016

Contextual data source:
National Vegetation Information System (NVIS 4.2) 2016
Interim Biogeographic Regionalisation for Australia (IBRA) version 7 2012
Collaborative Australian Protected Area Database (CAPAD) 2014
Geoscience Australia GEODATA TOPO 250K Topographic Data Series 3 2006

Projection: Geographic
Datum: GDA94

Ecological Communities

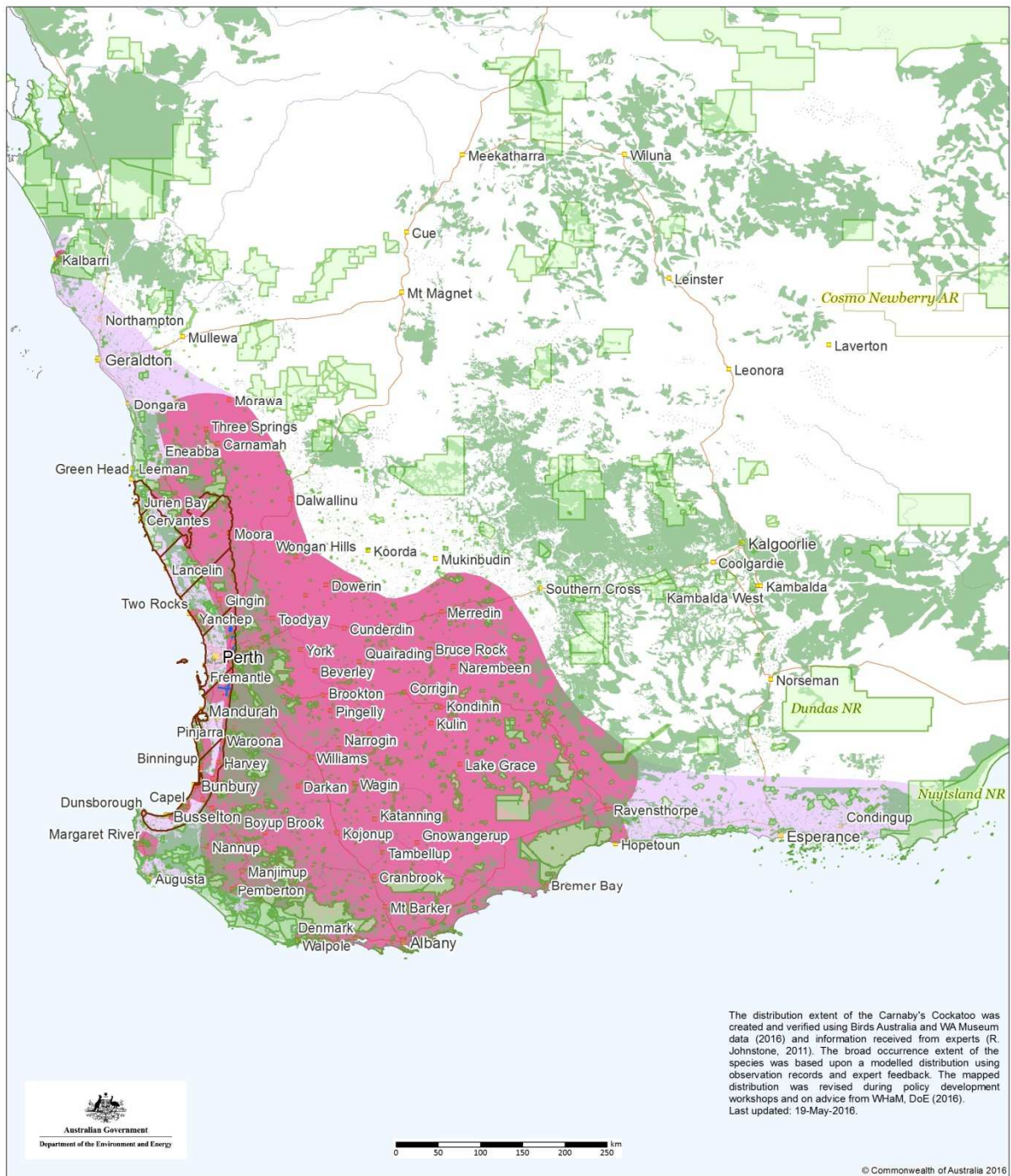
- Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain
- Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain
- Banksia Woodlands of the Swan Coastal Plain
- Conservation Areas
- Jarrah, Karri and Marri (NVIS 4.2)

Species

- Known Breeding Areas
- Predicted Breeding Range
- Known Foraging Areas
- Main Wintering Area
- Species Likely to Occur

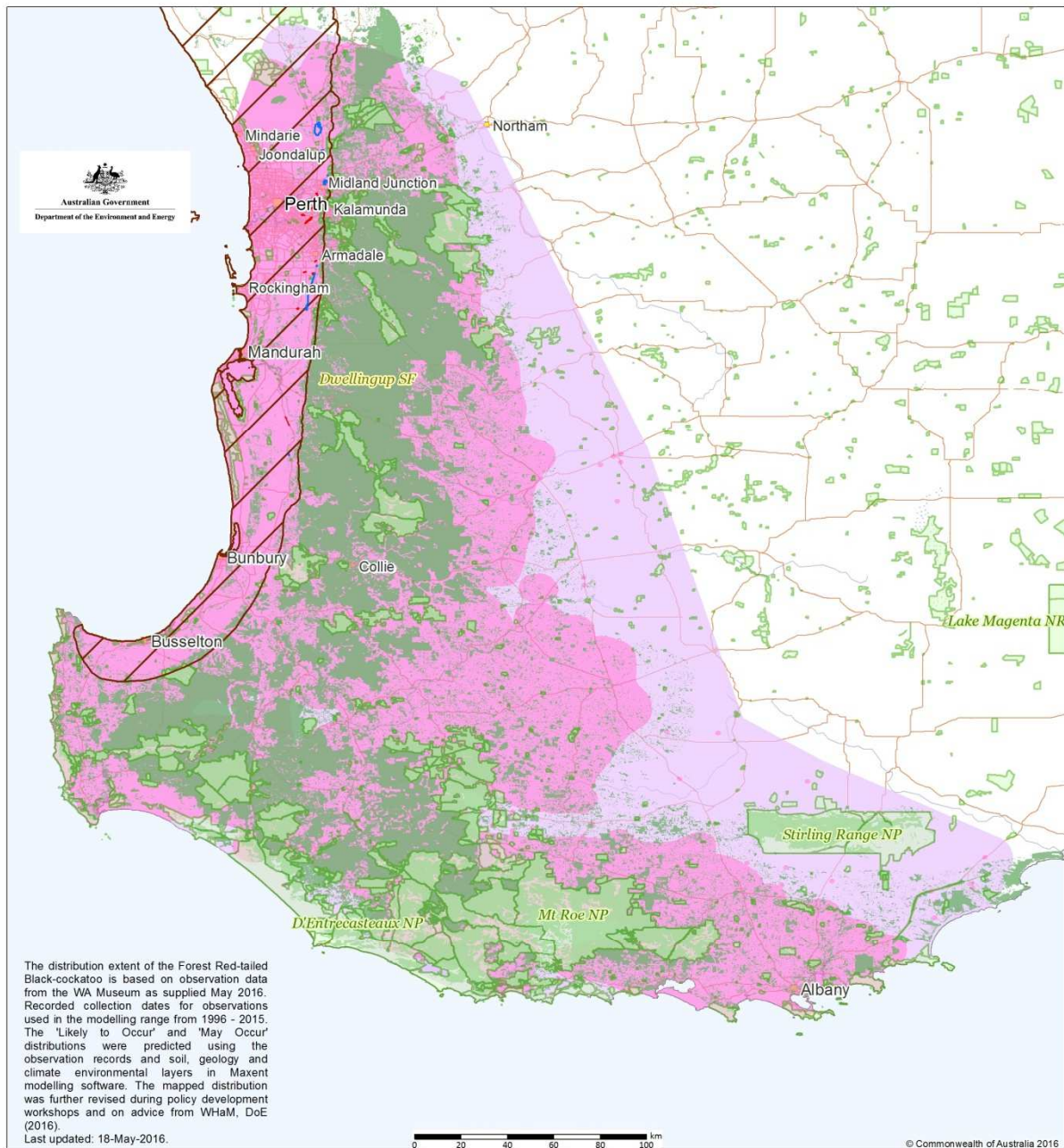
- Cities & Towns
- Roads (sealed)
- Roads (unsealed)
- State Border
- Major Rivers
- Lakes/Reservoirs
- Non-perennial Lakes

Map 3: Modelled distribution for Carnaby's Cockatoo
(*Calyptorhynchus latirostris*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool and the Species Profiles & Threats Database at <http://www.environment.gov.au/biodiversity/threatened/index.html>

Map 4: Modelled distribution for Forest Red-tailed Black-Cockatoo
(*Calyptorhynchus banksii naso*)



INDICATIVE MAP ONLY: For the latest departmental information, please refer to the Protected Matters Search Tool and the Species Profiles & Threats Database at <http://www.environment.gov.au/biodiversity/threatened/index.html>

Produced by:
Environmental Resources Information Network 2016

Contextual data source:
National Vegetation Information System (NVIS 4.2) 2016
Interim Biogeographic Regionalisation for Australia (IBRA) version 7 2012
Collaborative Australian Protected Area Database (CAPAD) 2014
Geoscience Australia GEODATA TOPO 250K Topographic Data Series 3 2006

Projection: Geographic
Datum: GDA94

Conservation Areas
Jarrah, Karri and Marri (NVIS 4.2)

Species
Likely to Occur
May Occur

Ecological Communities

Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain
Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain
Banksia Woodlands of the Swan Coastal Plain

Cities & Towns
Roads (sealed)
Roads (unsealed)
State Border
Major Rivers
Lakes/Reservoirs
Non-perennial Lakes