Tuckabianna Gold Project

Basic Terrestrial Fauna Survey Report

Prepared for Westgold Resources Limited

April 2021

Limitations

Scope of services

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In preparing the report, WE have relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, WE have not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. WE have also not attempted to determine whether any material matter has been omitted from the data. WE will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WE. The making of any assumption does not imply that WE have made any enquiry to verify the correctness of that assumption.

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Report Version	Revision No.	Purpose	Author / Reviewer	Submitted to Client	
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Draft Report	1	For client review	Western Ecological / Westgold Resources	Electronic	22/03/2021
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Executive Summary

Westgold Resources Limited commissioned Western Ecological to undertake a basic terrestrial fauna survey for the Tuckabianna Gold Project in early 2021. The survey area is located approximately 25 km east of Cue, Western Australia and is approximately 2,200 ha. The basic terrestrial fauna survey was required to support an application to construct a tailings storage facility within the greater Tuckabianna ore processing site.

The outcome of the survey undertaken by Western Ecological and the information supplied in this report will be used to inform the environmental assessment and approvals process for construction of the tailings storage facility.

The desktop assessment involved searches of the Department of Biodiversity, Conservation and Attractions Threatened Fauna Database, NatureMap and the EPBC Protected Matters Search Tool and. Results of the databases searches returned a total of 234 vertebrate species from 72 families. These were comprised of two amphibian species from two families, 46 reptile species from nine families, 169 bird species from 52 families, and 17 mammal species from nine families.

A total of 31 conservation significant vertebrate species from 17 families were identified during the desktop review of the database searches. These were comprised of three reptile species from one family, 25 bird species from 13 families and three mammal species from three families.

Following assessment of these 31 conservation significant species, a total of 14 species are considered as either Likely, Possible or Unlikely to occur in the survey area. Of these 14 conservation significant species, no species were recorded during the assessment and no species are considered Likely to occur. A total of one species is considered as Possibly occurring in the survey area, the West Coast Mulga Slider (*Lerista eupoda*). The remaining 13 species are considered Unlikely to occur in the survey area

A total of 37 fauna species, from 25 families were recorded during the field survey. This was comprised of five reptile species from four families, 27 bird species from 17 families and five mammal species from four families. All species recorded were considered to be common and widespread in the region.

A total of 18 habitat assessments and eight reptile searches were undertaken during the field survey. A total of three broad fauna habitats types were recorded, these were Mulga Shrubland, Drainage Area and Scattered Acacia on Stony Plains. The most widespread habitat across the survey area was Mulga Shrubland, consisting of 54% of the survey area. Much of the survey area (23%) was in a degraded condition due to grazing (Cattle), previous vegetation clearing associated with mining activities and tracks and roads.

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1 Introduction

1.1 Background

Westgold Resources Limited (Westgold) commissioned Western Ecological (WE) to undertake a basic terrestrial fauna survey for the Tuckabianna Project in early 2021. The survey area is located approximately 25 km east of Cue, Western Australia (WA) and is approximately 2,200 ha (Figure 1).

The basic terrestrial fauna survey was required to support an application to construct a tailings storage facility within the greater Tuckabianna ore processing site. The outcome of the survey undertaken by WE and the information supplied in this report will be used to inform the environmental assessment and approvals process for construction of the tailings storage facility (TSF).

1.2 Scope and Objective

The scope of works to be undertaken was as follows:

- Basic fauna survey
- Document the above in a concise report.

The objective of the fauna survey was to define the fauna values in the survey area, to support future project planning, and inform environmental approvals.

Figure 1: Site Location

0 5 10 15 km

Scale 1:500,000

GDA94 - MGA Zone 50

Legend

Survey Area

Ref: 100_G003_RevA.qgz

1.3 Legislative Context

Fauna in Western Australia (WA) is protected formally and informally by various legislative and non-legislative measures, which are as follows:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- *Western Australian Biodiversity Conservation Act 2016* (BC Act).

Non-legislative measures:

- WA Department of Biodiversity, Conservation and Attractions (DBCA) Priority lists for flora, ecological communities and fauna
- 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 Agriculture, Water and the Environment (DAWE) 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 Fauna

Certain populations or communities of 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.

1.4 Bioregions and Climate

Bioregions

The Biogeographic Regionalisation of Australia (IBRA7) divides Australia into 89 bioregions based on major biological, geographical and geological attributes. These bioregions are subdivided into 419 subregions as part of a refinement of the IBRA framework (DEE 2016). The survey area is in the Murchison IBRA subregion (MUR01) which forms part of the Murchison Bioregion.

The Murchison IBRA subregion (MUR01) consists of the northern parts of the 'Southern Cross' and 'Eastern Goldfields' Terrains of the Yilgarn Craton. It is characterised by internal drainage and extensive areas of elevated red desert sandplains with minimal dune development. Salt lake systems are present and are associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes are present as well as red sandplains, with vegetation which is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands. The climate is arid, with mainly winter rainfall (200 mm) (Cowan 2001).

Climate

The nearest and most relevant Bureau of Meteorology (BoM) weather station is Cue (Station No. 007017) which is approximately 25 km west of the survey area, with temperature records from 1897 to 1985 and rainfall records from 1894 to 2021 (BoM 2021).

The annual long-term (1894 – 2020) average rainfall at Cue weather station is 232.6 mm (BoM 2021), with the lowest average monthly rainfall being 6.5 mm in October, while the highest average monthly rainfall is 29.5 mm in February (BoM 2021) (Figure 2). On average the warmest month of the year at Cue weather station is January with a mean maximum temperature of 37.8°C. July is the coolest month of the year with a mean maximum temperature of 18.4°C (Figure 2).

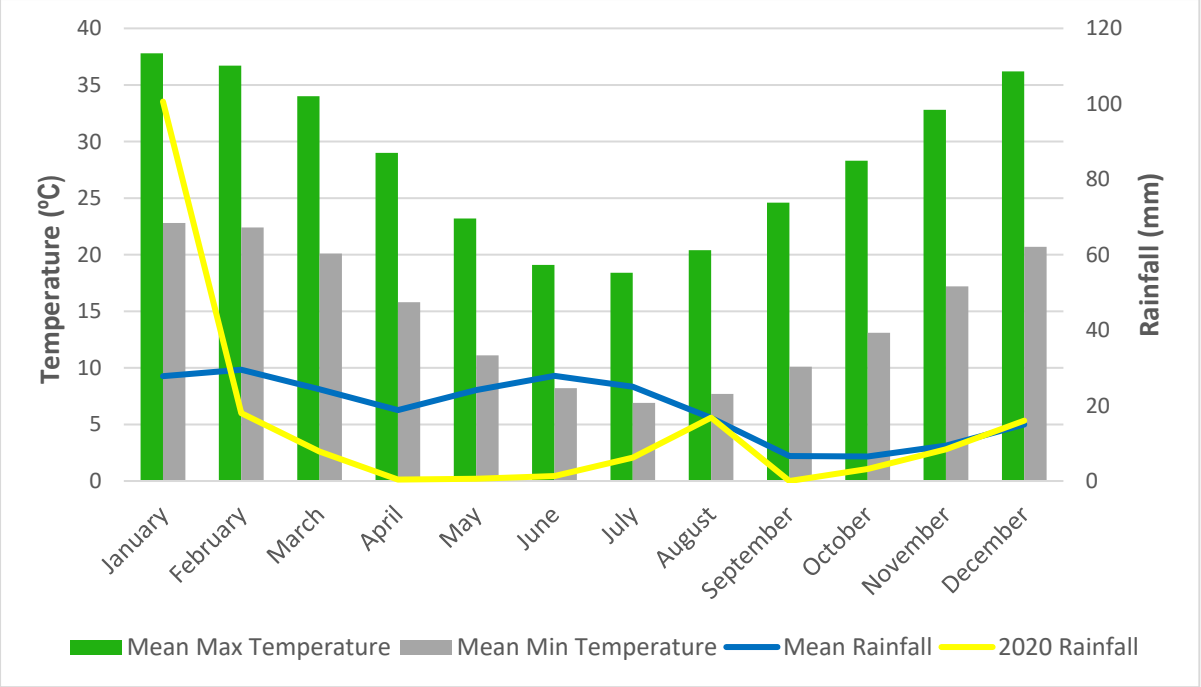

Figure 2: Temperate and Rainfall Data for Cue (taken from BoM Climate Data Online).

Total rainfall for 2020 at the Cue weather station was 179.3 mm which is well below the long-term average of 231.6 mm. Only January 2020 received more than the average rainfall (Figure 2). Maximum temperatures during the survey were above the long-term monthly average of 28.4°C on all days.

Although not a registered BoM weather station, The Tuckabianna mine site records climate data. This data for February 2021 has been provided by Westgold (Appendix 2).

Data for February 2020 can be seen in Figure 3. The mean maximum temperature at Tuckabianna for February 2021, was 34.6°C and the mean minimum temperature was 21.3°C. These average temperatures are lower than both the maximum and minimum temperatures recorded on each day of the survey.

Total rainfall at Tuckabianna for February 2021 was 45.4 mm and the daily mean rainfall for the month was 1.6 mm. No rainfall was recorded in the survey area during the assessment. It is important to note however, that in the week preceding the survey, there was a significant amount of rainfall on the 15th and particularly on the 17th of February (Figure 3). In lower lying areas and drainage lines (in both the survey area and the surrounding areas), large amounts of standing water was still present.

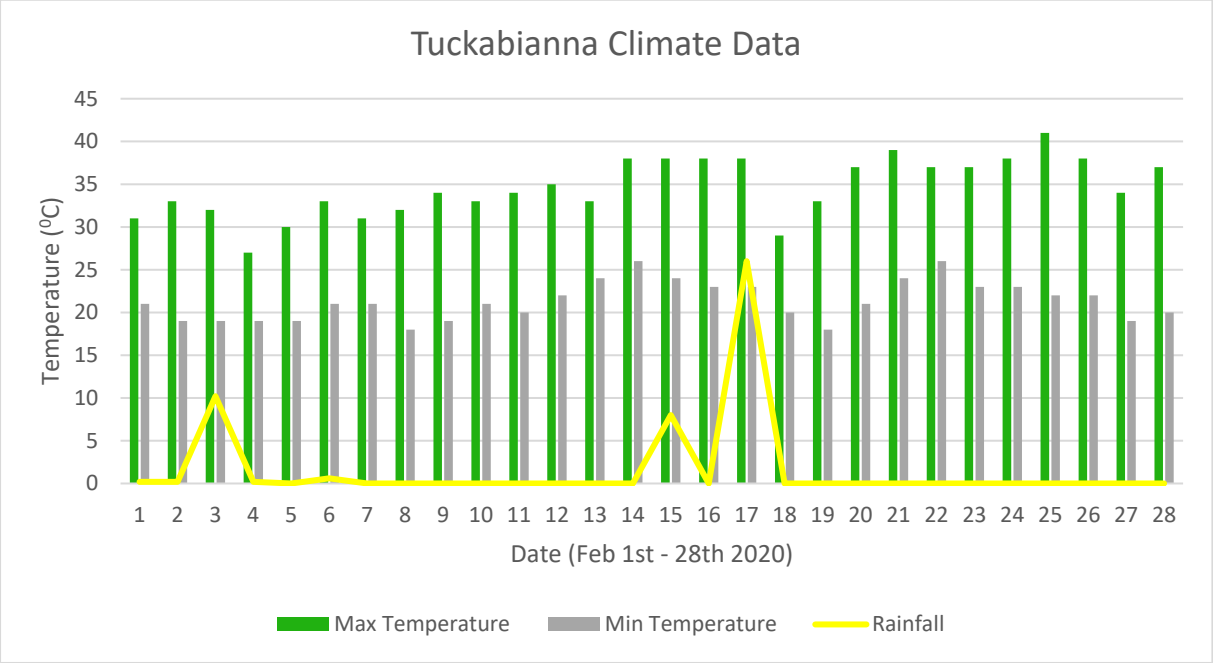

Figure 3: Temperate and Rainfall Data for Tuckabianna Mine Site (February 2021).

1.5 Disturbance History

Long-term disturbance in and surrounding the survey area was evident. Many pastoral leases were established towards the end of the 19th century, while gold prospecting and mining also started in the region in the late 1890's. More recently, the dominant land use within the Murchison Bioregion remains the grazing of sheep and cattle on native pastures, and mining. Grazing of native pastures accounts for the vast majority of land use in the subregion (85.47%) and mining interest in nickel and gold are considerable, however most mining leases still come under the pastoral lands act and as such are still required to be stocked (Cowan 2001).

Vegetation clearing has occurred over more than a century to support these pastoral and mining activities and to harvest sandalwood (*Santalum spicatum*). Continual impacts on the environment through grazing, clearing, trampling, changes to fire regimes and the introduction of weeds, has resulted in loss of structure and species, loss of seed banks and erosion. Erosion can be exhibited through the accumulation of wind-blown soil around plant bases (hummocking), breaking of the surface crust with erosion faces, pedestalling with plant bases elevated above the surrounding land surface, rilling and gullying, and erosion of creek banks and deposition of sediments in other areas. Examples of most of these processes and features were noted in several locations within the survey area. The levels of disturbance influence the vegetation, its composition and structure and as such impact the fauna species present.

A number of introduced predatory species also impact native fauna. Cats have direct negative impacts on native fauna through predation (Coutts-Smith *et al*. 2007; Dickman, 2009). They prey on mammals, birds, reptiles, amphibians and invertebrates depending on resource availability. Live prey is almost the sole source of food for cats. Mammals tend to be the dominant prey item when available.

Feral cats have contributed to the extinction of many small to medium-sized mammals and ground-nesting birds in the arid zone, and have seriously affected or caused extinction of populations of species such as Mala and Woylie. The ongoing decline of small mammals across much of Australia to very low numbers is also believed to be due, in a major part, to predation by the feral cat (Fisher *et al.* 2013; Frank *et al*. 2014; Woinarski *et al.* 2014).

Foxes also impact native fauna, having a wide dietary range, few serious diseases and few natural enemies. They have a high reproductive rate and a high rate of cub survival, although they only breed once a year. Movement patterns vary during the year, depending on the breeding cycle. Sub-adult foxes are the most likely to disperse to new areas, particularly from late summer until the start of the breeding season. In one Australian study, some extreme dispersal distances were observed, the longest being a straight-line distance of 300 kilometres (Saunders *et al.* 2002).

In addition, introduced species such as the Goat and Rabbit also impact native fauna, through their impacts on native vegetation. Rabbits impact on native plants by ringbarking, grazing and browsing, and preventing regeneration of seedlings. They selectively graze on native vegetation and can prevent seedlings from regenerating contributing to landscape degradation. While Goats, both managed and unmanaged, are found across approximately 2 million square kilometres of Australia. The greatest numbers of Goats are found in the arid and semiarid pastoral regions of Queensland, New South Wales, South Australia and Western Australia (Parkes *et al.* 1996). In high densities, unmanaged goats present a potential threat to plant communities because of the large number of plant species that are palatable to them (Parkes *et al.* 1996). Moreover, the ability of unmanaged Goats to survive on low-nutrient fibrous vegetation enables them to continue to feed under adverse environmental conditions, increasing the risk of overgrazing.

2 Methods

2.1 Requirements for Fauna Surveys

The fauna survey was completed in accordance with the following Environmental Protection Authority (EPA) and DAWE 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 Environmental Factor Guideline: Terrestrial Fauna (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)
- National Recovery Plan for Malleefowl *Leipoa ocellata* Department for Environment and Heritage (J. Benshemesh 2007).
- Interim Guideline for preliminary surveys of Night Parrot (*Pezoporus occidentalis*) in Western Australia (2017) DPaW

2.2 Desktop Assessment

Searches of the DBCA Threatened Fauna Database (80 km) NatureMap 40 km [maximum radius possible]) and the EPBC Protected Matters Search Tool (EPBC PMST) (40 km) were undertaken to identify fauna species of conservation significance potentially occurring in the survey area (DBCA 2021a, DBCA 2021b, DAWE 2021) (Appendix 3). These searches were centred on the following co-ordinates 610956 E, 6961241 N.

Please note a 40 km radial search buffer was requested from DBCA, however, an 80 km search buffer was provided (due to the number of records and so that records of additional potentially occurring species were present).

2.3 Field Survey

The field survey was undertaken over three days from the 23 – 25 February 2021 by two qualified Zoologists (Dr Ron Firth and Laura Stevens). As per the scope and proposal, the field survey consisted of habitat assessments, opportunistic fauna observations, searches and a targeted assessment of potential Malleefowl and Night Parrot habitat, in order to define the fauna values of the survey area. The following survey methods were undertaken.

2.3.1 Habitat Assessment

Habitat assessments were undertaken to assess the potential for habitats to support species of conservation significance and the quality of habitat they provide to a wider suite of fauna. Fauna habitat assessments were also 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
- Birds present in the habitat type were also recorded by their call and by observation

A total of 18 habitat assessments were undertaken in the survey area during the assessment (Appendix 4). The location of the habitat assessments can be seen in Figure 4. Five of the habitat assessments were focused around the proposed location of the TSF. Using the above information, fauna habitat in the survey area was mapped. The tracks walked and driven in the survey area can also be seen in Figure 4.

As per the scope, fauna habitat with a 5 km buffer around the survey area (referred to as the study area) was also mapped, but at a much broader scale than the survey area. The study area habitat mapping was undertaken by extrapolating the survey area habitat mapping, using available (though limited) regional data and four locations in the north, east, south and west of the study area were ground truthed to confirm the broad habitat types.

2.3.2 Reptile Search Sites

Reptiles were actively searched for in the survey area. Reptile searches were undertaken for twenty person minutes at locations throughout the survey area, in addition to the habitat assessment locations. The reptile searches included looking through leaf litter (particularly under large Acacia trees, where a layer of leaf litter and bark had accumulated), overturning rocks, looking under decorticating bark (where present) under piles of rubbish and in abandoned infrastructure buildings. The location of the reptile searches can be seen in Figure 4.

2.3.3 Opportunistic Searches

Fauna were recorded opportunistically during the survey. This involved looking through leaf litter and overturning rocks, whilst walking in the survey area. 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.

2.3.4 Bird Surveys

Systematic bird surveys were undertaken at three locations for approximately 20 minutes in a 2-ha plot. Locations were based on habitat present (i.e., areas with vegetation in numerous strata). They were also undertaken in the same locations as the habitat assessment sites. Bird surveys were carried out during typical peak periods of activity when birds are calling and moving about, which is typically in the 3-4 hours of sunrise, particularly during warmer periods (however, this is dependent on season and local weather). Call playback was used to help identify some species and to try and locate cryptic and or conservation significant species where possible and relevant.

2.3.5 Conservation Significant Fauna Assessment

Two species of conservation significance were considered during the fauna field survey:

Malleefowl (*Leipoa ocellata)*

Areas with suitable habitat were assessed for evidence of Malleefowl activity, including :

- Malleefowl tracks
- Malleefowl nesting mounds including status (inactive/ active) and activity according to the following criteria:
  - Nest in preparation – eggs not laid (evidence of litter trail)
  - Mound is in progress/ maintenance – eggs assumed to be laid
  - Evidence of chicks leaving nest – chicks fledging site / shell fragments
  - Decommissioned – spreading and returning of mound soil

- Malleefowl individual sightings and assessment of age (chick/ adult)
- Opportunistic observations of Malleefowl evidence (tracks, mounds and or individual sightings) within the survey area.

Night Parrot *(Pezoporus occidentalis)*

DBCA recommends that Night Parrot surveys should be undertaken if there is suitable Night Parrot habitat present in an area proposed to be disturbed. The survey area is close to the boundary that the DBCA considers a medium to high priority area for the species (DPaW 2017). However, based on our experience in the local region, it was highly unlikely that Night Parrot habitat (areas of old and unburnt spinifex) would occur in the survey area.

When traversing the survey area and undertaking habitat assessments suitable habitat in the way of old and unburnt spinifex was looked for and assessed if present.

2.3.6 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).

3 Results

3.1 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 fauna survey are outlined below in Table 1.

Table 1: Limitations and constraints associated with the survey.

Variable	Impact on Survey Outcome
Access	The survey area (approximately 2,200 ha) was accessible and traversed by vehicle and by foot.
Experience	The personnel who undertook the survey were practitioners suitably qualified in their respective fields with relevant experience as specified by the EPA Technical Guidance: Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA 2020). The personnel were as follows: • Dr Ron Firth (Principal Ecologist) • Laura Stevens (Principal Zoologist).
Timing, weather, season	The survey was conducted as a Basic fauna survey and therefore primarily about defining and describing habitats present. Timing, weather and season, therefore, are not deemed a prime consideration. Cue Weather Total rainfall for 2020 at the Cue weather station was 179.3 mm which is below the long-term average of 231.6 mm. Only three months of 2020 (January, August and December 2020) received more than the average (Figure 2). Max temperatures during the survey were above the long-term monthly average of 28.4°C on all days. Tuckabianna Weather The mean maximum temperature at Tuckabianna for February 2021 was 34.6°C and the mean minimum temperature was 21.3°C. These average temperatures are lower than both the maximum and minimum temperatures recorded on each day of the survey. Total rainfall at Tuckabianna for February 2021 was 45.4 mm and mean daily rainfall for the month was 1.6 mm. No rainfall was recorded in the survey area during the assessment, however standing water was still present in some locations from rainfall the preceding week. It is difficult to determine what the impacts of the low rainfall is on the fauna in the survey area and their detectability. However, there is likely to be an impact on food resources either directly or indirectly and this is likely to impact on their abundance and consequently their detectability, but this is not quantifiable from the work undertaken so far. Further to this and as mentioned above, the assessment was undertaken at the basic level, which is primarily about defining and delineating habitat. The survey was undertaken from 23 – 25 February 2021. There were therefore no limitations to the survey due to timing, weather or season, given the level of assessment undertaken.

Scope	The survey consisted of a basic fauna survey. During the field assessment, the survey area was evaluated to define the habitats and fauna values.
Completeness	A total of: • 2,200 ha was assessed during the Basic fauna survey, • 18 habitat assessment were undertaken, • Eight reptile searches were undertaken, • Three bird surveys were undertaken (in addition to those undertaken during habitat assessments), • 142 km of tracks were walked and driven, • 37 fauna species were recorded, and • Three broad fauna habitat types were recorded.
Disturbance	Historically, the survey area (and the greater region) has been explored and mined for gold for almost 130 years and has been involved in agriculture since the 1890's. Considerable disturbance from these activities as well as impacts from cattle grazing and other introduced species including the Cat, Fox and Goat has therefore affected the area for well over 100 years. This ongoing disturbance was evident in much of the survey area. In addition, Tuckabianna is a working ore processing plant and so much of the survey area has been previously cleared for the mine itself and associated infrastructure. Therefore, much of the site is degraded in condition.

3.2 Database Results

Results of the databases searches outlined a total of 234 vertebrate species from 72 families (Appendix 3). These were comprised of two amphibian species from two families, 46 reptile species from nine families, 169 bird species from 52 families, and 17 mammal species from nine families.

A total of 31 conservation significant vertebrate species (including Priority species) from 17 families were identified during the desktop review of the database searches (Appendix 3). These were comprised of 18 three reptile species from one family, 25 bird species from 13 families and three mammal species from three families.

The DBCA threatened fauna database returned a total of 27 conservation significant fauna species from within an 80 km radius of the survey area, the results of which can be seen in Figure 5.

Now regionally extinct

A number of species in the database searches were known to be historical records of species now locally extinct, for example the Bilby *(Macrotis lagotis*), which was present in NatureMap, but not in the EPBC PMST or DBCA Threatened fauna database, and the Black-flanked Rock-wallaby (*Petrogale lateralis*), which was present in the DBCA Threatened fauna database with two undated, historical records (Appendix 3). As such these species have been omitted from further discussion. In addition, those species with three or less records, which are also old/historic (for example the Brush-tailed Mulgara [*Dasycercus blythi*], which has a single, undated, fossil record from Weld Range), or less than three records that are from known locations which contain habitat not present in the survey area, for example clay-pan or salt lake habitat. Examples include the Bar-tailed Godwit (*Limosa lapponica)*, which has a single record from 1999, from a clay-pan at Austin Downs Station and the Curlew Sandpiper (*Calidris ferruginea)* which has two records (2005 and 1980), from an unnamed small lake 22 km to the south-west of the survey area and one (labelled as Meekatharra), 60 km to the north of the survey area. As well as the Common Sandpiper (*Actitis hypoleucos*) which has three records (2001, 2005, 2015), all from Lake Nallan, which is approximately 23 km to the north-west of the survey area. These records have been omitted from further discussion, with a few exceptions, as deemed pertinent to include.

Database errors and anomalies

Occasionally there are errors and/or anomalies in the database searches that are sourced from the various government departments, for example, the Grey Wagtail (*Motacilla cinerea*), which is a rare visitor (Johnstone & Storr 1998) and the Grey

Falcon (*Falco hypoleucos*), whose distribution is to the east of the survey area (Slater *et al*. 2009). These species have also been omitted from any further discussion.

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 is. Consequently, the results of the EPBC PMST are in some cases less accurate, particularly at a local scale (e.g., the Yellow Wagtail [*Motacilla flava*]. 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, many fauna are 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 locally/regionally extinct and database errors species removed, a total of 14 conservation significant species retrieved from the database searches are considered as either likely, possibly or unlikely to occur. Of these 14 conservation significant species, no species were recorded during the assessment, no species are considered Likely to occur, one species is considered as Possibly occurring and 13 are considered Unlikely to occur in the survey area (Table 2). All species will be considered in section 4.1 of the discussion 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 2: 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 (BC Act)	Likelihood
Reptiles				
West Coast Mulga Slider	*Lerista eupoda*		P1	Possible
Western Spiny-tailed Skink	*Egernia stokesii badia*	EN	VU	Unlikely
Gilled Slender Blue-tongue	*Cyclodomorphus branchialis*		VU	Unlikely
Birds				
Malleefowl	*Leipoa ocellata*	VU	VU	Unlikely
Glossy Ibis	*Plegadis falcinellus*	MiMa	MiMa	Unlikely
Peregrine Falcon	*Falco peregrinus*		OS	Unlikely
Hooded Plover	*Thinornis rubricollis*	VU	VU	Unlikely
Gull-billed Tern	*Gelochelidon nilotica*	MiMa	Mi	Unlikely
Sharp-tailed Sandpiper	*Calidris acuminata*	MiMa	MiMa	Unlikely
Wood Sandpiper	*Tringa glareola*	MiMa	MiMa	Unlikely
Common Greenshank	*Tringa nebularia*	MiMa	MiMa	Unlikely
Little Greenshank	*Tringa stagnatilis*	MiMa	MiMa	Unlikely

Night Parrot	*Pezoporus occidentalis*	EN	CR	Unlikely
Mammals				
Long-tailed Dunnart	*Sminthopsis longicaudata*		P4	Unlikely

3.3 Field Assessment Results

A total of 37 fauna species from 25 families were recorded in the survey area (Appendix 5). All fauna species recorded are considered relatively common and widespread.

3.3.1 Fauna Assemblage

Amphibians

With regard to amphibian species, no adult frogs were recorded during the field assessment (Appendix 5), however tadpoles were recorded in a number of the areas that contained standing water from recent rainfall. The species of tadpole could not be determined.

Reptiles

During the field survey, five reptile species, from four families were recorded (Appendix 5). The Tree Dtella (*Gehyra variegata*) and the Southern Pygmy Spiny-tailed Skink (*Egernia depressa*) were recorded in reptile searches. Both species were recorded under the bark of trees, in a number of locations. The Central Netted Dragon (*Ctenophorus nuchalis*) was observed basking on a rock on the side of a track and another *Ctenophorus* species was recorded running on the ground, however identification to species level was not possible. The Sand Monitor (*Varanus gouldii)*, was recorded from tracks and diggings and was observed on several occasions, with one individual feeding on tadpoles in standing water in drainage areas. Photographs of a number of reptile species recorded during the field survey can be seen in Plates 1-4.

Birds

During the field survey, 27 bird species from 17 families were recorded (Appendix 5). All bird species recorded are considered relatively common and widespread.

Mammals

During the field survey five mammal species from four families were recorded, the Red Kangaroo (*Macropus rufus*) and four introduced species, the Cat (*Felis catus*), European Rabbit (*Oryctolagus cuniculus*), Cattle (*Bos taurus*) and Goat (*Capra hircus*) (Appendix 5).

Plate 1: Tree Dtella (*Gehyra variegata*).

Plate 2: Southern Pygmy Spiny-tailed Skink (*Egernia depressa*).

Plate 3: Central Netted Dragon (*Ctenophorus nuchalis*).

Plate 4: Sand Monitor (*Varanus gouldii*).

3.4 Fauna Habitat

3.4.1 Fauna Habitat – Survey Area

A total of 18 habitat assessments were undertaken during the field survey, the details of which can be seen in Table 3, Figure 4 and Appendix 4.

Table 3: Habitat Assessment Locations.

Habitat Assessment	Easting (GDA94)	Northing (GDA94)	Fauna Habitat Type
1	612009	6962412	Mulga Shrubland
2	611805	6962476	Mulga Shrubland
3	611773	6962842	Mulga Shrubland
4	611672	6963312	Mulga Shrubland
5	611455	6962919	Drainage Area
6	610572	6963067	Mulga Shrubland
7	610685	6962308	Drainage Area
8	612365	6960104	Mulga Shrubland
9	614365	6964258	Mulga Shrubland
10	613483	6965250	Drainage Area
11	613379	6964785	Mulga Shrubland
12	613982	6963339	Drainage Area
13	613023	6961357	Drainage Area
14	610954	6961243	Mulga Shrubland
15	609419	6960744	Mulga Shrubland
16	610712	6960183	Mulga Shrubland
17	610074	6958702	Mulga Shrubland
18	610005	6957355	Drainage Area

A total of three broad fauna habitat types were described, however, a large proportion of the survey area was considered to be degraded. The three broad fauna habitat types described are as follows:

- Mulga Shrubland
- Drainage Area
- Scattered Acacia on Stony Plains

The remaining areas were classed as totally degraded and consisted of cleared areas and tracks, and mining areas.

In general, there were large sections of the survey area that were degraded in nature and showed evidence of previous clearing, pastoral use, mining and exploration activity. Through the centre of the survey area, large areas of past mining (i.e., mine pits and waste rock dumps) and associated infrastructure were present, including a working gold processing plant.

Fauna Habitat type and extent can be seen in Table 4 and Figure 6. Examples of the fauna habitat types can be seen in Plates 5 – 8.

Table 4: Fauna habitat type and extent in the survey area.

Fauna Habitat	Habitat extent in survey area (Ha)	Habitat extent in survey area (%)
Mulga Shrubland	1,176	54
Drainage Area	425	19
Scattered Acacia on Stony Plains	97	4
Cleared / Degraded	495	23
Total	2,193	100

Mulga Shrubland

Mulga Shrubland habitat consisted of an overstorey of emergent Mulga trees and tall shrubs, including *A. pteraneura and A. caesaneura*, over mixed *Acacia* open shrubland over a low sparse *Ptilotus obovatus*. Some areas contained sandy soils, which provided habitat for burrowing reptiles including *Lerista* species, while in some areas the substrate was quartz or calcrete, making it more suitable for non-burrowing reptiles such as *Ctenophorus* species. The vegetation was sparse with limited strata in some areas, but contained larger trees and tall shrubs in other areas, providing habitat and shelter for small bird species for example Thornbills and Honeyeaters.

Plate 5: Mulga Shrubland (survey area).

Drainage Area

Drainage Area habitat also consisted of mulga shrubland, however the presence of drainage channels, flood plains and lower lying areas constituted this habitat type. Drainage Area habitat consisted of *A. aptaneura, and A. ramulosa* tall open shrubland over mixed Acacia and Hakea, over very scattered low shrubs (including *Eremophila galeata, E. georgei* and *E. latrobei and P. obovatus* and *P. schwartzii,* with some mixed grasses on (mainly) sandy soils.

Again, in some areas, the vegetation structure was sparse, often with limited mid-storey and denser and in better condition in other areas. This vegetation and structure in the denser areas, provided shelter for fauna species including Thornbills, Fairy-wrens, Babblers, Whistlers and Robins, all of which were recorded in this habitat.

Drainage Area habitat consisted of main drainage channels (Plate 6), which were rocky in places and a number of which still had water present from recent rains, as well as broader drainage areas and depressions, with sandy soils and where evidence of previous flooding was recorded in a number of locations.

Plate 6: Drainage Area (survey area).

Scattered Acacia on Stony Plains

In general, this habitat type consisted of Isolated mixed Acacia shrubs, over isolated *Eremophila, Ptilotus* and *Senna* low shrubs on stony plains. The substrate was generally quartz and the vegetation was very sparse. Therefore, this habitat provided limited shelter for fauna species.

Plate 7: Scattered Acacia on Stony Plains (survey area).

3.4.2 Fauna Habitat – Study Area

The three fauna habitat types recorded in the survey area are also generally considered common and widespread in the surrounding area. This can be seen from Figure 7, in which the wider fauna habitat has been mapped broadly in a 5 km buffer (study area).

Mulga Shrubland

The Mulga Shrubland fauna habitat mapped in the survey area (Figure 6), is also represented in the 5 km study area. Approximately 10, 766 ha of Mulga Shrubland has been broadly mapped in the study area (Figure 7). An example of dense Mulga Shrubland in the study area can be seen in Plate 8.

Plate 8: Mulga Shrubland (study area).

Drainage Area

The Drainage Area fauna habitat mapped in the survey area (Figure 6), is also represented in the 5 km study area. Approximately 2, 039 ha of Drainage Area has been broadly mapped in the study area (Figure 7). An example of Drainage Area habitat in the study area can be seen in Plate 9.

Plate 9: Drainage Area habitat (study area).

Scattered Acacia on Stony Plains

The Scattered Acacia on Stony Plains habitat mapped in the survey area (Figure 6) is also represented in the 5 km study area. Approximately 6,363 ha has been broadly mapped in the study area (Figure 7). An example of Scattered Acacia on Stony Plains habitat in the study area can be seen in Plate 10.

Plate 10: Scattered Acacia Shrubland on Stony Plains (study area).

3.5 Reptile Searches

A total of eight reptile searches were undertaken during the field survey, the details of which can be seen in Table 5 and locations on Figure 3.

Table 5: Reptile Search Locations.

Habitat Assessment	Easting (GDA94)	Northing (GDA94)	Fauna Habitat Type
1	611971	6962433	Mulga Shrubland (under bark)
2	610893	6961291	Drainage Area (wood piles)
3	614030	6964094	Mulga Shrubland (rock pile)
4	614379	6964233	Mulga Shrubland (under bark)
5	613775	6964649	Mulga Shrubland (rock pile)
6	612408	6961566	Mulga Shrubland (disused buildings)
7	611579	6963544	Mulga Shrubland (wood piles)
8	610121	6958703	Mulga Shrubland (under bark)

3.6 Conservation Significant Fauna Assessment

Malleefowl

The survey area was assessed for suitable Malleefowl habitat by undertaking traverses on foot and by vehicle. The habitats in the survey area are considered unsuitable for this species. The drainage areas contained denser vegetation in the way of mixed acacia woodland and mulga shrubland, however it was considered to be too sparse for Malleefowl mound construction. In addition, Malleefowl are unlikely to build mounds in areas of drainage due to the possibility of flooding.

No Malleefowl were sighted, nor were their mounds or tracks, when assessing habitat (primarily areas containing mulga) in the survey area. Further to this no Malleefowl or their mounds were seen while driving along tracks.

Night Parrot

The survey area was traversed by foot and by vehicle and is considered unsuitable for the species. The survey area does not contain spinifex, which the species has been recorded roosting and nesting in.

4 Discussion

4.1 Fauna of Conservation Significance

A total of 14 conservation significant species retrieved from the database searches are considered as either Likely, Possibly or Unlikely to occur in the survey area. Of these 14 conservation significant species, none were recorded during the survey. The 14 species and their likelihood to occur in the survey area are discussed below.

4.1.1 Species Recorded in the survey area

No conservation significant species were recorded in the survey area.

4.1.2 Species considered Likely to occur in the survey area

No conservation significant species are considered Likely to occur in the survey area.

4.1.3 Species considered as Possibly occurring in the survey area

One conservation significant species is considered as Possibly occurring in the survey area, the West Coast Mulga Slider.

West Coast Mulga Slider (Lerista eupoda)

The West Coast Mulga Slider (*Lerista eupoda*) is listed as Priority 1 under the DBCA priority list and was present in the NatureMap and the DBCA threatened fauna databases. A total of 36 records were returned, 11 of which were from 2009 - 2017.

Most Lerista species are burrowing species, which are usually found in the loose soil or sand beneath litter, stones, logs, termite mounds etc., where they feed on ants, termites and other small insects. At night they emerge to feed at the surface, immediately diving into the loose sandy substrate when disturbed (Cogger 2014). The West Coast Mulga Slider inhabits open Mulga areas on loamy soils in the arid southern interior of WA, between Meekatharra and Cue (Chapple *et. al* 2019).

Suitable habitat in the way of open Mulga areas on loamy soils was present throughout the survey area, which potentially provides shelter and substrate for the species to burrow in. The DBCA threatened fauna database returned 36 records of the West Coast Mulga Slider within the 80 km search area, the closest of which is 21 km north-west of the survey area (Figure 5). This record however, is from 1990. Suitable habitat is present, however nearby records are limited and therefore the West Coast Mulga Slider is considered as Possibly occurring in the survey area.

4.1.4 Species considered Unlikely to occur in the survey area

The remaining 13 species are considered Unlikely to occur in the survey area.

Gilled Slender Blue-tongue (Cyclodomorphus branchialis)

The Gilled Slender Blue-tongue (*Cyclodomorphus branchialis)* is listed as Vulnerable under the BC Act and was present in the DBCA threatened fauna database only. There is no quantitative information available relating to the population size of this species. However, it has been described as rare, with the possibility of becoming extinct because of its range confinement (Bush *et al.* 2007). Extensive clearing has impacted the species distribution and abundance, particularly in the western portion of its range. Subpopulations can persist to some degree in disturbed areas, but at a much reduced abundance (Chapple *et al.* 2019). Recent records are mainly from rocky outcrops and its population is considered to be severely fragmented (Chapple *et al.* 2019).

The Gilled Slender Blue-tongue is a ground dwelling crepuscular species that shelters by day in hummock grass, leaf-litter, including Acacia and under fallen logs and stumps. This species prefers the deep leaf-litter on sandy beaches vegetated mainly with coastal spinifex (Chapple *et al.* 2019, Cogger 2014).

The DBCA threatened fauna database returned six records of the Gilled Slender Blue-tongue, all of which were from a survey undertaken in 2005 in Mount Magnet, with the closest record being 66km south west of the survey area (Figure 5).

A lack of recent and nearby records as well as a lack of suitable rocky outcrop habitat result in the Gilled Slender Blue-tongue being considered Unlikely to occur in the survey area.

Western Spiny-tailed Skink (Egernia stokesii badia)

The Western Spiny-tailed Skink (*Egernia stokesii badia*) is listed (at subspecies level) as Endangered under the EPBC Act and Vulnerable under the BC Act. The Western Spiny-tailed Skink was present in NatureMap and DBCA threatened fauna database results, however the most recent record present in the DBCA threatened fauna database is from 2010 (a single record).

The population has suffered significant historical declines from land-clearing and it currently occurs in isolated, small subpopulations (Chapple *et. al* 2019). The species is distributed along the coast of WA through the arid interior and is found among rocky outcrops, stony hills and mountain ranges, where it shelters in deep crevices or under large boulders (Cogger 2014). Current threats include land-clearing, habitat degradation by introduced grazes, salination and changes to fire regimes (Pearson 2012).

The DBCA threatened fauna database records were from three locations, Walga Rock, Wurrah Rocks and Woolgerong Rock, which all contain very large rock boulders and formations, which are not present in the survey area. The closest record of the species is 60 km to the west of the survey area, in rocky habitat (Figure 5). The survey area has some areas containing smaller rocks and stony hills and some log piles are present, which may provide limited habitat for the species, however in general the survey area lacks suitable habitat and as such the Western Spiny-tailed Skink is considered Unlikely to occur in the survey area.

Malleefowl (Leipoa ocellata)

The Malleefowl (*Leipoa ocellata)* will be discussed in section 4.2 below as part of the Malleefowl assessment.

Glossy Ibis *(Plegadis falcinellus)*

The Glossy Ibis *(Plegadis falcinellus)* is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in the NatureMap and DBCA threatened fauna database results. The Glossy Ibis is a small all-dark ibis with reddish-brown neck and dark iridescent body. It is usually seen in small flocks, often flying in a v-formation. It is found mainly in shallow water and mudflats, where it thrusts its bill into semi-submerged clumps of grass for frogs and tadpoles (Slater *et al.* 2009).

The DBCA threatened fauna database returned four records of the Glossy Ibis (Figure 5). These records were all from Lake Nallan, (which is approximately 23 km to the north-west of the survey area) and the most recent of which was from 2005.

A lack of recent and nearby records as well as a lack of suitable wetland habitat results in the Glossy Ibis being considered unlikely to occur in the surrey area.

Peregrine Falcon (*Falco peregrinus*)

The Peregrine Falcon (*Falco peregrinus*) is listed as Specially Protected under the BC Act and it was present in the NatureMap database and the DBCA threatened fauna database. It is an uncommon but wide-ranging bird across Australia (Barrett *et al*. 2003). It occurs mainly along rivers and ranges as well as wooded watercourses and lakes and nests primarily on cliffs, granite outcrops and quarries. The diet of the Peregrine Falcon has been well studied and primarily includes flocking species such as Parrots, Pigeons and on the east coast European Starlings (*Sturnus vulgaris*) (Olsen & Fuentes 2008).

The DBCA threatened fauna database returned 14 records of the Peregrine Falcon, the five most recent are from 2013 and 2017. The remainder of the records are from 2004 and older. A total of seven records are from Lake Nallan (approximately 23 km to the north-west). The closest record of the Peregrine Falcon is approximately 23 km to the north-west of the survey area (from 2003) (Figure 5).

The survey area lacks suitable cliff, rock outcrop habitat and rivers (the drainage lines are likely too small and occasionally inundated) and so lacks any suitable nesting and foraging habitat. The Peregrine Falcon is therefore considered Unlikely to occur in the survey area.

Hooded Plover (*Thinornis rubricollis)*

The Hooded Plover (*Thinornis rubricollis)* is listed as vulnerable under the EPBC Act and the BC Act and was present in all three database searches. In WA, the Hooded Plover lives on ocean beaches and beside inland lakes. They nest on the upper levels of the beach, in adjacent sand dunes, or on lake shores. They forage at the water's edge mostly for molluscs and crustaceans on the coast, but *Coxiella spp.* (snails) are probably the main food around inland lakes (Marchant & Higgins 1993, Weston & Elgar 2000).

The Hooded Plover breeds on south-west WA coasts from Cape Naturaliste to Eyre and on inland lakes as far north as Yalgorup Lakes (south of Perth). Single birds or non-breeding pairs have been recorded on Lakes Arrow, Barlee and Ballard (Garnett *et al.* 2011).

The DBCA threatened fauna database returned five records of the Hooded Plover within the 80 km search area., the most recent of which was from Lake Nallan in 2015 (approximately 23 km to the north-west of the survey area). A lack of recent and nearby records and a lack of suitable lake habitat in the survey area, results in the Hooded Plover being considered Unlikely to occur in the survey area.

Gull-billed Tern (Gelochelidon nilotica)

The Gull-billed Tern (*Gelochelidon nilotica*) is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in the NatureMap database and the DBCA threatened fauna database. The Gull-billed Tern can frequent inland fresh waterways habitually, or visit them on a regular basis and are considered an uncommon nomad in fresh and salt wetlands, estuaries and mudflats throughout Australia (Slater *et al.* 2009). The Gull-billed Tern is a colonial nester, laying 2-3 blotched buff-white eggs in a lined scrape on islands and spits in lakes.

The DBCA threatened fauna database returned 36 records of the Gull-billed Tern within the 80 km search area. A total of three records were from 2001 – 2006, all of which were from Lake Nallan (Figure 5). The remaining 33 records were all more than 20 years old.

A lack of recent and nearby records and more importantly a lack of suitable lake habitat in the survey area, results in the Gull-billed Tern being considered Unlikely to occur in the survey area.

Sharp-tailed Sandpiper (*Calidris acuminata*)

The Sharp-tailed Sandpiper *(Calidris acuminata)* is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in all three database searches. The Sharp-tailed Sandpiper is a medium-sized sandpiper with boldly mottled upperparts, rufous crown, green legs and finely streaked breast. The species is a common migrant from Siberia to coastal, sub-coastal and inland wetlands throughout Australia (Slater *et al.* 2009).

The DBCA threatened fauna database returned seven records of the Sharp-tailed Sandpiper within the 80 km search area.. Of these seven records, the most recent is from 2011 (three records), all of which are from Lake Austin, which is approximately 25 km south of the survey area (Figure 5). The remaining four records are from 2007 and older.

A lack of suitable habitat in the way of wetlands results in the Sharp-tailed Sandpiper being considered Unlikely to occur in the survey area.

Wood Sandpiper (*Tringa glareola*)

The Wood Sandpiper *(Tringa glareola)* is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in the NatureMap database and the DBCA threatened fauna database. The Wood Sandpiper is an active, mainly freshwater sandpiper with profusely spotted underparts with long greenish-yellow legs. The species is more likely to occur on fresh wooded swamps and lakes throughout the mainland, where it feeds mainly on aquatic insects and their larvae and molluscs in moist or dry mud and zig-zags off to some height when disturbed (Slater *et al.* 2009).

The DBCA threatened fauna database returned five records of the Wood Sandpiper, all from Lake Nallan, the most recent being from 2005 (Figure 5). A lack of suitable habitat in the way of wetlands results in the Wood Sandpiper being considered Unlikely to occur in the survey area.

Common Greenshank (*Tringa nebularia*)

The Common Greenshank *(Tringa nebularia)* is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in all three database searches. The Common Greenshank is a noisy, large, heavy greenshank that is a common to uncommon migrant from Asia to coastal mudflats, estuaries, salt marshes, mangroves, lakes and swamps throughout Australia (Slater *et al.* 2009).

The DBCA threatened fauna database returned 24 records of the Common Greenshank within the 80 km search area. A total of twenty of these records are from lakes (mainly Lake Nallan and Lake Austin). The most recent record of the Common Greenshank is from 2013 (two records), which is also from Lake Nallan (Figure 5).

A lack of suitable habitat in the way of wetlands results in the Common Greenshank being considered Unlikely to occur in the survey area.

Little Greenshank (*Tringa stagnatilis)*

The Little Greenshank (*Tringa stagnatilis*) is listed as Migratory and Marine (MiMa) under the EPBC Act and the BC Act and was present in the NatureMap database and the DBCA threatened fauna database. The Little Greenshank is a small, slender greenshank with a needle-like bill and long dusky-olive legs. The species is a regular migrant from Asia, mainly to lakes and swamps, but also mangroves, salt marshes and estuaries, mostly in the north and east, where it wades in water up to its belly, picking up food from the surface (Slater *et al.* 2009). The species breeds from eastern Europe to central Asia and spends the non-breeding period from Africa to Australia (Bamford *et al*. 2008).

The DBCA threatened fauna database returned four records of the Little Greenshank, all from Lake Nallan, the most recent being from 2013 (Figure 5). A lack of suitable habitat in the way of wetlands results in the Little Greenshank being considered Unlikely to occur in the survey area.

Night Parrot (*Pezoporus occidentalis)*

Night Parrot (*Pezoporus occidentalis)* will be discussed in section 4.3 below as part of the Night Parrot assessment.

Long-tailed Dunnart (*Sminthopsis longicaudata)*

The Long-tailed Dunnart (*Sminthopsis longicaudata)* is listed as Priority 1 under the DBCA priority list and was present in the NatureMap and the DBCA threatened fauna database. Records of the Long-tailed Dunnart come from widely scattered localities in the arid zone where it inhabits rugged, rocky areas. Little is known of the life history of long-tailed dunnarts, but available evidence suggests that this widely scattered species is restricted to rugged, rocky areas (Burbidge *et al.* 2008). Habitat includes plateaus composed of boulders and stones, with fine red sand sparsely vegetated with Mulga and miniritchie (*Acacia sp.*) shrubs over spinifex and areas of open woodland of Mulga (Van Dyck & Strahan 2008). The striated foot-pad and long strongly muscular tail of the Long-tailed Dunnart suggest it is an active and capable climber.

The DBCA threatened fauna database returned five records of the Long-tailed Dunnart from surveys undertaken in 2017 and 2018. The closest record of the Long-tailed Dunnart is 66 km to the north-east of the survey area from 2017 and these records appear to be rocky hills, which are not present in the survey area (Figure 5). A lack of suitable habitat therefore results in the Long-tailed Dunnart being considered Unlikely to occur in the survey area.

4.2 Malleefowl Assessment

The Malleefowl (*Leipoa ocellata)* is listed as Vulnerable (Vu) under the EBPC Act and the BC Act and was present in all three database searches. In the past century, the range of the Malleefowl has contracted, particularly in arid areas and at the periphery of its former range (Benshemesh 2007). In Australia, clearing for Agriculture has eliminated and fragmented much of the Malleefowl habitat, resulting in localised extinctions and fragmented populations (Garnett *et al*. 2011). In WA since 1981, the range of the Malleefowl has been estimated to have contracted by between 28 and 30% (Benshemesh 2007; Parsons *et al*. 2008).

Historically, the species was originally common and widespread in semiarid zones, mainly in scrubs of mallee and other low eucalypts on sandy and lateritic soils; also, acacia scrubs on heavy red soils, especially north and east of the mulga-eucalypt line. The Malleefowl is now generally rare to uncommon and patchily distributed due to habitat loss.

Malleefowl prefer habitat with a dense canopy and an open ground layer in which they can construct their mounds (Benshemesh 2007). Benshemesh (1992) also found that dense canopy cover was the most important feature associated with high breeding densities at sites in Victoria. Fire history is also important with Malleefowl birds preferring old growth (i.e., long unburnt) mallee. Fire has a major influence on the structure and floristic composition of habitats that Malleefowl occupy.

The DBCA threatened fauna database returned 11 records of the Malleefowl in the vicinity of the survey area, the most recent of which was from 2016 from Wanarie Pastoral Lease (which is approximately 50 km south-west of the survey area). The closest record of the Malleefowl is an historic undated, vouchered WA museum specimen record from within the survey area (Figure 5) (118.1169 / -27.4828).

The survey area is considered unsuitable for Malleefowl. A total of 1,176 ha of Mulga Shrubland habitat is present in the survey area. Although this habitat consists of Mulga and mixed Acacia, it is considered too sparse for Malleefowl mound construction. A total of 425 ha of Drainage Area habitat is present in the survey area. The Drainage Area habitat, contains relatively denser vegetation in the way of mixed acacia woodland, however it is considered to be too sparse for Malleefowl mound construction. In addition, Malleefowl are unlikely to build mounds in areas of drainage due to the possibility of flooding. A total of 97 ha of Scattered Acacia Shrubland on Stony Plains is present in the survey area. This habitat has very sparse vegetation structure and consists of scattered shrubs, so provides no shelter for Malleefowl, and more importantly their mounds, and the stony soils are generally unsuitable for Malleefowl to construct mounds as the stones present are relatively large. A total of 495 ha, consists of disturbed, degraded and cleared areas from previous and current mining activities (these areas provide no shelter or vegetation for Malleefowl to build mounds).

During the Malleefowl assessment, no suitable habitat was recorded and no Malleefowl, mounds or tracks were recorded. In addition, a lack of database records results in the Malleefowl being considered Unlikely to occur in the survey area.

4.3 Night Parrot Assessment

The Night Parrot is an enigmatic species thought possibly to be extinct until the recent recoveries of two dead specimens from Queensland (and new locations more recently). The type specimen and many early sightings, however, came from WA (Johnstone *et al.* 2013). Night Parrots are cryptic, nocturnal and endemic to Australia's arid interior. Until the late 19th century, they were widespread and relatively easily found at least at some locations. For instance, 14 of the 25 museum specimens in existence came from the Gawler Ranges in South Australia between 1871 and 1881 (Murphy *et al*. 2017). The last Night Parrot collected intentionally was in Western Australia in 1912 (Wilson 1937). Then followed 78 years of unconfirmed reports spanning all mainland states and the Northern Territory, until in 1990 a desiccated bird was found by a roadside in western Queensland (Boles *et al*. 1994, Murphy *et al.* 2017).

In 2006, another dead bird was discovered by a Ranger 200 km to the south-east of the 1990 specimen (McDougall *et al.* 2009, Murphy et al. 2017). In 2013, the first photographs of a living night parrot were captured close to the site of the 2006 specimen (Dooley 2013, Murphy *et al.* 2017). Their cryptic nature, remote distribution and apparently rapid decline means that there is scant ecological information about night parrots.

A more recent sighting of the Night Parrot in WA comes from the Pilbara (12 April 2005) at a well near the Fortescue Marshes (Davis & Metcalf 2008). There was also a sighting near Matuwa (Lorna Glen), which is about 400 km north-east of the survey area, in 2009 (Hamilton *et al.* 2017).

The most recent sighting of the Night Parrot was from the interior of WA in 2017, when four ornithologists photographed the species in flight over a patch of spinifex at an undisclosed location in the dry interior of the state.

There is very limited ecological information available for this species such as its preferred habitat (only very broad information). However, with increasing conservation focus being given to this species, more information is likely to become available, e.g., the discovery of Night Parrot nests in large Spinifex hummocks in Queensland (Murphy *et al*. 2017) which is a common and widespread habitat type throughout much of south-east Queensland and WA.

The survey area lacks spinifex and so contains no suitable habitat for the Night Parrot. In addition, a lack of records (despite relatively limited survey effort in the local region) results in the Night Parrot being considered Unlikely to occur in the survey area.

4.4 Fauna Habitat

During the fauna survey three different broad fauna habitat types were 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 6).

Mulga Shrubland

Mulga Shrubland habitat comprised 1,176 ha (54%) of the survey area. This habitat consisted of a mix of Acacia species including A. *pteraneura, A. caesaneura*, over *Eremophila* sp. and *Ptilotus obovatus*. The vegetation was sparse with limited midstorey and absent ground layer in some areas. In other areas vegetation was denser, in better condition and contained larger trees and tall shrubs. This habitat provides shelter for small bird species, including Fairy-wrens and Thornbills, with some vegetation in the ground-storey and some leaf-litter present, providing habitat for small reptiles and skinks such as those in the genus Lerista. In some areas, leaf litter and sandy soils provided potential shelter and habitat for small mammals and particularly small burrowing reptile species, while in other areas the substrate was harder and consisted of quartz or calcrete, making it unsuitable for theses burrowing species.

Drainage Area

Drainage Area habitat also consisted of mulga shrubland, however the presence of drainage channels, flood plains and low lying areas constituted this habitat type. Drainage Line habitat comprised 425 ha (19%) of the survey area, with of an overstorey of mixed Acacia, including *A. aptaneura, and A. ramulosa* over mixed shrubland species, including Acacia and Hakea species, over scattered low shrubs (including *Eremophila galeata, E. georgei* and *E. latrobei and Ptilotus obovatus* and *P. schwartzii,* with some mixed grasses. Drainage Area habitat did contain vegetation in a number of strata, however in some areas midstorey vegetation was often limited. The vegetation structure provided by the larger trees, as well as some vegetation in the mid and ground storey provided habitat for a suite of fauna species including the Red Kangaroo (tracks and scats), Honeyeaters and other bird species, as well as reptiles, for example, the Sand Goanna which was recorded hunting tadpoles in areas of standing water. Evidence of recent water and evidence of past flooding was recorded in this habitat.. Some parts of the Drainage Area habitat contained rocky creek beds, however other areas contained leaf litter and sandy soils which provided potential shelter and habitat for small mammal and particularly small burrowing reptile species.

Scattered Acacia Shrubland on Stony Plains

Scattered Acacia Shrubland on Stony Plains habitat comprised 97 ha (4%) of the survey area. This habitat consisted of scattered *A. aptaneura* (Mulga) over isolated Eremophila low sparse shrubland, on stony plains and rises.

The vegetation was very sparse in all strata, with a particularly limited overstorey and near absent ground layer. The lack of vegetation and structure provided very limited shelter sites for fauna species, while the stoney substrate provided a lack of habitat to burrowing species. Some of the areas with larger rocks may provide some habitat for small reptile species, however none were recorded in this habitat (even when many rocks were overturned).

5 Conclusion

The dominant land use within the Murchison Bioregion is grazing of sheep and cattle on native pastures, while gold prospecting/mining started in the region in the late 1890's. These activities have therefore had an impact on the flora and fauna at a local and regional context for almost 130 years.

These long-term and ongoing impacts through grazing, mining and exploration (clearing of vegetation), changes to fire regimes and the introduction of weeds, have resulted in a degraded and somewhat fragmented vegetation and a lack of vegetation structure in large sections of the survey area. This loss of vegetation and absence of structure throughout large parts of the survey area has had an impact on the suite of fauna species that would have originally occurred in the region.

Results of the fauna databases searches outlined a total of 234 vertebrate species from 72 families and a total of 31 conservation significant vertebrate species (including Priority species) from 17 families in the vicinity of the survey area. During the survey a total of 37 fauna species, from 25 families were recorded. No species of conservation significance were recorded during the field survey and all fauna species recorded are considered relatively common and widespread in the region.

A total of three fauna habitats types were recorded in the survey area, Mulga Shrubland, Drainage Area and Scattered Acacia Shrubland on Stony Plains. The most widespread being Mulga Shrubland with a total of 1,176 ha (54%) being recorded. A total of 465 ha (23%) of the survey area is considered to be cleared or degraded in nature, which provides little habitat to fauna species. The three fauna habitats recorded in the survey area, were also represented in the wider study area, with Mulga Shrubland again representing the most widespread habitat with a total of approximately 10, 766 ha, or 56% of the Study Area. All three broad fauna habitat types described here are common and widespread in the region.

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Figures

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6965000 6965000

6960000 6960000

610000 615000

HA10 HA11 HA9 HA12 HA4 HA6 HA5 HA3 HA1 HA2 HA7 HA14 HA13 HA15 HA16 HA8 HA17 HA18

1 2 3 4 5 6 7 8

Tuckabianna Rd

Cue-Wondinong Rd

Figure 4: Fauna Assessment Locations

0 500 1,000 1,500 m

GDA94 - MGA Zone 50

1:30,000

Legend

- Additional Birding Location
- Reptile Search
- Habitat Assessment
- Tracks
- Survey Area
- TSF3

WESTERN ECOLOGICAL

Figure 5: Conservation Significant Fauna

0 8 16 24 km

Scale 1:700,000

GDA94 - MGA Zone 50

Survey Area

DBCA Records

- Bar-tailed Godwit
- Black-flanked Rock-wallaby
- Blue-billed Duck
- Brush-tailed Mulgara
- Caspian Tern
- Common Greenshank
- Common Sandpiper
- Curlew Sandpiper
- Fork-tailed Swift
- Gilled Slender Blue-tongue
- Glossy Ibis
- Grey Falcon
- Gull-billed Tern
- Hooded Plover
- Long-tailed Dunnart
- Malleefowl
- Marsh Sandpiper
- Night Parrot
- Oriental Pratincole
- Pectoral Sandpiper
- Peregrine Falcon
- Red-necked Stint
- Sharp-tailed Sandpiper
- West Coast Mulga Slider
- Western Spiny-tailed Skink
- White-winged Black Tern
- Wood Sandpiper

Ref: 100_G003_RevA.qgz

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Tuckabianna Rd

Cue-Wondinong Rd

Figure 6: Fauna Habitat (Survey Area)

0 500 1,000 1,500 m

GDA94 - MGA Zone 50

1:30,000

Legend

Fauna Habitat

- Mulga Shrubland
- Scattered Acacia on Stony Plain
- Drainage Area
- Cleared / Degraded

- Survey Area
- TSF3

WESTERN ECOLOGICAL

Ref: 100_G006_RevA.qgz

Figure 7: Fauna Habitat (Study Area)

Ref: 100_Georef_RevA.qgz

Appendices

Appendix 1: Conservation Categories

Categories of Threatened 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**

GOVERNMENT OF WESTERN AUSTRALIA

CONSERVATION CODES

For Western Australian Flora and Fauna

Threatened, Extinct and Specially Protected fauna or flora[1] are species[2] 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.

Conservation codes for Western Australian flora and fauna

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*.

Conservation codes for Western Australian flora and fauna

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.

[1] The definition of flora includes algae, fungi and lichens
[2] Species 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).

Last updated 3 January 2019

Appendix 2: Tuckabianna Mine Site Climate Data (February 2021)

FEBRUARY 2021
LOCAL CLIMATOLOGICAL DATA
DAVIS INSTRUMENTS, WEATHERLINK NETWORK

Lake Austin, WA AUS
CGO - Tuckabianna
Lat: -27.4568 Long: 118.1440 Elev (ground): 476 meters Time Zone: Australia/Perth

DAVIS

	TEMPERATURE °C					DEG DAYS BASE 18.3°		PRECIP. (mm)	PRESSURE (hPa)		WIND SPEED = km/h DIR = DEGREES									
														WIND MAX						
														INSTANT		2 - MIN		ARCHIVE		
Date	MAXIMUM	MINIMUM	AVERAGE	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	SPEED	DIR	SPEED	DIR	SPEED	DIR	Date
01	31	21	26	15	18	0.000	8.048	0.2	956.1	1011.9	17	88	17	47	54	30	45	27	50	01
02	33	19	26	15	17	0.000	7.317	0.2	953.6	1009.3	12	43	16	40	90	24	360	20	360	02
03	32	19	23	17	19	0.000	4.988	10.2	951.0	1006.7	8	27	12	39	155	27	161	22	164	03
04	27	19	22	15	17	0.000	3.214	0.2	952.2	1007.9	13	50	17	45	360	26	360	22	360	04
05	30	19	24	11	14	0.000	5.428	0.0	951.2	1006.8	14	45	17	40	29	26	48	21	29	05
06	33	21	25	13	16	0.000	7.009	0.6	948.9	1004.4	19	13	20	51	333	33	31	28	36	06
07	31	21	26	17	19	0.000	7.302	0.0	949.8	1005.4	13	325	16	47	360	28	316	23	360	07
08	32	18	25	13	16	0.000	6.990	0.0	952.4	1008.1	6	330	10	34	360	22	357	17	360	08
09	34	19	26	12	15	0.000	8.063	0.0	953.5	1009.3	4	25	10	31	360	20	360	14	190	09
10	33	21	27	9	13	0.000	8.362	0.0	953.9	1009.6	3	46	17	40	163	26	14	22	2	10
11	34	20	27	10	14	0.000	8.819	0.0	954.0	1009.8	7	44	13	35	360	21	153	18	124	11
12	35	22	29	10	14	0.000	10.916	0.0	955.1	1010.9	8	36	11	35	19	24	11	20	12	12
13	33	24	29	7	12	0.000	10.553	0.0	956.9	1012.8	9	43	11	32	360	21	27	18	34	13
14	38	26	31	8	12	0.000	13.047	0.0	955.6	1011.4	8	31	10	39	19	24	25	20	37	14
15	38	24	29	16	19	0.000	10.881	8.0	954.7	1010.5	5	22	10	42	360	24	2	20	218	15
16	38	23	30	21	22	0.000	11.573	0.0	953.9	1009.7	6	6	7	32	330	22	345	17	355	16
17	38	23	29	22	23	0.000	10.424	26.0	953.2	1009.0	8	346	12	50	261	33	259	27	34	17
18	29	20	25	16	18	0.000	6.315	0.0	956.3	1012.2	11	181	12	39	174	24	171	21	184	18
19	33	18	26	12	15	0.003	7.748	0.0	958.1	1014.1	9	132	10	31	161	18	157	14	102	19
20	37	21	29	13	16	0.000	10.783	0.0	957.8	1013.8	3	113	7	31	167	20	214	14	202	20
21	39	24	31	10	14	0.000	13.057	0.0	957.8	1013.8	4	84	8	29	169	18	53	16	54	21
22	37	26	31	3	8	0.000	13.039	0.0	959.2	1015.2	12	60	13	39	44	26	49	22	37	22
23	37	23	30	0	6	0.000	11.536	0.0	960.2	1016.3	12	66	13	51	89	27	51	24	46	23
24	38	23	31	3	8	0.000	12.869	0.0	958.5	1014.4	7	62	9	42	50	21	79	18	28	24
25	41	22	33	3	8	0.000	14.580	0.0	955.4	1011.3	4	287	9	34	242	24	238	17	341	25
26	38	22	30	9	13	0.000	12.055	0.0	951.3	1007.0	9	217	10	42	261	26	256	21	260	26
27	34	19	27	5	10	0.000	8.652	0.0	951.3	1007.0	5	172	6	31	225	18	185	13	191	27
28	37	20	29	7	12	0.000	10.852	0.0	951.8	1007.5	2	40	5	26	295	19	338	13	76	28
	35	21	28	11	15	0.006	16.999		954.4	1010.2	9	104.71	12	< Monthly Avg						

NUMBER OF DAYS WITH: >
Maximum Temp ≥ 32.2: 21
Maximum Temp ≤ 0: 0
Minimum Temp ≤ 0: 0
Minimum Temp ≤ -17.7: 0
Precipitation ≥ 0.2 mm: 4
Precipitation ≥ 2.0 mm: 3
Greatest 24 — hr precipitation: 26.0 Date: 16-17
Monthly Total Precipitation: 45.4

			DATE	TIME
SEA LEVEL PRESSURE: >	MAXIMUM:	1018.7	23	09:34
	MINIMUM:	1000.6	6	16:20

		MONTHLY TOTAL	SEASON TO DATE TOTAL
DEGREEE DAYS: >	HEATING:	0.006	0.017
	COOLING:	475.959	3039.392

FEBRUARY 2021
Lake Austin, WA AUS

Appendix 3: Fauna Database Searches

SCI_NAME	COM_NAME	CLASS	WA_LISTING	WA_status	EPBC status	Date	CERTAINTY	OBS_METHOD	OBS_TYPE	LOCALITY	SITE	ACCURACY_M	LONG_GDA	LAT_GDA
Limosa lapponica	Bar-tailed godwit	BIRD	Specially Protected - migratory	MI	MI	22/09/1999				Claypan, Austin Downs Station	Claypan, Austin Downs Station	100	117.65360000000	-27.42200000000
Petrogale lateralis lateralis	Black-flanked rock-wallaby	MAMMAL	Threatened - Endangered	EN	EN		Certain	Historical (written)	Fossil	Wilgie Mia	Wilgie Mia aboriginal ochre mine; about 5 km SSW of Gnanagooragoo Peak in the Weld Range	1000	117.70140170000	-26.91538788000
Petrogale lateralis lateralis	Black-flanked rock-wallaby	MAMMAL	Threatened - Endangered	EN	EN		Moderately certain	Historical (written)	Dead	Mt Farmer	A few miles west of Mt Farmer.	10000	117.41666700000	-27.70000362000
Oxyura australis	Blue-billed duck	BIRD	Priority	P4		23/06/2000				Nallan Dam	Nallan Dam	100	117.98750000000	-27.25790000000
Dasycercus blythi	Brush-tailed mulgara	MAMMAL	Priority	P4			Certain	Historical (written)	Fossil	Weld Range	Wilgie Mia aboriginal ochre mine; about 5 km SSW of Gnanagooragoo Peak in the Weld Range	1000	117.70140170000	-26.91538788000
Hydroprogne caspia	Caspian Tern	BIRD	Specially Protected - migratory	MI	MI	24/01/2013				Lake Nallan	Lake Nallan	0	117.98690000000	-27.25860000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	9/05/2011				Lake Austin - Lakeside Rd	Lake Austin - Lakeside Rd	0	117.81670000000	-27.52500000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	14/02/2013				Lake Nallan	Lake Nallan	0	117.98690000000	-27.25860000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	27/03/2012				Nallan Lake	Nallan Lake	0	117.98500000000	-27.25780000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	5/09/1980				MEEKATHARRA	MEEKATHARRA	18000	118.25140000000	-26.91540000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	15/09/1980				MEEKATHARRA	MEEKATHARRA	18000	118.25140000000	-26.91540000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	24/08/1980				REEDY	REEDY	18000	118.08470000000	-27.08200000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	21/09/2001				Lake Nallan, Great Northern Hwy	Lake Nallan, Great Northern Hwy	100	117.98720000000	-27.25820000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	23/08/2003				Nallan Lake	Nallan Lake	100	117.98280000000	-27.25560000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	22/09/1999				Claypan, Austin Downs Station	Claypan, Austin Downs Station	100	117.65360000000	-27.42200000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	9/11/2003				Nallan Lake	Nallan Lake	100	117.98360000000	-27.25690000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	17/01/2004				Nallon Lake	Nallon Lake	100	117.98640000000	-27.26000000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	18/09/2004				Nallan Dam	Nallan Dam	100	117.98860000000	-27.25760000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	25/03/2005				Nallan Lake	Nallan Lake	100	117.98500000000	-27.25980000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	28/07/2005				Hallan Dam	Hallan Dam	100	117.98890000000	-27.25870000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	11/06/2005				Nallan Dam	Nallan Dam	100	117.98890000000	-27.25900000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	22/08/2005				Nallan Dam	Nallan Dam	100	117.99110000000	-27.25730000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	5/11/2005				Small Lake	Small Lake	100	117.90080000000	-27.58080000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	6/11/2005				Nallan Lake	Nallan Lake	100	117.98970000000	-27.25830000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	27/10/1999				Nallan Lake	Nallan Lake	100	117.98220000000	-27.25720000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	2/06/2009				Nallan Station	Nallan Station	100	117.97170000000	-27.31670000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	9/05/2011				Lake Austin - Lakeside Rd	Lake Austin - Lakeside Rd	0	117.81670000000	-27.52500000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	14/02/2013				Lake Nallan	Lake Nallan	100	117.98690000000	-27.25860000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	29/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000
Tringa nebularia	Common greenshank	BIRD	Specially Protected - migratory	MI	MI	28/03/2012	Certain	Survey	Unknown	WELD RANGE	Cue, Lake Austin	3000	117.47250000000	-27.20110000000
Actitis hypoleucos	Common Sandpiper	BIRD	Specially Protected - migratory	MI	MI	22/07/2015				Nallan Lake	Nallan Lake	0	117.98170000000	-27.26080000000
Actitis hypoleucos	Common Sandpiper	BIRD	Specially Protected - migratory	MI	MI	15/09/2001				Nallan Lake, Great Northern Hwy	Nallan Lake, Great Northern Hwy	100	117.98890000000	-27.25700000000
Actitis hypoleucos	Common Sandpiper	BIRD	Specially Protected - migratory	MI	MI	22/08/2005				Nallan Dam	Nallan Dam	100	117.99110000000	-27.25730000000
Calidris ferruginea	curlew sandpiper	BIRD	Threatened - Critically endangered	CR	CR	15/09/1980				MEEKATHARRA	MEEKATHARRA	18000	118.25140000000	-26.91540000000
Calidris ferruginea	curlew sandpiper	BIRD	Threatened - Critically endangered	CR	CR	5/11/2005				Small Lake	Small Lake	100	117.90080000000	-27.58080000000
Apus pacificus	Fork-tailed swift	BIRD	Specially Protected - migratory	MI	MI	2/09/1980				MEEKATHARRA	MEEKATHARRA	18000	118.41810000000	-26.91540000000
Apus pacificus	Fork-tailed swift	BIRD	Specially Protected - migratory	MI	MI	11/09/2001				Walga Rock	Walga Rock	100	117.46470000000	-27.40090000000
Cyclodomorphus branchialis	gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	Certain	Survey	Caught or trapped	Mount Magnet	2km east Mount Magnet	1000	117.86666170000	-28.06666470000
Cyclodomorphus branchialis	gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	Certain	Survey	Caught or trapped	Mount Magnet	Mount Magnet	1000	117.82819520000	-28.06129661000
Cyclodomorphus branchialis	Gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	WAM Vouchered	Collection	Specimen	MOUNT MAGNET	MOUNT MAGNET	10000	117.86670000000	-28.06670000000
Cyclodomorphus branchialis	Gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	WAM Vouchered	Collection	Specimen	MOUNT MAGNET	MOUNT MAGNET	10000	117.86670000000	-28.06670000000
Cyclodomorphus branchialis	Gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	WAM Vouchered	Collection	Specimen		MOUNT MAGNET	10000	117.86670000000	-28.06670000000
Cyclodomorphus branchialis	Gilled slender blue-tongue	REPTILE	Threatened - Vulnerable	VU		28/08/2005	WAM Vouchered	Collection	Specimen		MOUNT MAGNET	10000	117.86670000000	-28.06670000000
Plegadis falcinellus	Glossy ibis	BIRD	Specially Protected - migratory	MI	MI	18/09/2004				Nallan Dam	Nallan Dam	100	117.98860000000	-27.25760000000
Plegadis falcinellus	Glossy ibis	BIRD	Specially Protected - migratory	MI	MI	19/10/2005				Lake Nallan	Lake Nallan	100	117.97080000000	-27.25750000000
Plegadis falcinellus	Glossy ibis	BIRD	Specially Protected - migratory	MI	MI	27/10/1999				Nallan Lake	Nallan Lake	100	117.98220000000	-27.25720000000
Plegadis falcinellus	Glossy ibis	BIRD	Specially Protected - migratory	MI	MI	14/10/1999				Nallan Lake	Nallan Lake	100	117.98920000000	-27.25650000000
Falco hypoleucos	Grey falcon	BIRD	Threatened - Vulnerable	VU		17/07/2003				Stake Well	Stake Well	5000	118.21670000000	-27.02500000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	2/09/1980						18000	118.25140000000	-26.91540000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1980						18000	118.25140000000	-26.91540000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	5/09/1980						18000	118.25140000000	-26.91540000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	2/09/1980						18000	117.91810000000	-27.58200000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	24/08/1980						18000	117.91810000000	-27.58200000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	24/08/1980						108000	117.50140000000	-27.49870000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	15/09/1980						18000	118.25140000000	-26.91540000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	24/08/1980						18000	117.91810000000	-27.58200000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	2/09/1980						108000	117.50140000000	-27.49870000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	17/09/1980						108000	117.50140000000	-27.49870000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	5/09/1980						18000	117.91810000000	-27.24870000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	9/08/2000				Lake Annean	Lake Annean	5000	118.31810000000	-26.94870000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	4/08/2000				Lake Nallan	Lake Nallan	100	117.98920000000	-27.25510000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	5/05/2000				Lake Annean, Great Northern Hwy	Lake Annean, Great Northern Hwy	100	118.30890000000	-26.89530000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	24/07/2001				Nallan Lakes	Nallan Lakes	100	117.98280000000	-27.25700000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	2/08/2001				Lake Annean, Great Northern Hwy	Lake Annean, Great Northern Hwy	100	118.27030000000	-26.90810000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	9/09/1999				Nannine Lake	Nannine Lake	100	118.35830000000	-26.88110000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	5/06/2006				Lake Austin	Lake Austin	100	117.88970000000	-27.61060000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	29/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	25/08/1992	WAM Vouchered	Collection	Specimen		Lake Annean	0	118.31670000000	-26.95000000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	3/04/1999	WAM Vouchered	Collection	Specimen		Annean, Lake; Anneen	0	118.28280000000	-26.91690000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	3/04/1999	WAM Vouchered	Collection	Specimen		Annean, Lake; Annean Station	0	118.28280000000	-26.91690000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	12/04/1999	WAM Vouchered	Collection	Specimen		Lake Annean	10000	118.28330000000	-26.91670000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	10/04/1999	WAM Vouchered	Collection	Specimen		LAKE ANNEAN	50	118.35000000000	-26.88330000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	10/04/1999	WAM Vouchered	Collection	Specimen		LAKE ANNEAN	50	118.35000000000	-26.88330000000
Gelochelidon nilotica	Gull-billed tern	BIRD	Specially Protected - migratory	MI	MI	20/03/1965	WAM Vouchered	Collection	Specimen		Lake Annean	10000	118.28330000000	-26.91670000000
Thinornis rubricollis	Hooded plover	BIRD	Priority	P4		17/09/2015				Lake Nallan	Lake Nallan	0	117.98530000000	-27.26140000000
Thinornis rubricollis	Hooded plover	BIRD	Priority	P4		21/09/2000				Cue South	Cue South	500	117.90250000000	-27.58010000000
Thinornis rubricollis	Hooded plover	BIRD	Priority	P4		28/03/2012	Certain	Survey	Unknown	WELD RANGE	Cue, Lake Austin	3000	117.47250000000	-27.20110000000
Thinornis rubricollis	Hooded plover	BIRD	Priority	P4		1/09/2000	Certain	Community survey	Day sighting	Lake Austin	Lake Austin complex, just south of Cue	50000	117.90000150000	-27.61666976000
Thinornis rubricollis	Hooded plover	BIRD	Priority	P4		21/09/2000	Certain	Community survey	Day sighting	Lake Austin	Small lake west side of Great Northern Highway, 18.9km South of Cue	1000	117.90111140000	-27.58138446000
Sminthopsis longicaudata	Long-tailed dunnart	MAMMAL	Priority	P4		29/04/2017	Not Sure		Camera Trap	Meekathara: Gabanintha	Acorn A30 (A4.3)	50000	118.65010000000	-27.02180000000
Sminthopsis longicaudata	Long-tailed dunnart	MAMMAL	Priority	P4		26/04/2017	Not Sure		Pitfall Trap	Meekathara: Gabanintha	TR-02	50000	118.63230000000	-26.94210000000
Sminthopsis longicaudata	Long-tailed dunnart	MAMMAL	Priority	P4		19/10/2018		Survey			Sminthopsis longicaudata|118.6021206|-26.8993542|19/10/2018	50000	118.60210000000	-26.89940000000
Sminthopsis longicaudata	Long-tailed dunnart	MAMMAL	Priority	P4		26/04/2017		Survey			Sminthopsis longicaudata|118.6323|-26.9421|26/04/2017	50000	118.63230000000	-26.94210000000
Sminthopsis longicaudata	Long-tailed dunnart	MAMMAL	Priority	P4		29/04/2017		Survey			Sminthopsis longicaudata|118.650135957|-27.02176203666|29/04/2017	50000	118.65010000000	-27.02180000000
Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	31/10/1980				LAKE AUSTIN	LAKE AUSTIN	108000	117.50140000000	-27.49870000000
Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU	24/09/1999				20km NW of Mount Magnet	20km NW of Mount Magnet	100	117.64080000000	-27.94870000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	31/07/2016	Certain	Opportunistic sighting	Night sighting	Daggar Hills	Wamane Pastoral Lease, 16km N of Mt Magnet post office, track to W leads to MRD borrow pit	1000	117.78220060000	-27.93029867000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1/11/1981	Moderately certain	Opportunistic sighting	Secondary sign	REEDY	10 km South East of 11 Well	10000	118.51670000000	-27.25000000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1/01/2001	Moderately certain	Opportunistic sighting	Sighting	DAGGAR HILLS	20km NW of Mount Magnet	500	117.63944000000	-27.95000000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU		Moderately certain	Opportunistic sighting	Secondary sign	LAKE AUSTIN	Between Cue and Separation Well	50000	117.90000000000	-27.41660000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1/11/1981	Moderately certain	Opportunistic sighting	Secondary sign	REEDY	Near Red Tank Mill on Cogla Downs	10000	118.43330000000	-27.20000000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU	1/01/1980	Moderately certain	Opportunistic sighting	Sighting	LAKE AUSTIN		50000	117.50000000000	-27.50000000000
Leipoa ocellata	malleefowl	BIRD	Threatened - Vulnerable	VU	VU		Certain	Historical (written)	Secondary sign	Cue	Between Cue and Seperation Well	1000	117.85260000000	-27.44710000000
Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU		WAM Vouchered	Collection	Specimen	LAKE AUSTIN	Tuckabianna; Perth Zoological Gardens	10000	118.11690000000	-27.48280000000

Leipoa ocellata	Malleefowl	BIRD	Threatened - Vulnerable	VU	VU		WAM Vouchered	Collection	Specimen		Tuckabianna; Perth Zoological Gardens	10000	118.11690000000	-27.48280000000
Tringa stagnatilis	Little greenshank	BIRD	Specially Protected - migratory	MI	MI	11/01/2013				Lake Nallan	Lake Nallan	0	117.98690000000	-27.25860000000
Tringa stagnatilis	Little greenshank	BIRD	Specially Protected - migratory	MI	MI	17/01/2004				Nallon Lake	Nallon Lake	100	117.98640000000	-27.26000000000
Tringa stagnatilis	Little greenshank	BIRD	Specially Protected - migratory	MI	MI	11/01/2013				Lake Nallan	Lake Nallan	100	117.98690000000	-27.25860000000
Tringa stagnatilis	Little greenshank	BIRD	Specially Protected - migratory	MI	MI	29/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000
Pezoporus occidentalis	Night parrot	BIRD	Threatened - Critically endangered	CR	EN		Certain	Historical (written)	Dead	Daggar Hills	8 miles [13km] SE of Mt Farmer, Murchison District near the W end of Lake Austin	10000	117.49199900000	-27.79800171000
Glareola maldivarum	Oriental pratincole	BIRD	Specially Protected - migratory	MI	MI	31/05/1980				LAKE AUSTIN	LAKE AUSTIN	108000	118.50140000000	-27.49870000000
Calidris melanotos	Pectoral Sandpiper	BIRD	Specially Protected - migratory	MI	MI	2/01/2013				Great Northern Hwy at 26 56 44S 118 15 01E	Great Northern Hwy at 26 56 44S 118 15 01E	100	118.25030000000	-26.94560000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		14/02/2013				Lake Nallan	Lake Nallan	0	117.98690000000	-27.25860000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		1/08/2017				Nallan Lake	Nallan Lake	0	117.98700000000	-27.26050000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		5/09/1980				WELD RANGE	WELD RANGE	18000	117.58470000000	-27.24870000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		15/08/1979				WELD RANGE	WELD RANGE	18000	117.75140000000	-26.91540000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		14/09/2000				Lake Annean	Lake Annean	100	118.31030000000	-26.89590000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		8/04/2001				Walga Rock	Walga Rock	500	117.46250000000	-27.40290000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		7/07/2004				Nallan Dam	Nallan Dam	100	117.98580000000	-27.26090000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		15/05/2003				Nallan Railway dam	Nallan Railway dam	100	117.99030000000	-27.25940000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		14/02/2013				Lake Nallan	Lake Nallan	100	117.98690000000	-27.25860000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		31/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		21/10/2017	Not Sure		Bird Census	Meekathara: Gabanintha	TR-02	50	118.63210000000	-26.94220000000
Falco peregrinus	peregrine falcon	BIRD	Specially Protected - other specially protected	OS		26/04/1994	Certain	Opportunistic sighting	Day sighting		Mining Lease, above open cut pit	50000	117.83396240000	-27.95402430000
Falco peregrinus	peregrine falcon	BIRD	Specially Protected - other specially protected	OS		20/08/1993	Certain	Opportunistic sighting	Day sighting	Mount Magnet	Mining Lease, above open cut pit (disused)	50000	117.83101830000	-28.01288751000
Falco peregrinus	Peregrine falcon	BIRD	Specially Protected - other specially protected	OS		21/10/2017		Survey			Falco peregrinus|118.6320966|-26.9421558|21/10/2017	50	118.63210000000	-26.94220000000
Calidris ruficollis	Red-necked stint	BIRD	Specially Protected - migratory	MI	MI	4/09/2003				Lake Nallan	Lake Nallan	100	117.98330000000	-27.25720000000
Calidris ruficollis	Red-necked stint	BIRD	Specially Protected - migratory	MI	MI	25/03/2005				Nallan Lake	Nallan Lake	100	117.98500000000	-27.25980000000
Calidris ruficollis	Red-necked stint	BIRD	Specially Protected - migratory	MI	MI	28/03/2012	Certain	Survey	Unknown	WELD RANGE	Cue, Lake Austin	3000	117.47250000000	-27.20110000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	27/04/2011				Lake Austin	Lake Austin	0	117.88690000000	-27.60890000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	16/10/2007				Nallan Station	Nallan Station	100	117.96750000000	-27.31780000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	7/04/2011				Lake Austin	Lake Austin	0	117.89690000000	-27.60080000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	15/09/1980				MEEKATHARRA	MEEKATHARRA	18000	118.25140000000	-26.91540000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	17/01/2004				Wetland Great Northern Hwy	Wetland Great Northern Hwy	100	117.90110000000	-27.58110000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	5/11/2005				Small Lake	Small Lake	100	117.90080000000	-27.58080000000
Calidris acuminata	Sharp-tailed sandpiper	BIRD	Specially Protected - migratory	MI	MI	27/04/2011				Lake Austin	Lake Austin	100	117.88830000000	-27.60760000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		25/09/2011	Certain	Survey	Unknown	WELD RANGE	Murchison, Weld Range	100	117.68770000000	-26.94770000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		25/09/2011	Certain	Survey	Unknown	WELD RANGE	Murchison, Weld Range	100	117.67870000000	-26.95140000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		25/09/2011	Certain	Survey	Unknown	WELD RANGE	Murchison, Weld Range	100	117.67340000000	-26.94780000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		5/04/2011	Certain	Survey	Unknown	REEDY	Cue area, Opp	10000	118.07660000000	-27.22440000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		5/04/2011	Certain	Survey	Unknown	REEDY	Cue area, Opp	10000	118.07660000000	-27.22440000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		5/08/2014	Certain	Survey	Unknown	REEDY	20 km North Cue,	100	117.97770000000	-27.27940000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		5/08/2014	Certain	Survey	Unknown	MEEKATHARRA	30 km South Meekatharra,	100	118.25980000000	-26.92980000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		27/04/2017	Not Sure		Foraging	Meekathara: Gabanintha	Active 5	10	118.63830000000	-27.01860000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		15/02/1990	Certain	Survey	Caught or trapped	Reedy	14km NNE of Cue	1000	117.95140580000	-27.31538560000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1			Certain	Historical (written)	Caught or trapped	Coodardy	Telegootherra Hill	10000	117.56666210000	-27.26666578000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		1/01/1995	Certain	Survey	Caught or trapped	Reedy	16km NNE of Cue	10000	117.96900210000	-27.29219966000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1			Certain	Historical (written)	Caught or trapped	Nannine	35km SSW of Meekatharra	10000	118.35900200000	-26.87199818000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1			Certain	Historical (written)	Caught or trapped	Nannine	70km NNE of Cue	10000	118.27099750000	-26.89840068000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		15/02/1990	WAM Vouchered	Collection	Specimen	REEDY	CUE	10000	117.95000000000	-27.31670000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		15/02/1990	WAM Vouchered	Collection	Specimen	REEDY	CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		27/03/1990	WAM Vouchered	Collection	Specimen	MEEKATHARRA	NANNINE	50000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		7/09/1991	WAM Vouchered	Collection	Specimen	MEEKATHARRA	MEEKATHARRA	10000	118.31670000000	-26.95000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		7/09/1991	WAM Vouchered	Collection	Specimen	MEEKATHARRA	MEEKATHARRA	10000	118.31670000000	-26.95000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		20/08/1994	WAM Vouchered	Collection	Specimen	MEEKATHARRA	CUE	10000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		20/08/1994	WAM Vouchered	Collection	Specimen	MEEKATHARRA	CUE	10000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		18/08/1998	WAM Vouchered	Collection	Specimen	REEDY	CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		18/08/1998	WAM Vouchered	Collection	Specimen	REEDY	CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		17/05/2009	WAM Vouchered	Collection	Specimen	WELD RANGE	WELD RANGE	200000	117.81720000000	-26.84810000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		13/07/1984	WAM Vouchered	Collection	Specimen	WELD RANGE	COODARDY HS	10000	117.58330000000	-27.26670000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		15/02/1990	WAM Vouchered	Collection	Specimen		CUE	10000	117.95000000000	-27.31670000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		15/02/1990	WAM Vouchered	Collection	Specimen		CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		27/03/1990	WAM Vouchered	Collection	Specimen		NANNINE	50000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		7/09/1991	WAM Vouchered	Collection	Specimen		MEEKATHARRA	10000	118.31670000000	-26.95000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		7/09/1991	WAM Vouchered	Collection	Specimen		MEEKATHARRA	10000	118.31670000000	-26.95000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		20/08/1994	WAM Vouchered	Collection	Specimen		CUE	10000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		20/08/1994	WAM Vouchered	Collection	Specimen		CUE	10000	118.35000000000	-26.88330000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		18/08/1998	WAM Vouchered	Collection	Specimen		CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		18/08/1998	WAM Vouchered	Collection	Specimen		CUE	10000	117.96670000000	-27.30000000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		17/05/2009	WAM Vouchered	Collection	Specimen		WELD RANGE	200000	117.81720000000	-26.84810000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		13/07/1984	WAM Vouchered	Collection	Specimen		COODARDY HS	10000	117.58330000000	-27.26670000000
Lerista eupoda	West Coast mulga slider	REPTILE	Priority	P1		27/04/2017		Survey			Lerista eupoda|118.6383134|-27.01864054|27/04/2017	10	118.63830000000	-27.01860000000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	29/04/2010	Certain	Survey	Unknown	LAKE AUSTIN	SA3, SA3 29-5	100	117.49110000000	-27.40730000000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	31/05/1998	Certain	Survey	Caught or trapped	Austin Downs/Weld Range	WOOLGERONG ROCK	10000	117.38471160000	-27.39872313000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	1/01/1998	Certain	Survey	Caught or trapped	Walga Rock	WALGANNA ROCK (WALGA ROCK)	10000	117.46810830000	-27.39872098000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	14/08/2003	Certain	Survey	Caught or trapped	Austin Downs	Walga Rock	1000	117.47082880000	-27.39861252000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	21/06/1998	Not sure	Survey	Caught or trapped	Austin Downs/Weld Range	Wurrah Rocks	1000	117.34999950000	-27.38333158000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	3/08/1986	Certain	Survey	Caught or trapped	Austin Downs	Woolgerong Rock	1000	117.38330000000	-27.39999995000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	13/08/2003	Certain	Survey	Caught or trapped	Austin Downs	Walga Rock	1000	117.47079840000	-27.39860359000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	1/01/1998	Certain	Targeted survey	Day sighting	Lake Austin	Woolgerong Rock, Austin Downs	1000	117.38700140000	-27.39400421000
Egernia stokesii badia	western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	1/01/1998	Certain	Targeted survey	Day sighting	Lake Austin	Wurrah Rocks, Austin Downs	1000	117.35999740000	-27.38199710000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	21/06/1998	WAM Vouchered	Collection	Specimen	WELD RANGE	WURRAH ROCK	10000	117.35000000000	-27.38330000000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	31/05/1998	WAM Vouchered	Collection	Specimen	LAKE AUSTIN	WOOLGERONG ROCK	10000	117.38280000000	-27.40000000000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	14/08/2003	WAM Vouchered	Collection	Specimen	LAKE AUSTIN	WALGA ROCK	200000	117.47080000000	-27.39860000000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	13/08/2003	WAM Vouchered	Collection	Specimen	LAKE AUSTIN	WALGA ROCK	200000	117.47080000000	-27.39860000000
Egernia stokesii badia	Western spiny-tailed skink	REPTILE	Threatened - Vulnerable	VU	EN	3/08/1986	WAM Vouchered	Collection	Specimen	LAKE AUSTIN	WOOLGERONG ROCK	10000	117.38330000000	-27.40000000000
Chlidonias leucopterus	White-winged black tern	BIRD	Specially Protected - migratory	MI	MI	20/07/2015				Lake Austin, Lakeside Rd causeway	Lake Austin, Lakeside Rd causeway	0	117.81720000000	-27.52640000000
Chlidonias leucopterus	White-winged black tern	BIRD	Specially Protected - migratory	MI	MI	31/08/2015				Nallan Lake	Nallan Lake	0	117.98170000000	-27.26080000000
Chlidonias leucopterus	White-winged black tern	BIRD	Specially Protected - migratory	MI	MI	29/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000
Tringa glareola	Wood sandpiper	BIRD	Specially Protected - migratory	MI	MI	30/09/1999				Nallan Station	Nallan Station	100	117.98940000000	-27.25590000000
Tringa glareola	Wood sandpiper	BIRD	Specially Protected - migratory	MI	MI	9/11/2003				Nallan Lake	Nallan Lake	100	117.98360000000	-27.25690000000
Tringa glareola	Wood sandpiper	BIRD	Specially Protected - migratory	MI	MI	5/11/2005				Small Lake	Small Lake	100	117.90080000000	-27.58080000000
Tringa glareola	Wood sandpiper	BIRD	Specially Protected - migratory	MI	MI	6/11/2005				Nallan Lake	Nallan Lake	100	117.98970000000	-27.25830000000
Tringa glareola	Wood sandpiper	BIRD	Specially Protected - migratory	MI	MI	29/12/1999				Nallan Lake	Nallan Lake	500	117.98500000000	-27.25570000000

NatureMap
Mapping Western Australia's biodiversity

NatureMap Species Report

Created By Guest user on 08/03/2021

Kingdom Animalia
Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 118° 07' 23" E,27° 28' 03" S
Buffer 40km
Group By Family

Family	Species	Records
Acanthizidae	14	583
Accipitridae	11	248
Aegothelidae	2	5
Agamidae	11	175
Anatidae	12	486
Anhingidae	1	9
Ardeidae	3	139
Artamidae	6	168
Boidae	1	4
Bothriuridae	1	1
Bovidae	2	5
Branchipodidae	2	6
Burhinidae	1	18
Cacatuidae	1	71
Campephagidae	3	73
Caprimulgidae	1	2
Carphodactylidae	1	7
Casuariidae	1	72
Charadriidae	6	165
Cinclosomatidae	3	78
Climacteridae	1	5
Columbidae	7	367
Corinnidae	1	1
Corvidae	3	187
Cracticidae	3	250
Crytopidae	1	2
Cuculidae	1	19
Dasyuridae	5	67
Desidae	1	5
Dicaeidae	1	9
Dicruridae	4	436
Diplodactylidae	5	37
Elapidae	7	12
Estrilidae	1	229
Falconidae	6	125
Gekkonidae	3	107
Halcyonidae	2	29
Hirundinidae	4	259
Hylidae	1	2
Laridae	3	11
Leporidae	1	6
Limnadiidae	1	2
Limnodynastidae	1	1
Lycosidae	2	2
Macropodidae	1	5
Maluridae	6	232
Megapodiidae	1	2
Meliphagidae	10	502
Meropidae	1	7
Motacillidae	2	4
Muridae	1	1
Neosittidae	2	17
Pachycephalidae	5	476
Pardalotidae	1	7
Pelecanidae	1	15
Petroicidae	3	244
Phalacrocoracidae	3	43
Phasianidae	2	10
Podargidae	2	4
Podicipedidae	3	126
Pomatostomidae	2	153
Prodidomidae	1	1
Psittacidae	7	213
Ptilonorhynchidae	2	59
Pygopodidae	2	10
Rallidae	3	89
Recurvirostridae	3	117
Scincidae	14	337
Scolopacidae	7	36
Scolopendridae	1	1
Sparassidae	1	1
Sturnidae	1	4
Tachyglossidae	1	4
Thamnocephalidae	1	1
Theridiidae	1	1

Threskiornithidae	4	104
Thylacomyidae	1	3
Trochanteriidae	1	1
Turnicidae	1	27
Urodacidae	3	10
Varanidae	3	31
Zodariidae	1	3
Zosteropidae	1	1
TOTAL	**254**	**7387**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Acanthizidae					
1.	24260	*Acanthiza apicalis (Broad-tailed Thornbill, Inland Thornbill)*			
2.	24261	*Acanthiza chrysorrhoa (Yellow-rumped Thornbill)*			
3.	25527	*Acanthiza iredalei (Samphire Thornbill, Slender-billed Thornbill)*			
4.	24263	*Acanthiza iredalei subsp. iredalei (Samphire Thornbill, Slender-billed Thornbill)*			
5.	24264	*Acanthiza robustirostris (Slaty-backed Thornbill)*			
6.	24265	*Acanthiza uropygialis (Chestnut-rumped Thornbill)*			
7.	25528	*Aphelocephala leucopsis (Southern Whiteface)*			
8.	24266	*Aphelocephala leucopsis subsp. castaneiventris (Southern Whiteface)*			
9.	24268	*Aphelocephala nigricincta (Banded Whiteface)*			
10.	24269	*Calamanthus campestris (Rufous Fieldwren)*			
11.	25530	*Gerygone fusca (Western Gerygone)*			
12.	24271	*Gerygone fusca subsp. fusca (Western Gerygone)*			
13.	24278	*Pyrrholaemus brunneus (Redthroat)*			
14.	30948	*Smicrornis brevirostris (Weebill)*			
Accipitridae					
15.	25535	*Accipiter cirrocephalus (Collared Sparrowhawk)*			
16.	25536	*Accipiter fasciatus (Brown Goshawk)*			
17.	24285	*Aquila audax (Wedge-tailed Eagle)*			
18.	24288	*Circus approximans (Swamp Harrier)*			
19.	24289	*Circus assimilis (Spotted Harrier)*			
20.		*Elanus axillaris*			
21.	24295	*Haliastur sphenurus (Whistling Kite)*			
22.	24296	*Hamirostra isura (Square-tailed Kite)*			
23.	24297	*Hamirostra melanosternon (Black-breasted Buzzard)*			
24.	47965	*Hieraaetus morphnoides (Little Eagle)*			
25.	25542	*Milvus migrans (Black Kite)*			
Aegothelidae					
26.	25544	*Aegotheles cristatus (Australian Owlet-nightjar)*			
27.	24301	*Aegotheles cristatus subsp. cristatus (Australian Owlet-nightjar)*			
Agamidae					
28.	25458	*Ctenophorus caudicinctus (Ring-tailed Dragon)*			
29.	24869	*Ctenophorus caudicinctus subsp. mensarum (Ring-tailed Dragon)*			
30.	24882	*Ctenophorus nuchalis (Central Netted Dragon)*			
31.	24883	*Ctenophorus ornatus (Ornate Crevice-Dragon)*			
32.	24886	*Ctenophorus reticulatus (Western Netted Dragon)*			
33.	24888	*Ctenophorus salinarum (Salt Pan Dragon)*			
34.	24889	*Ctenophorus scutulatus (Lozenge-marked Dragon)*			
35.	24904	*Moloch horridus (Thorny Devil)*			
36.	25510	*Pogona minor (Dwarf Bearded Dragon)*			
37.	24907	*Pogona minor subsp. minor (Dwarf Bearded Dragon)*			
38.	30814	*Tympanocryptis cephalus (Pebble Dragon)*			
Anatidae					
39.	24310	*Anas castanea (Chestnut Teal)*			
40.	24312	*Anas gracilis (Grey Teal)*			
41.	24315	*Anas rhynchotis (Australasian Shoveler)*			
42.	24316	*Anas superciliosa (Pacific Black Duck)*			
43.	24318	*Aythya australis (Hardhead)*			
44.	24319	*Biziura lobata (Musk Duck)*			
45.	24321	*Chenonetta jubata (Australian Wood Duck, Wood Duck)*			
46.	24322	*Cygnus atratus (Black Swan)*			
47.	24326	*Malacorhynchus membranaceus (Pink-eared Duck)*			
48.	24328	*Oxyura australis (Blue-billed Duck)*		P4	
49.	24329	*Stictonetta naevosa (Freckled Duck)*			
50.	24331	*Tadorna tadornoides (Australian Shelduck, Mountain Duck)*			
Anhingidae					
51.	47414	*Anhinga novaehollandiae (Australasian Darter)*			
Ardeidae					
52.	41324	*Ardea modesta (great egret, white egret)*			
53.	24341	*Ardea pacifica (White-necked Heron)*			
54.		*Egretta novaehollandiae*			
Artamidae					
55.	25566	*Artamus cinereus (Black-faced Woodswallow)*			
56.	24352	*Artamus cinereus subsp. melanops (Black-faced Woodswallow)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
57.	24353	*Artamus cyanopterus (Dusky Woodswallow)*			
58.	24355	*Artamus minor (Little Woodswallow)*			
59.	24356	*Artamus personatus (Masked Woodswallow)*			
60.	24357	*Artamus superciliosus (White-browed Woodswallow)*			
Boidae					
61.	25318	*Antaresia perthensis (Pygmy Python)*			
Bothriuridae					
62.		*Cercophonius granulosus*			
Bovidae					
63.	24251	*Bos taurus (European Cattle)*	Y		
64.	24253	*Capra hircus (Goat)*	Y		
Branchipodidae					
65.		*Parartemia informis*			
66.		*Parartemia sp.*			
Burhinidae					
67.	24359	*Burhinus grallarius (Bush Stone-curlew)*			
Cacatuidae					
68.		*Eolophus roseicapillus*			
Campephagidae					
69.	24361	*Coracina maxima (Ground Cuckoo-shrike)*			
70.	25568	*Coracina novaehollandiae (Black-faced Cuckoo-shrike)*			
71.	24367	*Lalage tricolor (White-winged Triller)*			
Caprimulgidae					
72.	24368	*Eurostopodus argus (Spotted Nightjar)*			
Carphodactylidae					
73.	24973	*Nephrurus wheeleri subsp. wheeleri*			
Casuariidae					
74.	24470	*Dromaius novaehollandiae (Emu)*			
Charadriidae					
75.	24377	*Charadrius ruficapillus (Red-capped Plover)*			
76.	47937	*Elseyornis melanops (Black-fronted Dotterel)*			
77.	24379	*Erythrogonys cinctus (Red-kneed Dotterel)*			
78.	24380	*Peltohyas australis (Inland Dotterel)*			
79.	48135	*Thinornis rubricollis (Hooded Plover, Hooded Dotterel)*		P4	
80.	24386	*Vanellus tricolor (Banded Lapwing)*			
Cinclosomatidae					
81.	25580	*Cinclosoma castaneothorax (Chestnut-breasted Quail-thrush)*			
82.	42311	*Cinclosoma marginatum (Western Quail-thrush)*			
83.	24390	*Psophodes occidentalis (Western Wedgebill, Chiming Wedgebill)*			
Climacteridae					
84.	25581	*Climacteris affinis (White-browed Treecreeper)*			
Columbidae					
85.	24399	*Columba livia (Domestic Pigeon)*	Y		
86.	24401	*Geopelia cuneata (Diamond Dove)*			
87.	25585	*Geopelia striata (Zebra Dove)*			
88.	24404	*Geophaps plumifera (Spinifex Pigeon)*			
89.	24407	*Ocyphaps lophotes (Crested Pigeon)*			
90.	24409	*Phaps chalcoptera (Common Bronzewing)*			
91.	25590	*Streptopelia senegalensis (Laughing Turtle-Dove)*	Y		
Corinnidae					
92.		*Supunna picta*			
Corvidae					
93.	24416	*Corvus bennetti (Little Crow)*			
94.	25592	*Corvus coronoides (Australian Raven)*			
95.	25593	*Corvus orru (Torresian Crow)*			
Cracticidae					
96.	24420	*Cracticus nigrogularis (Pied Butcherbird)*			
97.	25595	*Cracticus tibicen (Australian Magpie)*			
98.	25596	*Cracticus torquatus (Grey Butcherbird)*			
Crytopidae					
99.		*Cryptops OES2*			Y

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Cuculidae					
100.	42307	*Cacomantis pallidus (Pallid Cuckoo)*			
Dasyuridae					
101.	24087	*Antechinomys laniger (Kultarr)*			
102.	24106	*Pseudantechinus woolleyae (Woolley's Pseudantechinus)*			
103.	24108	*Sminthopsis crassicaudata (Fat-tailed Dunnart)*			
104.	24109	*Sminthopsis dolichura (Little long-tailed Dunnart)*			
105.	24116	*Sminthopsis macroura (Stripe-faced Dunnart)*			
Desidae					
106.		*Phryganoporus candidus*			
Dicaeidae					
107.	25607	*Dicaeum hirundinaceum (Mistletoebird)*			
Dicruridae					
108.	24443	*Grallina cyanoleuca (Magpie-lark)*			
109.	48096	*Rhipidura albiscapa (Grey Fantail)*			
110.	25614	*Rhipidura leucophrys (Willie Wagtail)*			
111.	24454	*Rhipidura leucophrys subsp. leucophrys (Willie Wagtail)*			
Diplodactylidae					
112.	25231	*Diplodactylus klugei*			
113.	24940	*Diplodactylus pulcher*			
114.	24982	*Rhynchoedura ornata (Western Beaked Gecko)*			
115.	24946	*Strophurus strophurus*			
116.	24949	*Strophurus wellingtonae*			
Elapidae					
117.	25331	*Brachyurophis approximans (North-western Shovel-nosed Snake)*			
118.	42380	*Brachyurophis fasciolatus subsp. fasciolatus (Narrow-banded Shovel-nosed Snake)*			
119.	25254	*Parasuta monachus*			
120.	25262	*Pseudechis butleri (Spotted Mulga Snake)*			
121.	42416	*Pseudonaja mengdeni (Western Brown Snake)*			
122.	25263	*Pseudonaja modesta (Ringed Brown Snake)*			
123.	25269	*Suta fasciata (Rosen's Snake)*			
Estrilidae					
124.	30870	*Taeniopygia guttata (Zebra Finch)*			
Falconidae					
125.	25621	*Falco berigora (Brown Falcon)*			
126.	24471	*Falco berigora subsp. berigora (Brown Falcon)*			
127.	25622	*Falco cenchroides (Australian Kestrel, Nankeen Kestrel)*			
128.	25623	*Falco longipennis (Australian Hobby)*			
129.	25624	*Falco peregrinus (Peregrine Falcon)*		S	
130.	24476	*Falco subniger (Black Falcon)*			
Gekkonidae					
131.	24958	*Gehyra punctata*			
132.	24959	*Gehyra variegata*			
133.	24961	*Heteronotia binoei (Bynoe's Gecko)*			
Halcyonidae					
134.	42351	*Todiramphus pyrrhopygius (Red-backed Kingfisher)*			
135.	25549	*Todiramphus sanctus (Sacred Kingfisher)*			
Hirundinidae					
136.	47909	*Cheramoeca leucosterna (White-backed Swallow)*			
137.	24491	*Hirundo neoxena (Welcome Swallow)*			
138.	48060	*Petrochelidon ariel (Fairy Martin)*			
139.	48061	*Petrochelidon nigricans (Tree Martin)*			
Hylidae					
140.	25392	*Litoria rubella (Little Red Tree Frog)*			
Laridae					
141.	41332	*Chlidonias leucopterus (White-winged Black Tern, white-winged tern)*		IA	
142.		*Chroicocephalus novaehollandiae*			
143.	48587	*Hydroprogne caspia (Caspian Tern)*		IA	
Leporidae					
144.	24085	*Oryctolagus cuniculus (Rabbit)*	Y		
Limnadiidae					
145.		*Eulimnadia sp. 3 (Garden Rock)*			Y

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Limnodynastidae					
146.	25427	*Neobatrachus sutor (Shoemaker Frog)*			
Lycosidae					
147.		*Dingosa simsoni*			
148.		*Hoggicosa bicolor*			
Macropodidae					
149.	24136	*Macropus rufus (Red Kangaroo, Marlu)*			
Maluridae					
150.	24541	*Amytornis textilis subsp. textilis (Western Grasswren, Thick-billed Grasswren (western))*		P4	
151.	25651	*Malurus lamberti (Variegated Fairy-wren)*			
152.	24544	*Malurus lamberti subsp. assimilis (Variegated Fairy-wren)*			
153.	25652	*Malurus leucopterus (White-winged Fairy-wren)*			
154.	24549	*Malurus leucopterus subsp. leuconotus (White-winged Fairy-wren)*			
155.	25654	*Malurus splendens (Splendid Fairy-wren)*			
Megapodiidae					
156.	24557	*Leipoa ocellata (Malleefowl)*		T	
Meliphagidae					
157.	24559	*Acanthagenys rufogularis (Spiny-cheeked Honeyeater)*			
158.	24564	*Certhionyx variegatus (Pied Honeyeater)*			
159.	24567	*Epthianura albifrons (White-fronted Chat)*			
160.	24568	*Epthianura aurifrons (Orange Chat)*			
161.	24570	*Epthianura tricolor (Crimson Chat)*			
162.	42314	*Gavicalis virescens (Singing Honeyeater)*			
163.	24572	*Lacustroica whitei (Grey Honeyeater)*			
164.	25661	*Lichmera indistincta (Brown Honeyeater)*			
165.	24583	*Manorina flavigula (Yellow-throated Miner)*			
166.	42344	*Purnella albifrons (White-fronted Honeyeater)*			
Meropidae					
167.	24598	*Merops ornatus (Rainbow Bee-eater)*			
Motacillidae					
168.	25670	*Anthus australis (Australian Pipit)*			
169.	24599	*Anthus australis subsp. australis (Australian Pipit)*			
Muridae					
170.	24224	*Notomys alexis (Spinifex Hopping-mouse)*			
Neosittidae					
171.	25673	*Daphoenositta chrysoptera (Varied Sittella)*			
172.	24606	*Daphoenositta chrysoptera subsp. pileata (Varied Sittella, Black-capped Sitella)*			
Pachycephalidae					
173.	25675	*Colluricincla harmonica (Grey Shrike-thrush)*			
174.	24613	*Colluricincla harmonica subsp. rufiventris (Grey Shrike-thrush)*			
175.	24618	*Oreoica gutturalis (Crested Bellbird)*			
176.	34012	*Oreoica gutturalis subsp. pallescens (Crested Bellbird, central)*			
177.	25680	*Pachycephala rufiventris (Rufous Whistler)*			
Pardalotidae					
178.	25682	*Pardalotus striatus (Striated Pardalote)*			
Pelecanidae					
179.	24648	*Pelecanus conspicillatus (Australian Pelican)*			
Petroicidae					
180.	47997	*Melanodryas cucullata (Hooded Robin)*			
181.	25693	*Microeca fascinans (Jacky Winter)*			
182.	24659	*Petroica goodenovii (Red-capped Robin)*			
Phalacrocoracidae					
183.		*Microcarbo melanoleucos*			
184.	25697	*Phalacrocorax carbo (Great Cormorant)*			
185.	24667	*Phalacrocorax sulcirostris (Little Black Cormorant)*			
Phasianidae					
186.	24671	*Coturnix pectoralis (Stubble Quail)*			
187.	25701	*Coturnix ypsilophora (Brown Quail)*			
Podargidae					
188.	25703	*Podargus strigoides (Tawny Frogmouth)*			
189.	24679	*Podargus strigoides subsp. brachypterus (Tawny Frogmouth)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Podicipedidae					
190.	25704	*Podiceps cristatus (Great Crested Grebe)*			
191.	24681	*Poliocephalus poliocephalus (Hoary-headed Grebe)*			
192.	25705	*Tachybaptus novaehollandiae (Australasian Grebe, Black-throated Grebe)*			
Pomatostomidae					
193.	24683	*Pomatostomus superciliosus (White-browed Babbler)*			
194.	25706	*Pomatostomus temporalis (Grey-crowned Babbler)*			
Prodidomidae					
195.		*Wesmaldra waldockae*			
Psittacidae					
196.		*Barnardius zonarius*			
197.	25716	*Cacatua sanguinea (Little Corella)*			
198.	24736	*Melopsittacus undulatus (Budgerigar)*			
199.	24737	*Neophema bourkii (Bourke's Parrot)*			
200.		*Neopsephotus bourkii*			
201.	24742	*Nymphicus hollandicus (Cockatiel)*			
202.	24748	*Platycercus varius (Mulga Parrot)*			
Ptilonorhynchidae					
203.		*Ptilonorhynchus guttatus*			
204.	24757	*Ptilonorhynchus maculatus subsp. guttatus (Western Bowerbird)*			
Pygopodidae					
205.	25005	*Lialis burtonis*			
206.	25009	*Pygopus nigriceps*			
Rallidae					
207.	25727	*Fulica atra (Eurasian Coot)*			
208.	24769	*Porzana fluminea (Australian Spotted Crake)*			
209.	48141	*Tribonyx ventralis (Black-tailed Native-hen)*			
Recurvirostridae					
210.	24774	*Cladorhynchus leucocephalus (Banded Stilt)*			
211.	25734	*Himantopus himantopus (Black-winged Stilt)*			
212.	24776	*Recurvirostra novaehollandiae (Red-necked Avocet)*			
Scincidae					
213.	25052	*Ctenotus leonhardii*			
214.	25074	*Ctenotus schomburgkii*			
215.	25075	*Ctenotus severus*			
216.	25465	*Ctenotus uber (Spotted Ctenotus)*			
217.	25092	*Egernia depressa (Southern Pygmy Spiny-tailed Skink)*			
218.	25109	*Eremiascincus richardsonii (Broad-banded Sand Swimmer)*			
219.	25134	*Lerista eupoda (West Coast mulga slider, Good-legged Lerista)*		P1	
220.	25482	*Lerista macropisthopus*			
221.	25152	*Lerista macropisthopus subsp. galea*			
222.	25155	*Lerista muelleri*			
223.	25157	*Lerista nichollsi*			
224.	42411	*Lerista timida*			
225.	25184	*Menetia greyii*			
226.	25185	*Menetia maini*			
Scolopacidae					
227.	41323	*Actitis hypoleucos (Common Sandpiper)*		IA	
228.	24779	*Calidris acuminata (Sharp-tailed Sandpiper)*		IA	
229.	24784	*Calidris ferruginea (Curlew Sandpiper)*		T	
230.	24788	*Calidris ruficollis (Red-necked Stint)*		IA	
231.	24806	*Tringa glareola (Wood Sandpiper)*		IA	
232.	24808	*Tringa nebularia (Common Greenshank, greenshank)*		IA	
233.	24809	*Tringa stagnatilis (Marsh Sandpiper, little greenshank)*		IA	
Scolopendridae					
234.		*Cormocephalus turneri*			
Sparassidae					
235.		*Pediana tenuis*			
Sturnidae					
236.	47954	*Gelochelidon nilotica (Gull-billed Tern)*		IA	
Tachyglossidae					
237.	24207	*Tachyglossus aculeatus (Short-beaked Echidna)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Thamnocephalidae					
238.		*Branchinella longirostris*			
Theridiidae					
239.		*Latrodectus hasseltii*			
Threskiornithidae					
240.	24841	*Platalea flavipes (Yellow-billed Spoonbill)*			
241.	24842	*Platalea regia (Royal Spoonbill)*			
242.	24843	*Plegadis falcinellus (Glossy Ibis)*		IA	
243.	24845	*Threskiornis spinicollis (Straw-necked Ibis)*			
Thylacomyidae					
244.	24168	*Macrotis lagotis (Bilby, Dalgyte, Ninu)*		T	
Trochanteriidae					
245.		*Corimaethes campestrus*			
Turnicidae					
246.	24851	*Turnix velox (Little Button-quail)*			
Urodacidae					
247.		*Urodacus armatus*			
248.		*Urodacus hoplurus*			
249.		*Urodacus novaehollandiae*			
Varanidae					
250.	25211	*Varanus caudolineatus*			
251.	25524	*Varanus panoptes (Yellow-spotted Monitor)*			
252.	25223	*Varanus panoptes subsp. rubidus*			
Zodariidae					
253.		*Storena sinuosa*			
Zosteropidae					
254.	25765	*Zosterops lateralis (Grey-breasted White-eye, Silvereye)*			

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

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

Australian Government

Department of Agriculture, Water and the Environment

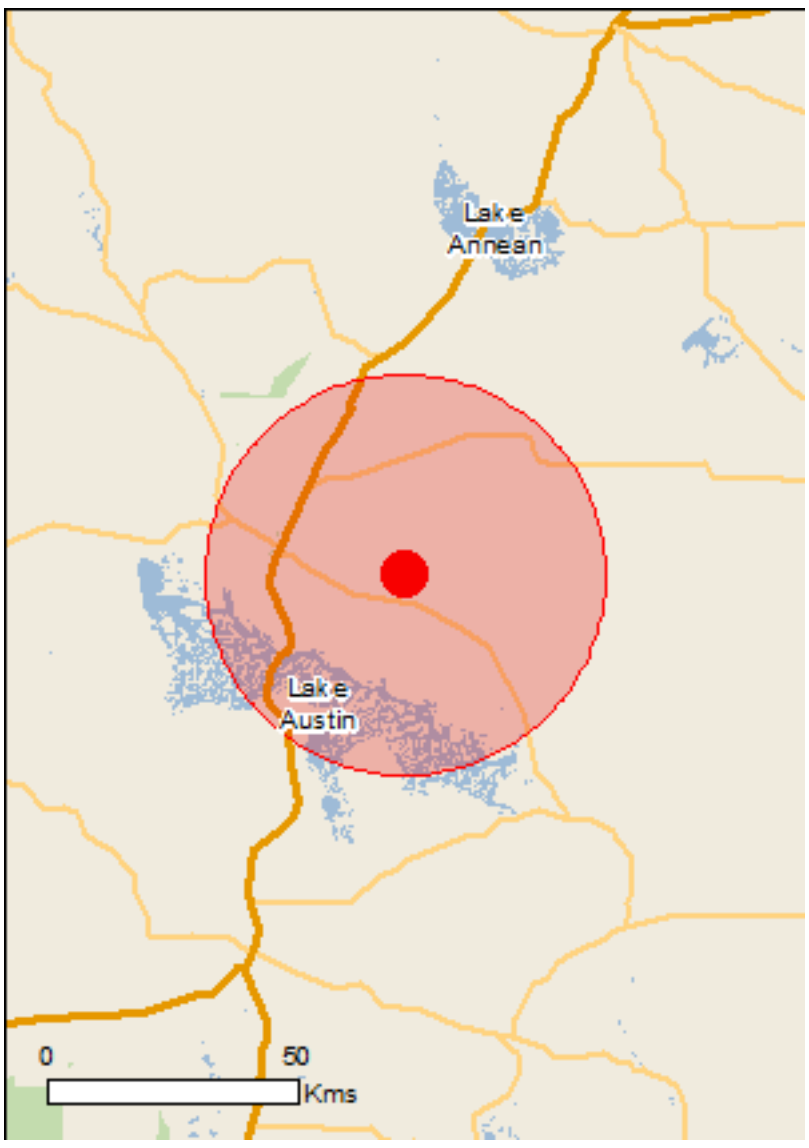
EPBC Act Protected Matters Report

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

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

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

Report created: 08/03/21 10:16:59



Coordinates

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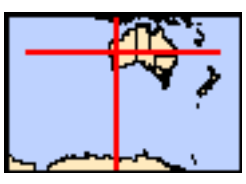

Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	8
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 http://www.environment.gov.au/heritage

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

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

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	9
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Other		
Idiosoma nigrum Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Eremophila rostrata Beaked Eremophila [65124]	Critically Endangered	Species or species habitat known to occur within area
Minuria tridens Minnie Daisy [13753]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Egernia stokesii badia Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

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

Name
Commonwealth Land -

Listed Marine Species [Resource Information]

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

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat known to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans		
Black-eared Cuckoo [705]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Lakeside Pastoral Lease	WA

Invasive Species	[Resource Information]

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

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Carrichtera annua		
Ward's Weed [9511]		Species or species habitat may occur within area
Cenchrus ciliaris		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-27.46727 118.12317

Acknowledgements

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

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

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

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

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Appendix 4: Fauna Habitat Assessments

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA1**			
Project Number:		**Aspect**	N	NE	NW
Date: 23 Feb 2021	**Easting: 0612009**		S	SE	SW
Quadrat Size: 50 x 50 m	**Northing: 6962412**		E	W	**N/A**

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation	Hummock Grassland	Other:		**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*	2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**			0 <5%	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus*	0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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						**Notes**				

(general)			**DISTURBANCE**		**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**
Notes					**Notes**				
Tracks									

GROUND COVER

Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						

MICROHABITATS									
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird		Varanid diggings

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA2**					
Project Number:					**Aspect**	N	NE	NW		
Date: 23 Feb 2021		**Easting: 0611805**				S	SE	SW		
Quadrat Size: 50 x 50 m		**Northing: 6962476**				E	W	**N/A**		

Soil Texture	**sand**		sandy-loam		loam		cracking clay		clay	
VEGETATION										
Vegetation	Hummock Grassland	Other:			**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*		2.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
	Other Grassland	**Midstorey**	*Acacia sp.*		2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila,Ptilotus*		0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
CONDITION						**LAST FIRE**				
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						**Notes**				
(general)					**DISTURBANCE**	**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes						**Notes**				

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird		

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA3**				
Project Number:		**Aspect**	N	NE	NW	
Date: 23 Feb 2021	**Easting: 0611773**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6962842**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other:							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*	2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**			0 <5%	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus*	0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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						**Notes**				

(general)			**DISTURBANCE**			**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	**2 mild**	3 none	
Notes						**Notes**				

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Masked Woodswallow	Cattle scats	

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA4**					
Project Number:					**Aspect**	N	NE	NW		
Date: 23 Feb 2021	**Easting: 0612172**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 6963312**					E	W	**N/A**		

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION										
Vegetation	Hummock Grassland	Other:		**Average Height (M)**	**Cover**					
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**		
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*	2	0 <5%	1 <20%	**2 20-60%**	3 60-100%		
	Other Grassland	**Midstorey**			0 <5%	1 <20%	2 20-60%	3 60-100%		
	Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus*	0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%		

CONDITION						LAST FIRE				
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	Notes

(general)			DISTURBANCE			(cattle)				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes					Notes					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability		0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common
Pebbles Stones		0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common
Exfoliating Slabs		**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common
Rock Crevices		**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common
Boulders		**0 none**	1 0-30%	2 30-70%	3 70-100%	**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

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Thornbill	Cattle scats	Varanid diggings

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA5**					
Project Number:					**Aspect**	N	NE	NW		
Date: 23 Feb 2021	**Easting: 0611455**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 6962919**					E	W	**N/A**		

Soil Texture	**sand**		sandy-loam		loam		cracking clay		clay	
VEGETATION										
Vegetation	Hummock Grassland	Other: Drainage Area			**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. ramulosa*		10	0 <5%	**1 <20%**	2 20-60%	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia, Hakea sp.*		2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, mixed shrubs, weedy grass*		0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
CONDITION						**LAST FIRE**				
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						**Notes**				
(general)					**DISTURBANCE**				**(cattle)**	
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes					Notes					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	0 none	**1 rare**	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Rufous Whistler		Varanid diggings
Brown Honeyeater		
Zebra Finch		
Willie Wagtail		

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA6**					
Project Number:					**Aspect**	N	NE	NW		
Date: 23 Feb 2021	**Easting: 0610572**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 6963067**					E	W	**N/A**		

Soil Texture	**sand**		sandy-loam		loam		cracking clay		clay	
VEGETATION										
Vegetation	Hummock Grassland	Other:			**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*		2	0 <5%	**1 <20%**	2 20-60%	3 60-100%	
	Other Grassland	**Midstorey**				0 <5%	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus*		0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
CONDITION						**LAST FIRE**				
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						**Notes**				
(general)					**DISTURBANCE**				**(cattle)**	
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes					Notes					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA7**					
Project Number:					**Aspect**	N	NE	NW		
Date: 23 Feb 2021	**Easting: 0610685**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 6962308**					E	W	**N/A**		

Soil Texture	**sand**		sandy-loam		loam		cracking clay		clay	
VEGETATION										
Vegetation	Hummock Grassland	Other: Drainage Area			**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. ramulosa*		8	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia*		3	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, mixed shrubs*		1	0 <5%	**1 <20%**	2 20-60%	3 60-100%	
CONDITION						**LAST FIRE**				
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						**Notes**				
(general)					**DISTURBANCE**				**(cattle)**	
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes					Notes					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
	Kangaroo scats	

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA8**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0612365**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6960104**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation					**Average Height (M)**	**Cover**				
	Hummock Grassland	Other:								
	Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*		2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Eremophila*		1	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila*		0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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	**Notes**

(general)			**DISTURBANCE**		**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**

Notes	**Notes**

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird		Varanid diggings

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA9**					
Project Number:					**Aspect**	N	NE	NW		
Date: 24 Feb 2021	**Easting: 0614365**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 69664262**					E	W	**N/A**		

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION									
Vegetation	Hummock Grassland	Other:		**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*Tall Acacia trees*	14	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*A. pteraneura, A. caesaneura*	3	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila*	0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						LAST FIRE				
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					**Notes**					

DISTURBANCE										
(general)						(cattle)				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes					**Notes**					

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**
Malleefowl	Unsuitable

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird	Kangaroo Scats	

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA10**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0613483**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6965250**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other: Drainage Area							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. pteraneura, A. caesaneura*	8	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia*	3	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, mixed shrubs*	1	0 <5%	**1 <20%**	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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	**Notes**

(general) **DISTURBANCE** **(cattle)**

	0 heavy	1 medium	**2** **mild**	3 none		0 heavy	1 medium	2 mild	**3** **none**	
Notes					**Notes**					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2** **20-60%**	3 60-100%	**Hummock Grass**	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0** **<5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0** **<5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0** **none**	1 rare	2 moderate	3 common	
Pebbles Stones	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Large Hollows**	**0** **none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0** **none**	1 rare	2 moderate	3 common	
Rock Crevices	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0** **none**	1 rare	2 moderate	3 common	
Boulders	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Butcherbird	Kangaroo scats	Varanid Diggings
	Goat tracks	

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA11**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0613379**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6964785**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
Hummock Grassland	Other:								
Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
Riverine Woodland	**Overstorey**	*A. pteraneura*		2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
Other Grassland	**Midstorey**				0 <5%	1 <20%	2 20-60%	3 60-100%	
Euc Woodland	**Ground Cover**	*Ptilotus*		0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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						**Notes**				

(general)			**DISTURBANCE**			**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes						**Notes**				

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird		Varanid diggings

FAUNA HABITAT ASSESSMENT SHEET						
(Goldfields)						
Location: Tuckabianna		**Site Number: HA12**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0613982**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6963339**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION									
Vegetation	Hummock Grassland	Other: Drainage Area		**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. ramulosa*	8	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia and Hakea*	3	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila*	1	0 <5%	**1 <20%**	2 20-60%	3 60-100%	

CONDITION						LAST FIRE				
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					**Notes**					

(general)	DISTURBANCE	(cattle)

	0 heavy	1 medium	**2** **mild**	3 none		0 heavy	1 medium	2 mild	**3** **none**	
Notes					**Notes**					
Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2** **20-60%**	3 60-100%	**Hummock Grass**	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0** **<5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	0 <5%	1 <20%	**2** **20-60%**	3 60-100%	**Herbs**	**0** **<5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0** **<5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0** **none**	1 rare	2 moderate	3 common	
Pebbles Stones	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Large Hollows**	**0** **none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0** **none**	1 rare	2 moderate	3 common	
Rock Crevices	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0** **none**	1 rare	2 moderate	3 common	
Boulders	**0** **none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Rufous Whistler	Kangaroo scats	Varanid Diggings
Crested Bellbird		Goanna tracks

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA13**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0613023**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6961357**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other: Drainage Area							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. ramulosa*	8	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia and Hakea*	3	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila*	1	0 <5%	**1 <20%**	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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	**Notes**

(general)			**DISTURBANCE**		**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**

Notes	**Notes**

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	0 none	**1 rare**	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Rufous Whistler	Kangaroo scats	Varanid Diggings
		Goanna tracks

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA14**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0610954**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6961243**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other:							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura*	2	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**			0 <5%	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Ptilotus*	0.5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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						**Notes**				

(general)			**DISTURBANCE**			**(cattle)**				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes					**Notes**					

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						

MICROHABITATS									
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
	cattle scats	

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA15**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0609419**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6960744**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
Hummock Grassland	Other:								
Acacia Shrubland	**Stratum**				**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*		4	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Other Grassland	**Midstorey**	*Acacia sp*		2	0 <5%	**1 <20%**	2 20-60%	3 60-100%	
Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus*		1	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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					**Notes**					

(general)			**DISTURBANCE**		**(cattle)**				
0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes				**Notes**					

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Wedge-tailed Eagle	Kangaroo scats	

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA16**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0610712**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6960183**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other:							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura, A. caesaneura*	10	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Mixed Acacia, Hakea*	5	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila,Ptilotus*	1	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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	**Notes**

(general)			**DISTURBANCE**			**(cattle)**			
0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes	**Notes**

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	1 Stony	2 Sandy Loam	**3 Sand**	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**

FAUNA HABITAT ASSESSMENT SHEET

(Goldfields)

Location: Tuckabianna		**Site Number: HA17**				
Project Number:		**Aspect**	N	NE	NW	
Date: 24 Feb 2021	**Easting: 0610074**		S	SE	SW	
Quadrat Size: 50 x 50 m	**Northing: 6958702**		E	W	**N/A**	

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION

Vegetation				**Average Height (M)**	**Cover**				
	Hummock Grassland	Other:							
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. pteraneura*	5	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
	Other Grassland	**Midstorey**	*Eremophila*	2	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
	Euc Woodland	**Ground Cover**	*Ptilotus*	1	**0 <5%**	1 <20%	2 20-60%	3 60-100%	

CONDITION						**LAST FIRE**				
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	**Notes**

(general)			**DISTURBANCE**			**(cattle)**				
	0 heavy	**1 medium**	2 mild	3 none		0 heavy	1 medium	2 mild	**3 none**	

Notes	**Notes**

Exploration										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	2 20-60%	**3 60-100%**	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	**0 <5%**	1 <20%	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						

MICROHABITATS									
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	**0 none**	1 rare	2 moderate	3 common
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Woodswallow	Cattle scats	

FAUNA HABITAT ASSESSMENT SHEET										
(Goldfields)										
Location: Tuckabianna					**Site Number: HA18**					
Project Number:					**Aspect**	N	NE	NW		
Date: 25 Feb 2021	**Easting: 0610005**					S	SE	SW		
Quadrat Size: 50 x 50 m	**Northing: 6957355**					E	W	**N/A**		

Soil Texture	**sand**	sandy-loam	loam	cracking clay	clay

VEGETATION									
Vegetation	Hummock Grassland	Other: Drainage Area		**Average Height (M)**	**Cover**				
	Acacia Shrubland	**Stratum**			**Scattered Plants**	**Sparse**	**Moderate**	**Thick**	
	Riverine Woodland	**Overstorey**	*A. aptaneura, A. ramulosa*	10	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Other Grassland	**Midstorey**	*Acacia, Hakea*	6	0 <5%	1 <20%	**2 20-60%**	3 60-100%	
	Euc Woodland	**Ground Cover**	*Eremophila, Ptilotus, mixed grasses*	1	0 <5%	**1 <20%**	2 20-60%	3 60-100%	

CONDITION						LAST FIRE				
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					**Notes**					

DISTURBANCE										
(general)						(cattle)				
	0 heavy	1 medium	**2 mild**	3 none		0 heavy	1 medium	2 mild	**3 none**	
Notes					**Notes**					

Tracks										
GROUND COVER										
Bare Ground	0 <5%	1 <20%	**2 20-60%**	3 60-100%	**Hummock Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Rock	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Other Grass**	**0 <5%**	1 <20%	2 20-60%	3 60-100% *	
Leaf Litter	0 <5%	**1 <20%**	2 20-60%	3 60-100%	**Herbs**	**0 <5%**	1 <20%	2 20-60%	3 60-100%	
Logs >10cm	**0 <5%**	1 <20%	2 20-60%	3 60-100%						
MICROHABITATS										
Burrowing Suitability	0 Rock	**1 Stony**	2 Sandy Loam	3 Sand	**Peeling Bark**	**0 none**	1 rare	2 moderate	3 common	
Pebbles Stones	0 none	**1 0-30%**	2 30-70%	3 70-100%	**Large Hollows**	**0 none**	1 rare	2 moderate	3 common	
Exfoliating Slabs	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Small Hollows**	**0 none**	1 rare	2 moderate	3 common	
Rock Crevices	**0 none**	1 0-30%	2 30-70%	3 70-100%	**Water Prescence**	0 none	**1 rare**	2 moderate	3 common	
Boulders	**0 none**	1 0-30%	2 30-70%	3 70-100%	**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	

CONSERVATION SIGNIFICANT FAUNA	
Species	**Notes**

FAUNA RECORDED		
Birds	**Mammals**	**Reptiles**
Crested Bellbird	Kangaroo scats	Varanus goudii
Rufius Whistler	Kangaroo tracks	
Chestnut Rumped Thornbill		
Diamond Dove		

Appendix 5: Fauna Species List

Key: EPBC = Environmental Protection and Biodiversity Conservation Act 1999, BC = Biodiversity Conservation Act 2016 (IUCN Threat categories), DBCA = Department of Biodiversity, Conservation and Attractions Priority Code, A = EPBC Protected Matters search, B = Listed in Naturemap, C = DBCA Threatened Fauna Database, D = Current Field Survey

Note: For Definitions of Conservation Codes see Appendix 1.

AMPHIBIANS		**Conservation Codes**			**A**	**B**	**C**	**D**
Scientific Name	**Common Name**	**EPBC**	**BC**	**DBCA**				
LIMNODYNASTIDAE								
Neobatrachus sutor	Shoemaker Frog					X		
HYLIDAE								
Litoria rubella	Little Red Tree Frog					X		

Key: EPBC = Environmental Protection and Biodiversity Conservation Act 1999, BC = Biodiversity Conservation Act 2016 (IUCN Threat categories), DBCA = Department of Biodiversity, Conservation and Attractions Priority Code, A = EPBC Protected Matters search, B = Listed in Naturemap, C = DBCA Threatened Fauna Database, D = Current Field Survey

Note: For Definitions of Conservation Codes see Appendix 1.

REPTILES		Conservation Codes			A	B	C	D
Scientific Name	**Common Name**	**EPBC**	**BC**	**DBCA**				
CARPHADACTYLIDAE								
Nephrurus wheeleri	Banded Knob-tailed Gecko					X		
DIPLODACTYLIDAE								
Diplodactylus klugei	Kluges Gecko					X		
Diplodactylus pulcher	Fine-faced Gecko					X		
Rhynchoedura ornata	Western Beaked Gecko					X		
Strophurus strophurus	Western Spiny-tailed Gecko					X		
Strophurus wellingtonae	Western-shield Spiny-tailed Gecko					X		
GEKKONIDAE								
Gehyra punctata	Spotted Rock Dtella					X		
Gehyra variegata	Tree Dtella					X		X
Heteronotia benoei	Bynoe's Gecko					X		
PYGOPODIDAE								
Lialis burtonis	Burtons Snake Lizard					X		
Pygopus nigriceps	Western Hooded Scaly-foot					X		
SCINCIDAE								
Ctenotus sp.	Ctenotus sp.							X
Ctenotus leonhardii	Common Desert Ctenotus					X		
Ctenotus schomburgkii	Barred Wedge-snouted Ctenotus					X		
Ctenotus severus	Stern Rock Ctenotus					X		
Ctenotus uber	Spotted Ctenotus					X		
Cyclodomorphus branchialis	Gilled Slender Blue-tongue	Vu					X	
Egernia depressa	Southern Pygmy Spiny-tailed Skink					X		X
Egernia stokesii badia	Western Spiny-tailed Skink,	En			X		X	
Eremiascincus richardsonii	Broad-banded Sand Swimmer					X		
Lerista eupoda	West Coast Mulga Slider			P1		X	X	
Lerista macropisthopus	Unpatterned Robust Slider					X		
Lerista muelleri	Muellers Three-toed Slider					X		
Lerista nichollsi	Inland Broad-striped Slider					X		

REPTILES		Conservation Codes			A	B	C	D
Scientific Name	**Common Name**	**EPBC**	**BC**	**DBCA**				
Lerista timida	Dwarf Three-toed Slider					X		
Menetia greyii	Common Dwarf Skink					X		
Menetia maini	Mains Dwarf Skink					X		
AGAMIDAE								
Ctenophorus caudicinctus	Ring-tailed Dragon					X		
Ctenophorus nuchalis	Central Netted Dragon					X		X
Ctenophorus ornatus	Ornate Crevice-Dragon					X		
Ctenophorus reticulatus	Western Netted Dragon					X		
Ctenophorus salinarum	Salt Pan Dragon					X		
Ctenophorus scutulatus	Lozenge-marked Dragon					X		
Moloch horridus	Thorny Devil					X		
Pogona minor	Dwarf Bearded Dragon					X		
Tympanocryptis pseudopsephos	Goldfields Pebble-mimic Dragon					X		
VARANIDAE								
Varanus caudolineatus	Stripe-tailed Monitor					X		
Varanus gouldii	Goulds Sand Monitor							X
Varanus panoptes	Yellow-spotted Monitor					X		
BOIDAE								
Antaresia perthensis	Pygmy Python					X		
ELAPIDAE								
Brachyurophis approximans	North-western Shovel-nosed Snake					X		
Brachyurophis fasciolatus	Narrow-banded Shovel-nosed Snake					X		
Parasuta monachus	Monk Snake					X		
Pseudechis butleri	Spotted Mulga Snake					X		
Pseudonaja mengdeni	Western Brown Snake					X		
Pseudonaja modesta	Ringed Brown Snake					X		
Suta fasciata	Rosen's Snake					X		

[X] fauna species recorded.
[*] denotes introduced species.

Key: EPBC = Environmental Protection and Biodiversity Conservation Act 1999, BC = Biodiversity Conservation Act 2016 (IUCN Threat categories), DBCA = Department of Biodiversity, Conservation and Attractions Priority Code, A = EPBC Protected Matters search, B = Listed in Naturemap, C = DBCA Threatened Fauna Database, D = Current Field Survey

Note: For Definitions of Conservation Codes see Appendix 1.

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	**Common Name**	**EPBC**	**BC**	**DBCA**				
MEGAPODIIDAE								
Leipoa ocellata	Malleefowl	Vu	Vu		X	X	X	
CASUARIIDAE								
Dromaius novaehollandiae	Emu					X		
PHASIANIDAE								
Coturnix pectoralis	Stubble Quail					X		
Coturnix ypsilophora	Brown Quail					X		
ANATIDAE								
Anas castanea	Chestnut Teal					X		
Anas gracilis	Grey Teal					X		
Anas rhynchotis	Australasian Shoveler					X		
Anas superciliosa	Pacific Black Duck					X		
Aythya australis	Hardhead					X		
Biziura lobata	Musk Duck					X		
Chenonetta jubata	Australian Wood Duck					X		
Cygnus atratus	Black Swan					X		
Malacorhynchus membranaceus	Pink-eared Duck					X		
Oxyura australis	Blue-billed Duck			P4		X	X	
Stictonetta naevosa	Freckled Duck					X		
Tadorna tadornoides	Australian Shelduck					X		
RALLIDAE								
Fulica atra	Eurasian Coot					X		
Porzana fluminea	Australian Spotted Crake					X		
Tribonyx ventralis	Black-tailed Native-hen					X		
COLUMBIDAE								
Columba livia	Rock Pigeon				X	X		
Geopelia cuneata	Diamond Dove					X		X
Geopelia striata	Zebra Dove					X		
Geophaps plumifera	Spinifex Pigeon					X		
Ocyphaps lophotes	Crested Pigeon					X		X
Phaps chalcoptera	Common Bronzewing					X		

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Streptopelia senegalensis	Laughing Turtle-Dove				X	X		
PODICIPEDIDAE								
Podiceps cristatus	Great Crested Grebe					X		
Poliocephalus poliocephalus	Hoary-headed Grebe					X		
Tachybaptus novaehollandiae	Australasian Grebe					X		
PODARGIDAE								
Podargus strigoides	Tawny Frogmouth					X		
CAPRIMULGIDAE								
Eurostopodus argus	Spotted Nightjar					X		
AEGOTHELIDAE								
Aegotheles cristatus	Australian Owlet-nightjar					X		X
APODIDAE								
Apus pacificus	Fork-tailed Swift	MiMa	MiMa		X		X	
ANHINGIDAE								
Anhinga novaehollandiae	Australasian Darter					X		
PHALACROCORACIDAE								
Microcarbo melanoleucos	Little Pied Cormorant					X		
Phalacrocorax carbo	Great Cormorant					X		
Phalacrocorax sulcirostris	Little Black Cormorant					X		
PELECANIDAE								
Pelecanus conspicillatus	Australian Pelican					X		
ARDEIDAE								
Ardea modesta	Great Egret	MiMa	MiMa		X	X		
Ardea pacifica	White-necked Heron					X		
Egretta novaehollandiae	White-faced Heron					X		
THRESKIORNITHIDAE								
Platalea flavipes	Yellow-billed Spoonbill					X		
Platalea regia	Royal Spoonbill					X		
Plegadis falcinellus	Glossy Ibis	MiMa	MiMa			X	X	
Threskiornis spinicollis	Straw-necked Ibis					X		
ACCIPITRIDAE								
Elanus axillaris	Black-shouldered Kite					X		
Hamirostra isura	Square-tailed Kite					X		
Hamirostra melanosternon	Black-breasted Buzzard					X		
Haliastur sphenurus	Whistling Kite					X		X
Hieraaetus morphnoides	Little Eagle					X		
Milvus migrans	Black Kite					X		
Aquila audax	Wedge-tailed Eagle					X		X

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Accipiter cirrocephalus	Collared Sparrowhawk					X		
Accipiter fasciatus	Brown Goshawk					X		
Circus assimilis	Spotted Harrier					X		
Circus approximans	Swamp Harrier					X		
FALCONIDAE								
Falco berigora	Brown Falcon					X		
Falco cenchroides	Nankeen Kestrel					X		
Falco hypoleucos	Grey Falcon	Vu			X		X	
Falco longipennis	Australian Hobby					X		
Falco peregrinus	Peregrine Falcon		OS			X	X	
Falco subniger	Black Falcon					X		
RALLIDAE								
Fulica atra	Eurasian Coot					X		
Porzana fluminea	Australian Spotted Crake					X		
Tribonyx ventralis	Black-tailed Native-hen					X		
RECURVIROSTRIDAE								
Cladorhynchus leucocephalus	Banded Stilt					X		
Himantopus himantopus	Black-winged Stilt					X		
Recurvirostra novaehollandiae	Red-necked Avocet					X		
CHARADRIIDAE								
Charadrius ruficapillus	Red-capped Plover	MiMa	MiMa			X		
Peltohyas australis	Inland Dotterel					X		
Thinornis rubricollis	Hooded Plover	MiMa	MiMa	P4	X	X	X	
Elseyornis melanops	Black-fronted Dotterel					X		
Erythrogonys cinctus	Red-kneed Dotterel					X		
Vanellus tricolor	Banded Lapwing					X		
LARIDAE								
Chroicocephalus novaehollandiae	Silver Gull					X		
Gelochelidon nilotica	Gull-billed Tern	MiMa	MiMa			X	X	
Hydroprogne caspia	Caspian Tern	MiMa	MiMa			X	X	
Sterna leucoptera	White-winged Black Tern	MiMa	MiMa			X	X	
SCOLOPACIDAE								
Actitis hypoleucos	Common Sandpiper	MiMa	MiMa		X	X	X	
Calidris acuminata	Sharp-tailed Sandpiper	MiMa	MiMa		X	X	X	
Calidris ferruginea	Curlew Sandpiper	MiMa, CR	MiMa		X	X	X	
Calidris melanotos	Pectoral Sandpiper	MiMa	MiMa		X		X	
Caliris ruficollis	Red-necked Stint	MiMa	MiMa			X	X	
Limosa lapponica	Bar-tailed Godwit	MiMa	MiMa				X	

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Tringa glareola	Wood Sandpiper	MiMa	MiMa			X	X	
Tringa nebularia	Common Greenshank	MiMa	MiMa		X	X	X	
Tringa stagnatilis	Little Greenshank	MiMa	MiMa			X	X	
GLAREOLIDAE								
Glareola maldivarum	Oriental pratincole					X		
TURNICADAE								
Turnix velox	Little Button-quail					X		
BURHINIDAE								
Burhinus grallarius	Bush Stone-curlew					X		
PSITTACIDAE								
Platycercus zonarius	Australian Ringneck					X		
Eolophus roseicapillus	Galah					X		X
Cacatua sanguinea	Little Corella					X		
Melopsittacus undulatus	Budgerigar					X		
Neophema bourkii	Bourke's Parrot					X		X
Neophema elegans	Elegant Parrot					X		
Nymphicus hollandicus	Cockatiel					X		X
Platycercus varius	Mulga Parrot					X		
Pezoporus occidentalis	Night Parrot	En	CR		X		X	
CUCULIDAE								
Cacomantis pallidus	Pallid Cuckoo					X		
Chalcites osculans	Black-eared Cuckoo				X			
HALCYONIDAE								
Todiramphus pyrrhopygius	Red-backed Kingfisher					X		
Todiramphus sanctus	Sacred Kingfisher					X		
MEROPIDAE								
Merops ornatus	Rainbow Bee-eater	Ma			X	X		
PTILONORHYNCHIDAE								
Ptilonorhynchus guttatus	Western Bowerbird					X		
CLIMACTERIDAE								
Climacteris affinis	White-browed Treecreeper					X		
MALURIDAE								
Amytornis textilis	Western Grasswren,			P4		X		
Malurus lamberti	Variegated Fairy-wren					X		
Malurus leucopterus	White-winged Fairy-wren					X		
Malurus splendens	Splendid Fairy-wren					X		X
MELIPHAGIDAE								
Acanthagenys rufogularis	Spiny-cheeked Honeyeater					X		X

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Certhionyx variegatus	Pied Honeyeater					X		
Epthianura albifrons	White-fronted Chat					X		
Epthianura aurifrons	Orange Chat					X		
Epthianura tricolor	Crimson Chat					X		
Gavicalis virescens	Singing Honeyeater					X		
Lacustroica whitei	Grey Honeyeater					X		
Lichmera indistincta	Brown Honeyeater					X		X
Manorina flavigula	Yellow-throated Miner					X		
Purnella albifrons	White-fronted Honeyeater					X		
PARDALOTIDAE								
Pardalotus striatus	Striated Pardalote					X		
ACANTHIZIDAE								
Acanthiza apicalis	Inland Thornbill					X		
Acanthiza chrysorrhoa	Yellow-rumped Thornbill					X		
Acanthiza iredalei	Slender-billed Thornbill					X		
Acanthiza robustirostris	Slaty-backed Thornbill					X		
Acanthiza uropygialis	Chestnut-rumped Thornbill					X		X
Aphelocephala leucopsis	Southern Whiteface					X		
Aphelocephala nigricincta	Banded White-face					X		
Gerygone fusca	Western Gerygone					X		
Pyrrholaemus brunneus	Redthroat					X		
Smicrornis brevirostris	Weebill					X		
POMATOSTOMIDAE								
Pomatostomus superciliosus	White-browed Babbler					X		X
Pomatostomus temporalis	Grey-crowned Babbler					X		
PAOPHODIDAE								
Cinclosoma castaneothorax	Chestnut-breasted Quail-thrush					X		
Cinclosoma castanotum	Chestnut Quail-thrush							X
Cinclosoma marginatum	Western Quail-thrush					X		
Psophodes occidentalis	Chiming Wedgebill					X		X
CAMPEPHAGIDAE								
Coracina maxima	Ground Cuckoo-shrike					X		
Coracina novaehollandiae	Black-faced Cuckoo-shrike					X		X
Lalage tricolor	White-winged Triller					X		
NEOSITTIDAE								
Daphoenositta chrysoptera	Varied Sittella					X		
PACHYCEPHALIDAE								
Colluricincla harmonica	Grey Shrike-thrush					X		X

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Oreoica gutturalis	Crested Bellbird					X		X
Pachycephala inornata	Gilberts Whistler							X
Pachycephala rufiventris	Rufous Whistler					X		X
CRACTICIDAE								
Cracticus nigrogularis	Pied Butcherbird					X		X
Cracticus tibicen	Australian Magpie					X		
Cracticus torquatus	Grey Butcherbird					X		
RHIPIDURIDAE								
Rhipidura albiscapa	Grey Fantail					X		
Rhipidura leucophrys	Willie Wagtail					X		X
MONARCHIDAE								
Grallina cyanoleuca	Magpie-Lark					X		
CORVIDAE								
Corvus bennetti	Little Crow					X		
Corvus coronoides	Australian Raven					X		
Corvus orru	Torresian Crow					X		X
PETROICIDAE								
Melanodryas cucullata	Hooded Robin					X		
Microeca fascinans	Jacky Winter					X		
Petroica goodenovii	Red-capped Robin					X		X
ARTAMIDAE								
Artamus cinereus	Black-faced Woodswallow					X		X
Artamus minor	Little Woodswallow					X		
Artamus personatus	Masked Woodswallow					X		X
Artamus superciliosus	White-browed Woodswallow					X		
ZOSTEROPIDAE								
Zosterops lateralis	Silvereye					X		
HIRUNDINIDAE								
Cheramoeca leucosterna	White-backed Swallow					X		
Hirundo neoxena	Welcome Swallow					X		
Petrochelidon ariel	Fairy Martin					X		
Petrochelidon nigricans	Tree Martin					X		
DICAEIDAE								
Dicaeum hirundinaceum	Mistletoebird					X		
ESTRILDIDAE								
Taeniopygia guttata	Zebra Finch					X		X
MOTACILLIDAE								
Anthus novaeseelandiae	Australasian Pipit					X		

BIRDS		Conservation Codes			A	B	C	D
Scientific Name	Common Name	EPBC	BC	DBCA				
Motacilla cinerea	Grey Wagtail	Mi	Mi		X			
Motacilla flava	Yellow Wagtail	Mi	Mi		X			

[X] fauna species recorded.
[*] denotes introduced species.

Key: EPBC = Environmental Protection and Biodiversity Conservation Act 1999, BC = Biodiversity Conservation Act 2016 (IUCN Threat categories), DBCA = Department of Biodiversity, Conservation and Attractions Priority Code, A = EPBC Protected Matters search, B = Listed in Naturemap, C = DBCA Threatened Fauna Database, D = Current Field Survey

Note: For Definitions of Conservation Codes see Appendix 1.

MAMMALS		Conservation Codes			A	B	C	D
Scientific Name	**Common Name**	**EPBC**	**BC**	**DBCA**				
TACHYGLOSSIDAE								
Tachyglossus aculeatus	Short-beaked Echidna					X		
DASYURIDAE								
Dasycercus blythi	Brush-tailed Mulgara						X	
Pseudantechinus woolleyae	Woolley's Pseudantechinus					X		
Antechinomys laniger	Kultarr					X		
Sminthopsis crassicaudata	Fat-tailed Dunnart					X		
Sminthopsis longicaudata	Long-tailed Dunnart			P4		X	X	
Sminthopsis macroura	Stripe-faced Dunnart					X		
THYLACOMYIDAE								
Macrotis lagotis	Bilby	Vu	Vu			X		
MACROPODIDAE								
Petrogale lateralis	Black-flanked Rock-wallaby	En					X	
Osphranter rufus	Red Kangaroo					X		X
MURIDAE								
Notomys alexis	Spinifex Hopping-mouse					X		
CANIDAE								
Canis lupus familiaris	Domestic Dog				X			
**Vulpes vulpes*	Red Fox				X			
FELIDAE								
**Felis catus*	Feral Cat				X			X
LEPORIDAE								
**Oryctolagus cuniculus*	European Rabbit				X	X		X
BOVIDAE								
**Bos taurus*	European Cattle					X		X
**Capra hircus*	Goat				X	X		X

[X] fauna species recorded.
[*] denotes introduced species.