# Basic Vertebrate Fauna Survey and Assessment

## Laverton Operations

Prepared for: Brightstar Resources Limited

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# EXECUTIVE SUMMARY

Brightstar Resources is planning exploration and mining activities in its mining tenements at Cork Tree Hill (724ha), Beta (249ha), Fish (389ha) and Byron (217ha) areas (Laverton Operations 'project area'). Cork Tree Hill is ~33km north of Laverton, Beta ~32km south-east of Laverton, and the Fish and Byron areas are ~84km south-east of Laverton.

Based on a field assessment, the following five broad fauna habitats are present in the project area:

- Mulga woodland;
- Mulga drainage;
- Rocky rise;
- Open Eucalypt woodland with low shrubs;
- Sparse Sheoak woodland; and
- Disturbed areas.

The density of trees and shrubs in the relatively undisturbed areas varied across the project area but the vegetation was mostly sparse. The fauna habitats varied from highly degraded to good with the more degraded areas being due to previous mining activity (i.e. mining pits, waste dumps and supporting infrastructure).

A single, inactive and unlikely to be used again Malleefowl (Vulnerable under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* and *Biodiversity Conservation Act 2016*) mound was recorded, along with Malleefowl tracks and a scat. Based on the available evidence there is a very low abundance of Malleefowl in the project area. The Southern Whiteface (Vulnerable under the *EPBC Act*) have been recorded in other fauna surveys in adjacent areas, so it is likely to be present in low numbers in the project area. This small bush bird is relatively abundant in this part of the Goldfields and will readily move if disturbed, so vegetation clearing is unlikely to significantly impact on this species. Banded ironstone formations (BIFs) are present in the project area, however, they are very small and isolated, and it is therefore improbable that any of them support a population of Long-tailed Dunnarts (Priority 4 species with the Department of Biodiversity, Conservation and Attractions).

The project area does not provide an important ecological linkage or fauna movement corridor. Clearing native vegetation is likely to result in the loss of small vertebrate fauna on-site that are unable to move away during the clearing process, however, the few larger animals, such as kangaroos and large goannas and snakes, and most of the birds will move into adjacent areas once clearing or development commences.

The proposed vegetation clearing and operations may result in indirect impacts on the vertebrate fauna such as a reduction or loss of activity areas and closure of burrows, habitat fragmentation, increased presence of feral predators, road deaths and unnatural noises, vibrations, artificial light sources and vehicle and human movement in an area all of which may result in the death of animals or force some of them into adjacent areas. Impacts associated with clearing vegetation in the project area in a landscape or bioregional context on the vertebrate fauna are likely to be low as there are vast tracts of similar habitat in adjacent areas.

The proposed project is unlikely to significantly impact on a conservation significant species, so a referral under the *EPBC Act* is not recommended.

Implementing the following recommendations will minimise and mitigate potential impacts of vegetation clearing and mining operations:

- an induction program that includes a component on managing fauna is mandatory for staff working in the project area;
- information on protecting fauna and reporting deaths and sightings of Malleefowl and other conservation significant species should be incorporated into the mine induction program;

- the impact of dust on adjacent vegetation and fauna habitat is managed against appropriate KPIs and in accordance with the clients' Construction Environmental Management Plan;
- all areas disturbed during mining are rehabilitated as soon as practical after they are no longer required;
- where possible, access routes are aligned to existing roads, tracks and other barriers or follow the boundaries of broad-scale vegetation associations in the area;
- pets are not permitted on the project;
- all waste and rubbish be contained in bins and regularly removed from the project or placed in land fill and suitably covered to exclude access to predator species;
- feeding of native fauna is prohibited;
- a feral cat control program is implemented in the project area and surrounds;
- a log of all on-site drill holes be maintained detailing when they were capped, how and by whom; and
- a vertebrate fauna management plan is prepared and implemented for the life of the project.

# 1. INTRODUCTION

## 1.1 BACKGROUND

Brightstar Resources is planning exploration and mining activities in its mining tenements at Cork Tree Hill (724ha), Beta (249ha), Fish (389ha) and Byron (217ha; i.e. project area). Cork Tree Hill is 33km north of Laverton, Beta is 32km south-east of Laverton, and the Fish and Byron areas are ~84km south-east of Laverton (Figures 1 and 2).

## 1.2 PROJECT OBJECTIVES AND SCOPE OF WORKS

Terrestrial Ecosystems was commissioned to undertake a Basic vertebrate fauna risk assessment for this project area. The purpose of this Basic fauna risk assessment was to provide information to the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) regarding the potential impacts of vegetation clearing and mining activity on the vertebrate fauna assemblage in the project area to enable the proposed development to be adequately assessed. The methodology broadly follows that described in the Environmental Protection Authority's (2020) *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment*.

This Basic fauna survey and risk assessment involved undertaking a desktop review and site visit. The objectives of this fauna risk assessment were to:

- provide an indication of the vertebrate fauna assemblage (reptiles, amphibians, mammals and birds) on and near the project area, so that potential impacts on the fauna and fauna assemblage might be adequately assessed;
- identify the presence and/or potential risk of impacts on species of conservation significance that are present or likely to be present in the project area;
- assess the impact and environmental risks associated with the proposed development on the fauna assemblage;
- determine if any additional surveys are required to assess the potential impact on fauna assemblages in the project area including impacts on species of conservation significance; and
- make recommendations that avoid, mitigate or minimise potential impacts on resident fauna.

To achieve these objectives, Terrestrial Ecosystems:

- reviewed Terrestrial Ecosystems' database (includes Atlas of Living Australia) to identify potential vertebrate fauna within the area;
- searched the Commonwealth Governments database of fauna of national environmental significance to identify species potentially occurring within the area that are protected under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* or international migratory bird agreements (JAMBA/CAMBA);
- reviewed previous fauna surveys conducted near the project area;
- undertook an assessment of the potential risks to the fauna associated with clearing additional areas of native vegetation;
- discussed the likelihood of *EPBC Act 1999* and *Biodiversity Conservation Act 2016* listed species being present in the project area; and
- provided management recommendations to avoid, mitigate and minimise potential impacts on the fauna in the project area.

# 2. EXISTING ENVIRONMENT

## 2.1 LOCATION OF PROJECT AREA

The project area is in the Murchison 1 (MUR1 – East Murchison subregion) IBRA bioregion. Cowan (2001) described the East Murchison IBRA subregion as internally draining, with extensive areas of elevated red desert sandplains with minimal dune development. The bioregion includes broad plains with red-brown soils and breakaway complexes as well as red sandplains. Vegetation is dominated by Mulga woodlands often with ephemerals, hummock grasslands, saltbush shrublands and halosarcia shrublands.

The threatening processes for conservation significant fauna were listed by Cowan (2001) as foxes and cats. In addition, cattle grazing and mining activity over many years have significantly degraded small parcels of land dotted throughout the landscape.

## 2.2 LAND USE HISTORY

The dominant land uses for the bioregion are native pasture to support grazing and crown land reserves, and to a lesser extent mining (Cowan 2001). The area surrounding the project area has been extensively explored for minerals and there are many operational and non-operational mining projects.

## 2.3 CLIMATE

The project area is characterised as semi-arid. The nearest weather station, Laverton has an annual rainfall of approximately 235mm, although this varies considerably from year-to-year. The highest mean maximum and minimum temperatures in Laverton are in January with an average of 35.8°C and 20.5°C, respectively (Bureau of Meteorology, 2024). The lowest mean daily maximum and minimum temperatures occur in July (Chart 1). Average monthly rainfall is heaviest in January - March.

Summer rain is unpredictable and often results from thunderstorms coming from the north and the west or decaying cyclonic activity as low-pressure cells move from the Pilbara through the Goldfields.

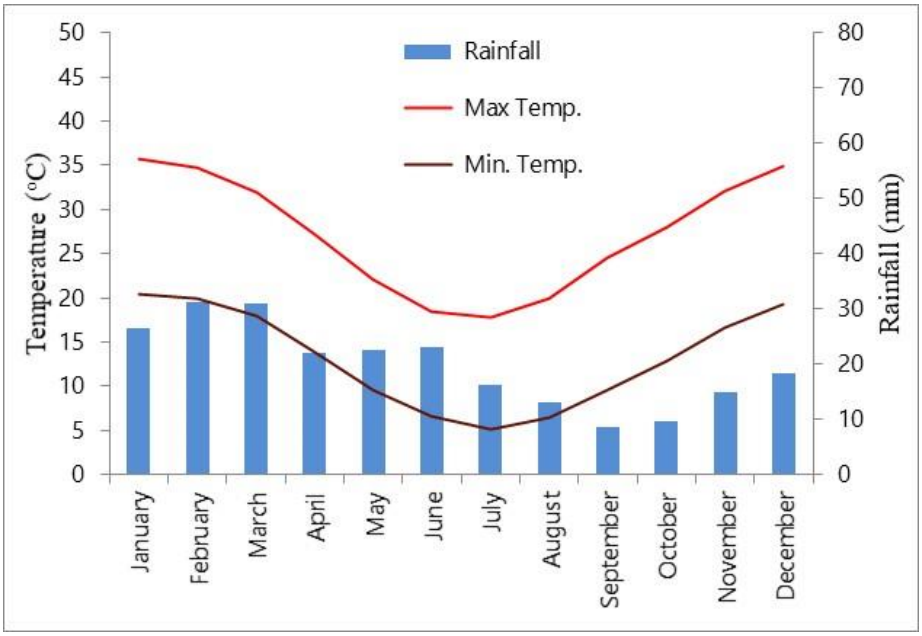



**Chart 1. Climatic averages for Laverton**

## 2.4 REGIONAL BIOLOGICAL FAUNA CONTEXT OF PROJECT AREA

Numerous fauna surveys and assessments have been undertaken near the project area and in similar habitats in the region. These include:


- Bamford Consulting Ecologists (2007) *Fauna Assessment and Targeted Mulgara Search of the Fish Deposit, Laverton Gold Project*, Perth.
- Bell, D. T., Bell, R. C. and Loneragan, W. A. (2007) Winter bird assemblages across an arid gradient in south-west Western Australia. *Journal of the Royal Society of Western Australia* 90, 219-227.
- Coffey Environments (2008) *Level 2 Fauna Assessment for the Duketon Gold Project*. Unpublished report for Regis Resources, Perth.
- Craig, M. D. and Chapman, A. (2003) Effects of short-term drought on the avifauna of Wanjarri Nature Reserve: What do they tell us about drought refugia. *Journal of the Royal Society of Western Australia* 86: 133-137.
- Dell, J and How, R.A. (1988) Vertebrate fauna. In: The biological Survey of the Eastern Goldfields of Western Australia, Part 5, Edjudina - Menzies Study Area. *Records of the Western Australian Museum*, Supplement No 31., pp. 38-77.
- Dell, J., How, R. A. and Milewski, A. V. (1992) The biological survey of the Eastern Goldfields, Part 6, Youanmi-Leonora Study Area. *Records of the Western Australian Museum*, Supplement No 40, 131.
- Dunlop, J.N and Paynes, W. (1999) *A vertebrate Fauna Survey of the North Lake Carey Region including Hillside Prospect, Wallaby Prospect and Just in Time / Just in Case and the Teatree Dam Area,*. Unpublished report for Placer (Granny Smith) and Homestake, Perth.
- Halpern Glick Maunsell (1999) *Rosemont Gold Project Biological Assessment Survey - Phases 1 & 2*. Unpublished report for Johnson's Well Mining NL, Perth.
- Harewood, G. (2011) *Terrestrial Fauna Survey (Level 1) of the West Laverton Area (P38/3717, P38/3718, P38/3491, P38/3492, P38/3314, P38/3490, P38/3315, M38/0046, M38/0049, M38/0040, M38/0358, M38/0048, M38/0101, M38/0364, M38/0342, M38/0345, L38/0179, L38/0177, L38/0178, L38/0153, L38/0092, E38/1930, E38/2347, E38/2084 & E38/1966)*. Unpublished report for Crescent Gold Limited, Perth.
- How, R. A. and Dell, J. (1992) Vertebrate fauna. In: The Biological Survey of the Eastern Goldfields of Western Australia Part 7. Duketon - Sir Samuel Study Area. *Records of the Western Australian Museum*; Supplement 40, 90-109.
- Kingfisher Environmental Consulting (2014) *Sunrise Dam - Tropicana Infrastructure Corridor Fauna Survey*, Unpublished report for Anglogold Ashanti Australia, Perth.
- MBS Environmental (2004) *Vegetation and Habitat Assessment of the Euro, Sickle and Admiral Hill Project Areas, Laverton*. Unpublished report for Crescent Gold Limited, Perth.
- McKenzie N.L., Rolfe, J.K. and Youngson, W.K. (1994) Vertebrate fauna. In: The Biological Survey of the Eastern Goldfields of Western Australia Part 10, Sandstone-Sir Samuel and Laverton-Leonara Study Areas. *Records of the Western Australian Museum*, Supplement No 47, PP. 51-85.
- Moriarty; T. K. (1972) Birds of Wanjarri; WA (27º; 25'S; 120º 40'E) *The Emu*, 72, 1-7.
- Murphy, D. (1994) *Vertebrate fauna species of the North-eastern Goldfields*. Report to Western Mining's Leinster Nickel and Mount Keith Operations, Perth.
- Ninox Wildlife Consulting (1998) *A Vertebrate Fauna Survey of the Murrin Murrin Expansion Project*. Unpublished report for Anaconda Nickel Ltd, Perth.
- Ninox Wildlife Consulting (2006) *A Vertebrate Fauna Assessment of the Tarmoola Area*, Unpublished report for St Barbara Ltd, Perth.
- Onus, M. L., Rolfe, J.K., and Algar, D. (2011) *Assessment of feral cat abundance and control options at Barrick, Granny Smith*. Perth.
- Stantec (2020) Mt Weld Rare Earth Project Level 2 and Targeted Terrestrial Fauna Survey. Unpublished report for Mt Weld Mining Pty Ltd, Perth
- Terrestrial Ecosystems (2010) *Level 2 Fauna Risk Assessment for the Garden Well Project Area*. Unpublished report for Regis Resources Ltd, Perth.

- Terrestrial Ecosystems (2011a) *Level 2 Fauna Risk Assessment for Granny Deeps Project Area*. Unpublished report for Barrick Gold Corporation, Perth.
- Terrestrial Ecosystems (2011b) *Targeted Survey for Long-tailed Dunnarts for the Granny Deeps Project Area*. Perth.
- Terrestrial Ecosystems (2012a) *Level 1 Fauna Risk Assessment for the Anchor Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012b) *Level 1 Fauna Risk Assessment for the Moolart Well to Garden Well Access Road on M38/354, M38/302, M38/303 and L38/216*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012c) *Level 1 Fauna Risk Assessment for the Petra Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012d) *Level 1 Fauna Risk Assessment for the Reichelt Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012e) *Level 1 Fauna Risk Assessment for the Rosemont Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012f) *Level 1 Fauna Risk Assessment for the Russell Find Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2012g) *Level 1 Vertebrate Fauna Risk Assessment for the Proposed Exploration Areas around the Granny Open Pit Project Area*. Unpublished report for Granny Smith Mining Pty Ltd, Perth.
- Terrestrial Ecosystems (2012h) *Level 1 Vertebrate Fauna Risk Assessment for the Proposed Mining Areas around the Granny Open Pit Project Area*. Unpublished report for Granny Smith Mining Pty Ltd, Perth.
- Terrestrial Ecosystems (2013) *Level 1 Fauna Risk Assessment for Two Waste Dumps either side of the proposed Rosemont Project Area (G38/29, G38/30, G38/31, G38/32) and a Slurry Pipeline from the Rosemont mine to the Garden Well processing plant (L38/219)*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2014) *Level 1 Fauna Risk Assessment for a proposed power station site*. Unpublished report for Granny Smith Mining Pty Ltd, Perth.
- Terrestrial Ecosystems (2015a) *Fauna risk assessment of the proposed borrow pit expansion*. Unpublished report for Granny Smith Mining Pty Ltd, Perth.
- Terrestrial Ecosystems (2015b) *Level 1 Fauna Risk Assessment for the Gloster Project and haul road*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2016a) *Level 1 Fauna Risk Assessment for the Anchor Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2016b) *Level 1 Fauna Risk Assessment for the Baneygo Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2016c) Level *1 Fauna Risk Assessment for the Dogbolter-Coopers Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2016d) *Level 1 Fauna Risk Assessment for the Petra Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2016e) *Level 1 Fauna Risk Assessment for the Tooheys Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2017b) *Level 1 Fauna Risk Assessment for the proposed Haul Road to the Baneygo Project Area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2017c) *Level 1 Fauna Risk Assessment for the proposed Haul Road to the proposed Petra Mining area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2018a) *Level 1 Fauna Risk Assessment for the proposed Haul Road to the proposed Petra Mining area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2018b) *Vertebrate Fauna Risk Assessment for the Granny Smith Solar Power Farm Project*, Unpublished report for Granny Smith Mining Company Pty Ltd, Perth.
- Terrestrial Ecosystems (2018c) *Vertebrate Fauna Risk Assessment for the Petra Mining Project*, Perth.
- Terrestrial Ecosystems (2019) *Basic vertebrate fauna survey and risk assessment for the Russels Find project area*, Regis Resources, Perth.

- Terrestrial Ecosystems (2020) *Vertebrate fauna risk assessment for the Granny Smith Tailing Storage Facility Expansion*. Unpublished letter report for Granny Smith Gold Mine, Perth.
- Terrestrial Ecosystems (2021a) *Basic vertebrate fauna assessment for the North Keringal Borefield*, Unpublished report for Granny Smith Mining Company, Perth.
- Terrestrial Ecosystems (2021b) *Basic vertebrate fauna reconnaissance survey and risk assessment for the Ben Hur project and haul road*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2021c) *Basic vertebrate fauna survey for Moolart Well*, Regis Resources, Perth.
- Terrestrial Ecosystems (2021d) *Potential impact on Long-tailed Dunnarts by the proposed vegetation clearing and construction of a new TSF west of Cell 3 at Granny Smith Mine*. Unpublished letter report for Granny Smith Gold Mine, Perth.
- Terrestrial Ecosystems (2022) *Basic vertebrate fauna reconnaissance survey and risk assessment of King of Creation*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023b) *Basic vertebrate fauna reconnaissance survey and risk assessment for the Ventnor Project area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023c) *Basic vertebrate fauna survey and risk assessment for the Ben Hur and King of Creations project area*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023d) *Basic vertebrate fauna survey and risk assessment for the Erlistoun project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023e) *Basic vertebrate fauna survey and risk assessment for the Maverick and McKenzie project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023f) *Basic vertebrate fauna survey and risk assessment for the Palliard project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023g) *Basic vertebrate fauna survey and risk assessment for the Petra project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023h) *Basic vertebrate fauna survey and risk assessment for the Reichelt's project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023i) *Basic vertebrate fauna survey and risk assessment for the Rosemont project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023j) *Basic vertebrate fauna survey and risk assessment for the Russells project area*, Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023k) *Basic vertebrate fauna survey and risk assessment for the Terminator Project*. Unpublished report for Regis Resources Ltd, Perth.
- Terrestrial Ecosystems (2023a) *Basic and detailed vertebrate fauna survey and assessment for the northern project areas*. Unpublished report for Regis Resources Limited, Perth.
- Terrestrial Ecosystems (2024a) *Basic vertebrate fauna assessment for expansion of the renewable energy zone*, Unpublished report for Granny Smith Mining Company, Perth.
- Terrestrial Ecosystems (2024b) *Basic vertebrate fauna assessment for the Keringal and Jubilee Borefields*, Unpublished report for Granny Smith Mining Company, Perth.

In addition, there are individual records for fauna contained in the Atlas of Living Australia, the Western Australian Museum and the Department of Biodiversity, Conservation and Attractions threatened species database have also been accessed.

The most relevant and useful data are those from the Terrestrial Ecosystems' (2010, 2011a, 2023a) and Stantec (2020) surveys in the area. These surveys were undertaken in similar habitat and in proximity to the survey areas and included pit trapping, funnel traps, echolocation bat detection surveys, avifauna surveys. Terrestrial Ecosystems has also completed multiple Basic fauna survey and assessments in nearby areas (2012g, a, e, c, d, f, h, b, 2013, 2014, 2015a, b, 2016a, e, c, b, d, 2017c, b, a, 2018a, c, b, 2019, 2020, 2021a, c, b, 2022, 2023k, b, c, j, d, g, h, f, e, i, 2024a, b).

Western Australian Museum (WAM) regional eastern goldfields biological surveys were undertaken in the Duketon-Sir Samuel, Sandstone–Sir Samuel and Laverton areas (How et al. 1992, McKenzie et al. 1994). These surveys were to the north of the project area. HGM (1999) undertook a terrestrial fauna assessment for the

Rosemont Gold Project, which is also located to the north of the Cork Tree Hill area. A survey was undertaken by Terrestrial Ecosystems staff for the Moolart Well area (Coffey Environments 2008) and Terrestrial Ecosystems (2010) surveyed the Garden Well mine; both of these surveys included habitat similar to the project area and are north of Cork Tree Hill. Stantec (2020) has done surveys on the Mt Weld Mining lease near Beta, Fish and Byron project areas. The WAM bioregional surveys of the Edjudina – Menzies and the Kurnalpi - Kalgoorlie areas (Dell et al. 1988, McKenzie and Hall 1992) and Terrestrial Ecosystems unpublished data for around Ora Banda are for areas to the south of the project area. The Murrin Murrin Expansion project fauna survey is for an area to the west of the project area (Ninox Wildlife Consulting 1998).

These fauna surveys, when considered together, provide a near complete list of the vertebrate species likely to be found in the project area. The composition of vertebrate fauna assemblages varies from habitat-to-habitat and site-to-site within the bioregion, but the survey data contained in Appendix B provide a good indication of the vertebrate fauna species potentially found in the project area. These data therefore provide a good regional context and indicate the extent of fauna assemblage variation that might be anticipated from site-to-site and temporally.

### 2.4.1 Fauna species at risk

Cowan (2001) reported the fauna species at risk in the East Murchison subregion as Bilby (*Macrotis lagotis*), Marsupial Mole (*Notoryctes typhlops*), Mulgara (*Dasycercus cristicauda / blythi*), Malleefowl (*Leipoa ocellata*), Princess Parrot (*Polytelis alexandrae*), Slender-billed Thornbill (*Acanthiza iredalei iredalei*), Giant Desert Skink (*Liopholis kintorei*) and Peregrine Falcon (*Falco peregrinus*). Since then, the Night Parrot (*Pezoporus occidentalis*) and Southern Whiteface (*Aphelocephala leucopsis*) have been added to the Commonwealth Government's threatened species list for the bioregion. This report assesses the potential for the current list of conservation significant species being impacted by vegetation clearing and the proposed development.

# 3. METHODOLOGY

## 3.1 DATABASE SEARCHES

A review of the *EPBC Act* list of protected species was undertaken to identify species of conservation interest to the Commonwealth Government by searching the Matters of National Environmental Significance (MNES) online database in the vicinity of the project area (Appendix A). In addition, a desktop search of the Terrestrial Ecosystems' fauna survey database was used to develop an appreciation of the vertebrate fauna assemblages in relevant sections of the bioregion near the project area.

Other more general texts were also used to provide supplementary information on vertebrates in the bioregion, including Tyler et al. (2000) for frogs; Storr et al. (1983, 1990, 1999, 2002) and Thompson and Thompson (2010) for reptiles; Johnstone and Storr (1998, 2004) for birds; and Van Dyck and Strahan (2008) for mammals.

Collectively these sources of information were used to create lists of species expected to utilise the project area and broader bioregion. It should be noted that these lists will include species that have been recorded in the general region but are possibly vagrants and they will not generally be found in the project area due to a lack of suitable habitat. Vagrants can be recorded almost anywhere. Many of the records are historical and some of these species will no longer present in the area. Many of the bird, mammal, reptile and amphibian species have specific habitat requirements that may be present in the general area but not in the project area. Also, the ecology of many of these species is often not well understood and it can sometimes be difficult to indicate those species whose specific habitat requirements are not present in the project area. Therefore, many species will be included in the lists produced from database searches but will not be present in the actual project area.

There are errors in most databases, including Atlas of Living Australia and the Western Australian Museum (WAM) collection. These errors occur because of a misidentification of individuals, taxonomic name changes and incorrect coordinates being entered into the database. Terrestrial Ecosystems was unable to verify the primary records, so it has used the information provided. Readers should therefore appreciate that species lists, and fauna surveys reported in the appendices may include these errors. These databases also contain historical records and therefore include species that are no longer present in the area (e.g. *Myrmecobius fasciatus*, *Bettongia lesueur* and *Macrotis lagotis*).

Because the project area is within 50km of Lake Carey, numerous water birds are likely to be present in database searches, even though there is no available habitat for these species in the project area.

## 3.2 SITE INSPECTION AND FAUNA HABITAT ASSESSMENT

A site assessment undertaken on 17–20 April 2024. The fauna habitat assessment had two foci:

- assessing fauna habitat types and their condition; and
- assessing the possible presence of and recording evidence of conservation significant fauna so that mine planning can minimise potential impacts and mitigation and management strategies can be developed and implemented to reduce potential impacts.

The two zoologists who undertook the site assessment, stopped at multiple locations within the project area and recorded a suite of data about the fauna habitat and its condition. This information included a description of the habitat structure, habitat condition, landform, soils and vegetation and time since last fire. Table 1 indicates the variables recorded at each location.

**Table 1. Variables assessed during the rapid habitat assessment**

| | |
|---|---|
| **Observer's Name:** | |
| **Coordinates of the location as UTM (GDA94):** | |
| **Fire history – options** | |
| ☐ > 5 years | |
| ☐ 1-5 years | |
| ☐ < 1 year | |
| **Landform – options** | |
| ☐ Beach | ☐ Lower slope |
| ☐ Clay plain | ☐ Mid slope |
| ☐ Cliff | ☐ Ridge |
| ☐ Creek line | ☐ River |
| ☐ Dam | ☐ Rocky outcrop / breakaway |
| ☐ Drainage line | ☐ Salt lake |
| ☐ Dune crest | ☐ Sand dune |
| ☐ Dune slope | ☐ Sand plain |
| ☐ Dune swale | ☐ Stony plain |
| ☐ Escarpment | ☐ Swamp |
| ☐ Flat | ☐ Undulating |
| ☐ Gorge | ☐ Upper slope |
| ☐ Gully | ☐ Wetland |
| ☐ Intertidal / mangrove | ☐ Water hole |
| ☐ Lake / lake edge | |
| **Habitat quality – options** | |
| ☐ *High quality fauna habitat* – These areas closely approximate the vegetation mix and quality that would have been in the area prior to any disturbance. The habitat has connectivity with other habitats and is likely to contain the most natural vertebrate fauna assemblage. | |
| ☐ *Very good fauna habitat* - These areas show minimal signs of disturbance (e.g. grazing, clearing, fragmentation, weeds) and generally retain many of the characteristics of the habitat if it had not been disturbed. The habitat has connectivity with other habitats and fauna assemblages in these areas are likely to be minimally effected by disturbance. | |
| ☐ *Good fauna habitat* – These areas showed signs of disturbance (e.g. grazing, clearing, fragmentation, weeds) but generally retain many of the characteristics of the habitat if it had not been disturbed. The habitat has connectivity with other habitats and fauna assemblages in these areas are likely to be affected by disturbance. | |
| ☐ *Disturbed fauna habitat*– These areas showed signs of significant disturbance. Many of the trees, shrubs and undergrowth are cleared. These areas may be in the early succession and regeneration stages. Areas may show signs of significant grazing, containing weeds or have been damaged by vehicle or machinery. Habitats are fragmented or have limited connectivity with other fauna habitats. Fauna assemblages in these areas are likely to differ significantly from what might be expected in the area had the disturbance not occurred. | |
| ☐ *Highly degraded fauna habitat* – These areas often have a significant loss of vegetation, an abundance of weeds, and a large number of vehicle tracks or are completely cleared. Limited or no fauna habitat connectivity. Fauna | |

| | | | |
|---|---|---|---|
| | assemblages in these areas are likely to be significantly different to what might have been in the area pre-disturbance. | | |
| *Habitat structure* – combined into habitat description | | | |
| *Upper stratum* | | | |
| ☐ | Tall open woodland | ☐ | Scattered tall trees |
| ☐ | Tall woodland | ☐ | Scattered trees |
| ☐ | Open woodland | ☐ | Scattered low trees |
| ☐ | Woodland | ☐ | Low closed forest |
| ☐ | Open forest | ☐ | Low open forest |
| ☐ | Closed forest | ☐ | Low woodland |
| ☐ | Tall closed forest | ☐ | Low open woodland |
| ☐ | Tall open forest | | |
| *Middle stratum* | | | |
| ☐ | Shrubland | ☐ | Open heath |
| ☐ | Tall shrubland | ☐ | Low closed heath |
| ☐ | Tall open shrubland | ☐ | Low open heath |
| ☐ | Low shrubland | ☐ | Tall closed scrub |
| ☐ | Scattered low shrubs | ☐ | Tall open scrub |
| ☐ | Low open shrubland | ☐ | Scattered tall shrubs |
| ☐ | Scattered tall shrubs | ☐ | Open shrubland |
| ☐ | Closed heath | ☐ | Scattered shrubs |
| **Soil Type – options** | | | |
| ☐ | Sand | ☐ | Silty loam |
| ☐ | Loamy sand | ☐ | Sand clay loam |
| ☐ | Clayey sand | ☐ | Clay |
| ☐ | Clay loam | ☐ | Peat / organic |
| ☐ | Silty clay loam | ☐ | Stony |
| ☐ | Sandy loam | | |
| **Soil colour - options** | | | |
| ☐ | Black | ☐ | Red |
| ☐ | Brown | ☐ | White |
| ☐ | Grey | ☐ | Yellow |
| ☐ | Orange | | |
| **Surface stones – options** | | | |
| ☐ | None | ☐ | Boulders (>250mm) |
| ☐ | Pebbles (0-50mm) | ☐ | Rocks |
| ☐ | Cobbles (51-250) | | |

## 3.3 SURVEY AND REPORTING STAFF

Mitch Plozza and Isaac Cable undertook the site investigation, fauna habitat assessment and search for Malleefowl and their mounds. The habitat mapping was undertaken by Mitch Plozza. Dr G Thompson drafted this report and Dr Scott Thompson reviewed the report before it was sent to the client.

Both senior scientists have appropriate relevant post-graduate qualifications, extensive experience in conducting fauna assessments in the Goldfields, have published research articles on biodiversity, fauna assemblages, conservation significant species, survey strategies for Malleefowl, trapping techniques and temporal variations in trapped fauna assemblages based on Goldfields surveys and are therefore appropriately trained and experienced for the task of preparing this assessment.

Dr Scott Thompson is the only environmental practitioner in Western Australia who has independent specialist certification (CEnvP – Ecology Specialist) in combination with post-graduate tertiary qualifications and is a licenced pest management technician (LPMT). This unique set of skills and qualifications ensures Scott undertakes fauna surveys, assessments and control programs to the highest standard and quality assurance. The qualifications and experience of the survey and reporting personnel are shown in Table 2.

**Table 2. Project personnel and their qualifications**

| Name | Experience and qualifications | Tasks |
|---|---|---|
| **Dr Scott Thompson** | BSc. (Env. Sc.), MSc. (Env. Mngt.), PhD (Env. Sc./Mngt), Cert III (Vertebrate Pest Mngt), Cert IV (WHS). CEnvP (Ecology Specialist), 20+ years of experience and a good familiarity with the vertebrate fauna in the Goldfields | Field work, fauna habitat mapping and reviewing report |
| **Dr Graham Thompson** | Post Grad. Dip. (Zool.), PhD (Zoology), Cert III (Vertebrate Pest Mngt), 20+ years of experience and a good familiarity with the vertebrate fauna in the Goldfields | Habitat analysis and reporting |
| **Mitch Plozza** | BSc (Conservation and Wildlife Biology); Cert III (Rural and Env Pest Mngt), 2+ years of experience and a familiarity with the vertebrate fauna in the Goldfields | Field work, habitat assessment and mapping |
| **Isaac Cable** | BSc (Conservation and Wildlife Biology); 2+ years of experience and a familiarity with the vertebrate fauna in the Goldfields | Field work and habitat assessment |

## 3.4 TAXONOMY AND NOMENCLATURE

Taxonomy and nomenclature for fauna species used in this report are generally based on the WA Museum species lists. Terrestrial Ecosystems has presumed that the identifications referred to in the appendices or in reports used to provide local and regional comparative data were correct and we have only corrected obvious records where the nomenclature was known to be incorrect.

## 3.5 LIMITATIONS

This Basic vertebrate fauna risk assessment is based on information contained in the Commonwealth Government's online EPBC MNES online database and other published and unpublished fauna survey data for the bioregion and a site visit. It is acknowledged that multiple surveys conducted in different seasons, repeated over several years are necessary to fully appreciate the fauna assemblage in the project area.

The (EPA; 2020) *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* suggested that fauna surveys may be limited by many variables. Limitations associated with each of these variables are assessed in Table 3.

**Table 3. Fauna survey limitations and constraints**

| Possible limitations | Constraint | Comment |
|---|---|---|
| **Competency and experience of the consultant carrying out this assessment** | No | The environmental scientists that undertook the site assessment, habitat mapping, and drafted and reviewed this report are familiar with the vertebrate fauna of this bioregion. |
| **Scope** | Yes, negligible | Data from this field reconnaissance survey and an examination of the aerial photography has been used to infer fauna habitat. |
| **Proportion of fauna identified, recorded and/or collected** | No | Not applicable. |
| **Accuracy of previous survey work** | Yes, negligible | Terrestrial Ecosystems has reported fauna survey data recorded by various authors but is not able to assure the accuracy of this information. It is acknowledged that the taxonomy of Western Australian vertebrates is continually being revised and the nomenclature of some of the species listed in the appendices may have changed since publication by the authors. |
| **Sources of information** | Yes, negligible | Vertebrate fauna information was available from on-line databases and unpublished and published reports of surveys conducted in the bioregion in a variety of habitat types. Many of these surveys employed a low level of trapping effort which significantly impacts on the capacity of these data to represent the fauna assemblages in the areas surveyed. |
| **Proportion of the task achieved** | No | The field assessment data combined with an examination of the aerial photography has been used to infer fauna habitats. |
| **Timing/weather/ season/ cycle** | N/A | Weather was suitable for a site investigation. |
| **Disturbances which affected results of the survey** | No | Disturbance areas throughout the project area have been factored into this assessment. |
| **Intensity of survey effort** | N/A | |
| **Completeness** | No | All aspects of this assessment have been completed. |
| **Resources** | No | Adequate resources were available. |
| **Remoteness and/or access problems** | No | All areas could be accessed. |
| **Availability of contextual information on the region** | No | There are adequate fauna survey data for areas around the project area to provide a list of species potentially in the project area. |

N/A = not applicable, Significant = major impact on outcome of the assessment, Moderate = impacted parts of the assessment, Negligible = almost no impact on the assessment.

# 4. RESULTS

## 4.1 FAUNA HABITAT

Based on fauna habitat assessment in the field, fauna habitats for the project areas are as shown below;

Beta
- Mulga woodland;
- Mulga drainage; and
- Disturbed.

Byron
- Mulga woodland;
- Mulga drainage;
- Disturbed;
- Rocky rise;
- Open Eucalypt woodland with low shrubs; and
- Sparse Sheoak woodland.

Cork Tree Hill
- Mulga woodland;
- Mulga drainage;
- Disturbed; and
- Rocky rise.

Fish
- Mulga woodland;
- Mulga woodland with Eucalypts;
- Disturbed; and
- Rocky rise.

The density of Mulga and Eucalypt trees and shrubs varied across the project area, being more-dense around ephemeral creek lines. There were substantial areas of bare ground, and leaf-litter varied appreciably across all sites.

The fauna habitat condition varied from completely degraded to good and all areas contained evidence of previous mining activity (i.e. mining pit, waste dump and supporting infrastructure). There was evidence of wild dogs and camels at Fish.

Four hundred and one fauna habitat points were assessed and reported in Appendix D. Images of the major fauna habitats are shown in Plates 1-14.



**Plate 1. Mulga woodland**



**Plate 2. Mulga woodland**



**Plate 3. Mulga drainage**



**Plate 4. Mulga drainage**



**Plate 5. Mulga woodland with Eucalypts**



**Plate 6. Mulga woodland with Eucalypts**



**Plate 7. Open Eucalypt woodland with low shrubs**



**Plate 8. Open Eucalypt woodland with low shrubs**



**Plate 9. Sparse Sheoak woodland**



**Plate 10. Sparse Sheoak woodland**



**Plate 11. Rocky rise**



**Plate 12. Rocky rise**



**Plate 13. Disturbed**



**Plate 14. Disturbed**

The results of the rapid habitat assessment are provided in Appendix D. Images of the habitat at each of these assessment points provides a more comprehensive overview of the habitats in the project area.

## 4.2 MALLEEFOWL

A single inactive Malleefowl mound was recorded. The details of this mound are shown in Table 4 and images in Plates 15-17.

**Table 4. Malleefowl mound details**

| Site | Zone | Easting | Northing | Width (m) | Crater width (m) | Height (m) | Crater depth (cm) | Rating |
|---|---|---|---|---|---|---|---|---|
| Byron | 51 | 504678 | 6777008 | 4 | 3 | 1 | 45 | Inactive |



**Plate 15. Malleefowl mound**



**Plate 16. Malleefowl track**



**Plate 17. Malleefowl scat**

Camel scats (Plate 18) and wild dog tracks (Plate 19) were recorded in the project area.



**Plate 18. Camel scats**



**Plate 19. Wild dog and echidna tracks**

## 4.3 FAUNA ASSEMBLAGE

In 2011, Terrestrial Ecosystems (2011a) undertook a Level 2 vertebrate fauna survey at Granny Smith. These data provide the best indication of the vertebrate fauna likely to occur in the project area, given the survey's proximity and similar fauna habitats. The Granny Smith vertebrate fauna survey included 13 survey sites that were trapped between 6-12 January 2011, which was optimal for reptiles and suitable for mammals. All pit-traps and drift fences were dug in prior to the field assessment and closed until the start of the trapping program. Each survey site contained four trap lines and each trap line contained three 20L PVC buckets, three 150mm by 500mm deep PVC pipes as pit-traps and three pair of funnel traps evenly spaced along a 30m fly-wire drift fence. Trap lines were arranged approximately 50m apart. The trapping effort was 1,092 bucket pit-trap nights, 1,092 pipe pit-trap nights and 2,184 funnel trap nights.

An avian survey was undertaken concurrently with the trapping program. The avian surveys were conducted from sunrise for approximately four hours and again each afternoon for approximately four hours. The search protocol was for a 20-minute active walking transect search of approximately 2ha before moving to another area. Seventy sites were surveyed, which equated to approximately 1,400 minutes of survey effort. All birds

were identified by their call or direct observation. Birds were also recorded opportunistically during the survey period by all field survey staff.

Bat echolocation calls were recorded using an Anabat system. Two Anabat recorders were left standing vertically all night (10-12 hours) on three occasions (8, 9 and 11 January 2011), and included representative habitat types and other locations likely to attract bats.

Table 5 indicates the small mammals, reptiles and amphibians caught during the 2011 survey. The reptile, mammal and amphibian assemblage recorded is like that recorded in other patches of open mulga woodland in this part of the Goldfields, except for the capture of three Long-tailed Dunnarts. As indicated in the follow up targeted survey report for Long-tailed Dunnarts (Terrestrial Ecosystems 2011b), it was unexpected to record Long-tailed Dunnarts in this area and this record at the time was more than 200km south-east of the previous known records. However, since then the Long-tailed Dunnart has been recorded at several banded ironstone formations in the region.

Four species of bats were recorded during the 2011 survey (*Chalinolobus gouldii* - Gould's Wattled bat; *Mormopterus* sp. (sp. 3) - Inland free-tailed bat; *Scotorepens balstoni* - Inland broad-nosed bat; and *Vespadelus finlaysoni* - Finlayson's cave bat). All these species are commonly recorded throughout the Goldfields.

**Table 5. Granny Smith terrestrial fauna survey results**

| | | Sites | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Family** | **Species** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
| Dasyuridae | *Antechinomys laniger* | 2 | 1 | | | 3 | 3 | 3 | 2 | | 2 | | | 1 |
| | *Antechinomys longicaudatus* | | | | | 1 | 1 | | | | | | | 1 |
| | *Sminthopsis dolichura* | 1 | 1 | 3 | 7 | 5 | 4 | 13 | 3 | 5 | 3 | | 1 | 1 |
| | *Sminthopsis hirtipes* | | | | 1 | | | | | | | | | |
| | *Sminthopsis macroura* | 2 | 3 | | 2 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | 3 | 2 |
| Muridae | *Notomys alexis* | 3 | | | | | | | | | | | | |
| | *Pseudomys hermannsburgensis* | 1 | 1 | 1 | 3 | | | | | 1 | 2 | 2 | 5 | 6 |
| | *Mus musculus* | | | | | | 1 | | | | | 5 | | |
| Hylidae | *Cyclorana maini* | | 1 | | | | | | | 11 | 5 | 1 | | |
| | *Cyclorana platycephala* | | 1 | 1 | | | | | | 5 | 2 | | 1 | 1 |
| Limnodynastidae | *Neobatrachus kunapalari* | | | | | | | | | 1 | | | | |
| | *Neobatrachus sutor* | 8 | 2 | 5 | 3 | 1 | | | 1 | 13 | 2 | | 1 | |
| Agamidae | *Diporiphora amphiboluroides* | | | | 2 | 1 | 1 | | | | | | | |
| | *Tympanocryptis pseudopsephos* | | | | 2 | 3 | 1 | | 1 | | | | | |
| Elapidae | *Suta monachus* | | | | | | 1 | | 1 | | | | | |
| Gekkonidae | *Diplodactylus granariensis* | | | | | | | | | | 1 | | | |
| | *Diplodactylus pulcher* | 2 | | | 1 | 4 | 3 | 1 | | | 2 | 1 | | 1 |
| | *Gehyra variegata* | | 3 | 2 | 4 | | 1 | | 3 | | 2 | 1 | 2 | |
| | *Heteronotia binoei* | 2 | | | | 1 | | | | | 1 | 2 | 1 | 5 |

| | | Sites | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Rhynchoedura ornata* | 3 | | | | | 2 | | | 1 | | | | |
| | *Strophurus wellingtonae* | 4 | 2 | | | | | | | | | | | 1 |
| Scincidae | *Ctenotus leonhardii* | 2 | 2 | | | | | 1 | | 5 | 9 | 7 | 16 | 27 |
| | *Egernia depressa* | | 1 | 1 | 2 | 2 | 3 | 9 | 6 | | 1 | | | |
| | *Eremiascincus richardsonii* | | | | 2 | | | | | | | | | 1 |
| | *Lerista desertorum* | | | | | | | | | | | | | 2 |
| | *Lerista distinguenda* | | | | | | | | | | | | | 1 |
| | *Menetia greyii* | | | | | | | | | | | 1 | | |
| | *Morethia butleri* | | 1 | | 1 | | 2 | | | 6 | 1 | | 3 | |
| | *Tiliqua multifasciata* | 1 | | | | | | | | | | | | |
| Typhlopidae | *Anilios australis* | | | | | | | | 1 | 1 | | | | |
| | *Anilios bicolor* | | | 1 | | | | | | | | | | |
| Varanidae | *Varanus caudolineatus* | | 2 | | 1 | 3 | 1 | 1 | | | 1 | | 2 | |
| | *Varanus panoptes* | 4 | | 7 | | 3 | 2 | 2 | | | 4 | 2 | | 6 |

The bird surveys recorded 820 individuals from 60 species across 70 survey sites and an additional 495 birds were opportunistically observed (Table 6). A proportion of these species are seldom seen in the north-eastern Goldfields. These are mostly the 'water birds' in the list (e.g. Musk Duck, Australian Wood Duck, Pink-eared Duck, Pacific Black Duck, Hardhead, stilts, and White-faced Heron). Some of these birds will occasionally be seen in water contained in disused mining pits during the non-rainy period, however, it was the presence of the heavy rain that resulted in their presence in the area. No Malleefowl nests or tracks were recorded in the Granny Smith survey but the Southern Whiteface was recorded at multiple locations.

**Table 6. Bird survey results for Granny Smith mining area**

| Family | *Species* | Common Name | No |
|---|---|---|---|
| Accipitridae | *Aquila audax* | Wedge-tailed Eagle | 3 |
| Anatidae | *Biziura lobata* | Musk Duck | 2 |
| | *Chenonetta jubata* | Australian Wood Duck | 81 |
| | *Malacorhynchus membranaceus* | Pink-eared Duck | 5 |
| | *Anas gracilis* | Grey Teal | 74 |
| | *Anas superciliosa* | Pacific Black Duck | 13 |
| | *Aythya australis* | Hardhead | 2 |
| Casuariidae | *Dromaius novaehollandiae* | Emu | 4 |
| Charadriidae | *Elseyornis melanops* | Black-fronted Dotterel | 4 |
| Recurvirostridae | *Himantopus himantopus* | Black-winged Stilt | 5 |
| | *Cladorhynchus leucocephalus* | Banded Stilt | 14 |

| Family | *Species* | Common Name | No |
|---|---|---|---|
| Ardeidae | *Egretta novaehollandiae* | White-faced Heron | 2 |
| Columbidae | *Phaps chalcoptera* | Common Bronzewing | 6 |
| | *Ocyphaps lophotes* | Crested Pigeon | 21 |
| Alcedinidae | *Todiramphus pyrrhopygius* | Red-backed Kingfisher | 1 |
| Cuculidae | *Heteroscenes pallidus* | Pallid Cuckoo | 3 |
| Falconidae | *Falco cenchroides* | Nankeen Kestrel | 2 |
| | *Falco berigora* | Brown Falcon | 2 |
| Rallidae | *Fulica atra* | Eurasian Coot | 21 |
| Acanthizidae | *Acanthiza robustirostris* | Slaty-backed Thornbill | 68 |
| | *Acanthiza chrysorrhoa* | Yellow-rumped Thornbill | 1 |
| | *Acanthiza apicalis* | Inland Thornbill | 12 |
| | *Aphelocephala leucopsis* | Southern Whiteface | 13 |
| Artamidae | *Artamus personatus* | Masked Woodswallow | 27 |
| | *Artamus cinereus* | Black-faced Woodswallow | 6 |
| | *Artamus minor* | Little Woodswallow | 2 |
| | *Cracticus torquatus* | Grey Butcherbird | 9 |
| | *Cracticus nigrogularis* | Pied Butcherbird | 5 |
| | *Gymnorhina tibicen* | Australian Magpie | 1 |
| Campephagidae | *Coracina maxima* | Ground Cuckoo-Shrike | 7 |
| | *Coracina novaehollandiae* | Black-faced Cuckoo-Shrike | 7 |
| | *Lalage tricolor* | White-winged Triller | 4 |
| Corvidae | *Corvus bennetti* | Little Crow | 5 |
| | *Corvus orru* | Torresian Crow | 2 |
| Estrildidae | *Taeniopygia guttata* | Zebra Finch | 2 |
| Hirundinidae | *Cheramoeca leucosterna* | White-backed Swallow | 6 |
| | *Hirundo neoxena* | Welcome Swallow | 6 |
| | *Petrochelidon nigricans* | Tree Martin | 10 |
| Maluridae | *Malurus splendens* | Splendid Fairy-wren | 12 |
| | *Malurus leucopterus* | White-winged Fairy-wren | 4 |
| Meliphagidae | *Certhionyx variegatus* | Pied Honeyeater | 2 |
| | *Gavicalis virescens* | Singing Honeyeater | 40 |
| | *Manorina flavigula* | Yellow-throated Miner | 41 |
| | *Acanthagenys rufogularis* | Spiny-cheeked Honeyeater | 44 |

| Family | *Species* | Common Name | No |
|---|---|---|---|
| | *Epthianura tricolor* | Crimson Chat | 4 |
| Monarchidae | *Grallina cyanoleuca* | Magpie-Lark | 17 |
| Motacilidae | *Anthus novaeseelandiae* | Australasian Pipit | 8 |
| Nectariniidae | *Dicaeum hirundinaceum* | Mistletoebird | 4 |
| Pachycephalidae | *Pachycephala rufiventris* | Rufous Whistler | 22 |
| | *Colluricincla harmonica* | Grey Shrike-thrush | 3 |
| | *Oreoica gutturalis* | Crested Bellbird | 46 |
| Pardalotidae | *Pardalotus striatus* | Striated Pardalote | 1 |
| Petroicidae | *Petroica goodenovii* | Red-capped Robin | 10 |
| | *Melanodryas cucullata* | Hooded Robin | 7 |
| Pomatostomidae | *Pomatostomus superciliosus* | White-browed Babbler | 14 |
| Ptilonorhynchidae | *Ptilonorhynchus guttatus* | Western Bowerbird | 7 |
| Rhipiduridae | *Rhipidura leucophrys* | Willie Wagtail | 10 |
| Podicipedidae | *Poliocephalus poliocephalus* | Hoary-headed Grebe | 30 |
| Psittacidae | *Barnardius zonarius* | Australian Ringneck | 6 |
| | *Psephotus varius* | Mulga Parrot | 20 |

## 4.4 BIOREGIONAL VERTEBRATE FAUNA

Appendix B provides a summary of the fauna survey data that are available near the project area. There are appreciable differences in the recorded fauna assemblages within and among fauna surveys shown in Appendix B. These differences are partially due to the low survey effort often deployed and they also reflect variations in soils and vegetation as well as temporal variations in the fauna assemblages.

Tables 7-10 provide a list of vertebrate species potentially found near the project area that have been compiled based on the fauna survey report results shown in Appendix B.

**Table 7. Birds potentially found near the project area**

| Family | Species | Common Name |
|---|---|---|
| Casuariidae | *Dromaius novaehollandiae* | Emu |
| Anatidae | *Cygnus atratus* | Black Swan |
| | *Tadorna tadornoides* | Australian Shelduck |
| | *Chenonetta jubata* | Australian Wood Duck |
| | *Anas superciliosa* | Pacific Black Duck |
| | *Anas gracilis* | Grey Teal |
| | *Malacorhynchus membranaceus* | Pink-eared Duck |
| | *Aythya australis* | Hardhead |
| | *Biziura lobata* | Musk Duck |
| Megapodiidae | *Leipoa ocellata* | Malleefowl |
| Phasianidae | *Coturnix pectoralis* | Stubble Quail |
| Podicipedidae | *Poliocephalus poliocephalus* | Hoary-headed Grebe |
| Columbidae | *Phaps chalcoptera* | Common Bronzewing |
| | *Ocyphaps lophotes* | Crested Pigeon |

| Family | Species | Common Name |
|---|---|---|
| | *Geopelia cuneata* | Diamond Dove |
| Cuculidae | *Chrysococcyx basalis* | Horsfield's Bronze-Cuckoo |
| | *Chrysococcyx osculans* | Black-eared Cuckoo |
| Aegothelidae | *Aegotheles cristatus* | Australian Owlet-nightjar |
| Podargidae | *Podargus strigoides* | Tawny Frogmouth |
| Caprimulgidae | *Eurostopodus argus* | Spotted Nightjar |
| Rallidae | *Tribonyx ventralis* | Black-tailed Nativehen |
| | *Fulica atra* | Eurasian Coot |
| Recurvirostridae | *Himantopus leucocephalus* | Pied Stilt |
| | *Cladorhynchus leucocephalus* | Banded Stilt |
| | *Recurvirostra novaehollandiae* | Red-necked Avocet |
| Charadriidae | *Vanellus tricolor* | Banded Lapwing |
| | *Charadrius ruficapillus* | Red-capped Plover |
| | *Elseyornis melanops* | Black-fronted Dotterel |
| Scolopacidae | *Actitis hypoleucos* | Common Sandpiper |
| Turnicidae | *Turnix velox* | Little Buttonquail |
| Otididae | *Ardeotis australis* | Australian Bustard |
| Ardeidae | *Ardea pacifica* | White-necked Heron |
| | *Egretta novaehollandiae* | White-faced Heron |
| Accipitridae | *Haliaeetus albicilla* | White-tailed Eagle |
| Phalacrocoracidae | *Microcarbo melanoleucos* | Little Pied Cormorant |
| Accipitridae | *Hieraaetus morphnoides* | Little Eagle |
| | *Aquila audax* | Wedge-tailed Eagle |
| | *Circus assimilis* | Spotted Harrier |
| | *Accipiter fasciatus* | Brown Goshawk |
| Cuculidae | *Heteroscenes pallidus* | Pallid Cuckoo |
| Strigidae | *Ninox boobook* | Southern Boobook |
| Alcedinidae | *Todiramphus pyrrhopygius* | Red-backed Kingfisher |
| Meropidae | *Merops ornatus* | Rainbow Bee-eater |
| Falconidae | *Falco cenchroides* | Nankeen Kestrel |
| | *Falco longipennis* | Australian Hobby |

| Family | Species | Common Name |
|---|---|---|
| | *Falco berigora* | Brown Falcon |
| | *Falco peregrinus* | Peregrine Falcon |
| Cacatuidae | *Eolophus roseicapilla* | Galah |
| | *Nymphicus hollandicus* | Cockatiel |
| Psittaculidae | *Neopsephotus bourkii* | Bourke's Parrot |
| | *Barnardius zonarius* | Australian Ringneck |
| | *Psephotus varius* | Mulga Parrot |
| | *Melopsittacus undulatus* | Budgerigar |
| Ptilonorhynchidae | *Chlamydera guttata* | Western Bowerbird |
| Climacteridae | *Climacteris affinis* | White-browed Treecreeper |
| | *Climacteris rufus* | Rufous Treecreeper |
| Maluridae | *Amytornis striatus* | Striated Grasswren |
| | *Malurus lamberti* | Variegated Fairywren |
| | *Malurus splendens* | Splendid Fairywren |
| | *Malurus leucopterus* | White-winged Fairywren |
| Meliphagidae | *Certhionyx variegatus* | Pied Honeyeater |
| | *Purnella albifrons* | White-fronted Honeyeater |
| | *Manorina flavigula* | Yellow-throated Miner |
| | *Acanthagenys rufogularis* | Spiny-cheeked Honeyeater |
| | *Anthochaera carunculata* | Red Wattlebird |
| | *Gavicalis virescens* | Singing Honeyeater |
| | *Ptilotula penicillata* | White-plumed Honeyeater |
| | *Ptilotula plumula* | Grey-fronted Honeyeater |
| | *Conopophila whitei* | Grey Honeyeater |
| | *Epthianura tricolor* | Crimson Chat |
| | *Epthianura aurifrons* | Orange Chat |
| | *Sugomel nigrum* | Black Honeyeater |
| | *Lichmera indistincta* | Brown Honeyeater |
| Pardalotidae | *Pardalotus rubricatus* | Red-browed Pardalote |
| | *Pardalotus striatus* | Striated Pardalote |
| Acanthizidae | *Pyrrholaemus brunneus* | Redthroat |
| | *Acanthiza iredalei* | Slender-billed Thornbill |

| Family | Species | Common Name |
|---|---|---|
| | *Acanthiza apicalis* | Inland Thornbill |
| | *Acanthiza chrysorrhoa* | Yellow-rumped Thornbill |
| | *Acanthiza uropygialis* | Chestnut-rumped Thornbill |
| | *Acanthiza robustirostris* | Slaty-backed Thornbill |
| | *Smicrornis brevirostris* | Weebill |
| | *Gerygone fusca* | Western Gerygone |
| | *Aphelocephala leucopsis* | Southern Whiteface |
| Pomatostomidae | *Pomatostomus superciliosus* | White-browed Babbler |
| Cinclosomatidae | *Cinclosoma castaneothorax* | Chestnut-breasted Quail-thrush |
| Campephagidae | *Coracina maxima* | Ground Cuckooshrike |
| | *Coracina novaehollandiae* | Black-faced Cuckooshrike |
| | *Lalage tricolor* | White-winged Triller |
| Neosittidae | *Daphoenositta chrysoptera* | Varied Sittella |
| Oreoicidae | *Oreoica gutturalis* | Crested Bellbird |
| Pachycephalidae | *Colluricincla harmonica* | Grey Shrikethrush |
| | *Pachycephala rufiventris* | Rufous Whistler |
| Artamidae | *Artamus personatus* | Masked Woodswallow |
| | *Artamus superciliosus* | White-browed Woodswallow |
| | *Artamus cinereus* | Black-faced Woodswallow |
| | *Artamus cyanopterus* | Dusky Woodswallow |
| | *Artamus minor* | Little Woodswallow |
| | *Cracticus torquatus* | Grey Butcherbird |
| | *Cracticus nigrogularis* | Pied Butcherbird |
| | *Gymnorhina tibicen* | Australian Magpie |
| | *Strepera versicolor* | Grey Currawong |
| Rhipiduridae | *Rhipidura leucophrys* | Willie Wagtail |
| | *Rhipidura albiscapa* | Grey Fantail |
| Monarchidae | *Grallina cyanoleuca* | Magpie-lark |
| Corvidae | *Corvus orru* | Torresian Crow |
| | *Corvus bennetti* | Little Crow |
| | *Corvus coronoides* | Australian Raven |
| Petroicidae | *Microeca fascinans* | Jacky Winter |
| | *Petroica goodenovii* | Red-capped Robin |
| | *Melanodryas cucullata* | Hooded Robin |
| Locustellidae | *Cincloramphus cruralis* | Brown Songlark |
| | *Cincloramphus mathewsi* | Rufous Songlark |
| Hirundinidae | *Hirundo rustica* | Barn Swallow |
| | *Hirundo neoxena* | Welcome Swallow |
| | *Petrochelidon nigricans* | Tree Martin |
| | *Cheramoeca leucosterna* | White-backed Swallow |
| Dicaeidae | *Dicaeum hirundinaceum* | Mistletoebird |
| Estrildidae | *Taeniopygia guttata* | Zebra Finch |
| Motacillidae | *Anthus novaeseelandiae* | Australasian Pipit |

### Table 8. Amphibians potentially found near the project area

| Family | Species | Common Name |
|---|---|---|
| Limnodynastidae | *Neobatrachus kunapalari* | Wheatbelt Frog |
| | *Neobatrachus sudelli* | Sudell's Frog |
| | *Neobatrachus sutor* | Shoemaker Frog |
| | *Neobatrachus wilsmorei* | Plonking Frog |
| | *Platyplectrum spenceri* | Spencer's Burrowing Frog |
| Myobatrachidae | *Pseudophryne occidentalis* | Western Toadlet |
| Pelodryadidae | *Cyclorana maini* | Main's Frog |
| | *Cyclorana occidentalis* | Western Water-holding Frog |

### Table 9. Mammals potentially found near the project area

| Family | Species | Common Name |
|---|---|---|
| Tachyglossidae | *Tachyglossus aculeatus* | Short-beaked Echidna |
| Bovidae | *Capra hircus* | Goat |
| | *Ovis aries* | Sheep |
| Camelidae | *Camelus dromedarius* | Dromedary |
| Canidae | *Canis lupus* | Dingo |
| | *Vulpes vulpes* | Red Fox |
| Felidae | *Felis catus* | Cat |
| Molossidae | *Austronomus australis* | White-striped Freetail Bat |
| | *Mormopterus planiceps* | Southern Free-tail Bat |
| Pteropodidae | *Syconycteris australis* | Common Blossom-bat |
| Vespertilionidae | *Chalinolobus gouldii* | Gould's Wattled Bat |
| | *Nyctophilus geoffroyi* | Lesser Long-eared Bat |
| | *Scotorepens balstoni* | Inland Broad-nosed Bat |
| Dasyuridae | *Antechinomys laniger* | Kultarr |
| | *Antechinomys longicaudatus* | Long-tailed Dunnart |
| | *Dasycercus blythi* | Brush-tailed Mulgara |
| | *Ningaui ridei* | Wongai Ningaui |
| | *Ningaui yvonneae* | Mallee Ningaui |
| | *Pseudantechinus woolleyae* | Woolley's False Antechinus |
| | *Sminthopsis crassicaudata* | Fat-tailed Dunnart |
| | *Sminthopsis dolichura* | Little Long-tailed Dunnart |
| | *Sminthopsis hirtipes* | Hairy-footed Dunnart |
| | *Sminthopsis macroura* | Stripe-faced Dunnart |
| | *Sminthopsis ooldea* | Ooldea Dunnart |
| Macropodidae | *Macropus fuliginosus* | Western Grey Kangaroo |
| | *Osphranter robustus* | Euro |
| | *Osphranter rufus* | Red Kangaroo |
| Leporidae | *Oryctolagus cuniculus* | Rabbit |
| Equidae | *Equus asinus* | Donkey |
| | *Equus caballus* | Horse |
| Muridae | *Mus musculus* | House Mouse |
| | *Notomys alexis* | Spinifex Hopping Mouse |
| | *Pseudomys hermannsburgensis* | Sandy Inland Mouse |

### Table 10. Reptiles potentially found in the project area

| Family | Species | Common Name |
|---|---|---|
| Agamidae | *Ctenophorus clayi* | Black-collared Dragon |
| | *Ctenophorus fordi* | Mallee Dragon |
| | *Ctenophorus inermis* | Military Dragon |
| | *Ctenophorus isolepis* | Central Military Dragon |
| | *Ctenophorus nuchalis* | Central Netted Dragon |
| | *Ctenophorus reticulatus* | Western Netted Dragon |
| | *Ctenophorus salinarum* | Saltpan Dragon |
| | *Ctenophorus scutulatus* | Lozenge-marked Dragon |
| | *Diporiphora amphiboluroides* | Mulga Dragon |
| | *Moloch horridus* | Thorny Devil |
| | *Pogona minor* | Western Bearded Dragon |
| | *Tympanocryptis cephalus* | Pebble Dragon |
| Carphodactylidae | *Nephrurus laevissimus* | Smooth Knob-tail |
| | *Nephrurus levis* | Three-lined Knob-tail |
| | *Nephrurus vertebralis* | Midline Knob-tail |
| | *Underwoodisaurus milii* | Barking Gecko |
| Diplodactylidae | *Diplodactylus conspicillatus* | Fat-tailed Gecko |
| | *Diplodactylus granariensis* | Wheatbelt Stone Gecko |

| Family | Species | Common Name |
|---|---|---|
| | *Diplodactylus pulcher* | Beautiful Gecko |
| | *Lucasium bungabinna* | Southern Sandplain Gecko |
| | *Lucasium damaeum* | Beaded Gecko |
| | *Lucasium squarrosum* | Mottled Ground Gecko |
| | *Lucasium stenodactylum* | Crowned Gecko |
| | *Rhynchoedura ornata* | Beaked Gecko |
| | *Strophurus assimilis* | Goldfields Spiny-tailed Gecko |
| | *Strophurus ciliaris* | Spiny-tailed Gecko |
| | *Strophurus elderi* | Jewelled Gecko |
| | *Strophurus strophurus* | Western Spiny-tailed Gecko |
| | *Strophurus wellingtonae* | Western Shield Spiny-tailed Gecko |
| Elapidae | *Brachyurophis fasciolatus* | Narrow-banded Burrowing Snake |
| | *Brachyurophis semifasciata* | Half-girdled Snake |
| | *Demansia psammophis* | Yellow-faced Whipsnake |
| | *Furina ornata* | Orange-naped Snake |
| | *Suta monachus* | Hooded Snake |
| | *Pseudechis australis* | Mulga Snake |
| | *Pseudechis butleri* | Spotted Mulga Snake |
| | *Pseudonaja mengdeni* | Western Brown Snake |
| | *Pseudonaja modesta* | Ringed Brown Snake |
| | *Simoselaps bertholdi* | Jan's Banded Snake |
| | *Suta fasciata* | Rosen's Snake |
| Gekkonidae | *Gehyra purpurascens* | Purplish Dtella |
| | *Gehyra variegata* | Variegated Gehyra |
| | *Heteronotia binoei* | Bynoe's Gecko |
| Pygopodidae | *Delma butleri* | Unbanded Delma |
| | *Delma fraseri* | Fraser's Delma |
| | *Delma nasuta* | Sharp-snouted Delma |
| | *Lialis burtonis* | Burton's Legless Lizard |
| | *Pygopus nigriceps* | Western Hooded Scaly-foot |
| Scincidae | *Cryptoblepharus australis* | Inland Snake-eyed Skink |
| | *Cryptoblepharus buchananii* | Buchanan's Snake-eyed Skink |
| | *Ctenotus ariadnae* | Ariadna's Ctenotus |
| | *Ctenotus atlas* | Southern Mallee Ctenotus |
| | *Ctenotus calurus* | Blue-tailed Finesnout Ctenotus |
| | *Ctenotus dux* | Fine Side-lined Ctenotus |
| | *Ctenotus grandis* | Grand Ctenotus |
| | *Ctenotus greeri* | Spotted-necked Ctenotus |
| | *Ctenotus hanloni* | Nimble Ctenotus |
| | *Ctenotus helenae* | Clay-soil Ctenotus |
| | *Ctenotus leonhardii* | Leonhardi's Ctenotus |
| | *Ctenotus pantherinus* | Leopard Ctenotus |
| | *Ctenotus piankai* | Coarse Sands Ctenotus |
| | *Ctenotus quattuordecimlineatus* | Fourteen-lined Ctenotus |
| | *Ctenotus schomburgkii* | Barred Wedgesnout Ctenotus |
| | *Ctenotus severus* | Stern Ctenotus |
| | *Ctenotus uber* | Spotted Ctenotus |
| | *Cyclodomorphus melanops* | Spinifex Slender Blue-tongue |
| | *Egernia depressa* | Southern Pygmy Spiny-tailed Skink |
| | *Egernia formosa* | Goldfields Crevice Skink |
| | *Eremiascincus richardsonii* | Broad-banded Sand-swimmer |
| | *Lerista bipes* | North-western Sandslider |
| | *Lerista desertorum* | Central Desert Robust Slider |
| | *Lerista distinguenda* | South-western Orange-tailed Slider |
| | *Lerista kingi* | King's Slider |
| | *Lerista timida* | Timid Slider |
| | *Liopholis inornata* | Desert Skink |
| | *Liopholis striata* | Nocturnal Desert Skink |
| | *Menetia greyii* | Common Dwarf Skink |
| | *Morethia butleri* | Woodland Morethia Skink |
| | *Tiliqua multifasciata* | Central Blue-tongue |

| Family | Species | Common Name |
|---|---|---|
| | *Tiliqua occipitalis* | Western Blue-tongued Lizard |
| Typhlopidae | *Anilios australis* | Austral Blind Snake |
| | *Anilios bicolor* | Dark-spined Blind Snake |
| | *Anilios hamatus* | Pale-headed Blind Snake |
| | *Anilios waitii* | Waite's Blind Snake |
| Varanidae | *Varanus brevicauda* | Short-tailed Pygmy Monitor |
| | *Varanus caudolineatus* | Stripe-tailed Monitor |
| | *Varanus eremius* | Pygmy Desert Monitor |
| | *Varanus giganteus* | Perentie |
| | *Varanus gouldii* | Gould's Goanna |
| | *Varanus panoptes* | Yellow-spotted Monitor |
| Varanidae | *Varanus tristis* | Black-headed Monitor |

## 4.5 CONSERVATION SIGNIFICANT FAUNA

Conservation significant fauna are protected by the Commonwealth *EPBC Act 1999*, and this list includes species covered by international treaties such as the Japan-Australia Migratory Bird Agreement (JAMBA) and China-Australia Migratory Bird Agreement (CAMBA) and the Western Australia (WA) *BC Act 2016*. The WA *BC Act 2016* provides for the publishing of the *Wildlife Conservation (Specially Protected Fauna) Notice* that lists species under multiple categories. In addition, DBCA maintains a list of fauna that require monitoring under four priorities based on the current knowledge of their distribution, abundance and threatening processes. The *EPBC Act 1999* and *BC Act 2016* imply legislative requirements for the management of anthropogenic impacts to minimise the effects of disturbances on species and their habitats. Priority species have no statutory protection, other than the DBCA wishes to monitor potential impacts on these species. Environmental consultants and proponents of developments are encouraged to avoid and minimise impacts on these species. Definitions of the significant fauna under the WA *Wildlife Conservation Act* are provided in Appendix C.

*Calidris ferruginea* (Curlew Sandpiper), *Calidris acuminata* (Sharp-tailed Sandpiper), *Tringa nebularia* (Common Greenshank), *Calidris melanotos* (Pectoral Sandpiper) and *Actitis hypoleucos* (Common Sandpiper) that were present in the MNES search, have not been included in Table 11 as there is no suitable habitat for these species in the project area.

There are two species listed under the *EPBC Act*, one species listed under the WA *Biodiversity Conservation 2016* (*BC Act*) and one species listed on the DBCA's Priority Fauna List that potentially occur in the project area. The following is an assessment of the likelihood of each of the species listed in Table 11 being found in the project area.

**Table 11. Conservation species recorded in database searches for the region**

| Species | BC Act and DBCA priority species list | EPBC conservation significant species | Comment on the potential presence of the species |
|---|---|---|---|
| Night Parrot *Pezoporus occidentalis* | Critically Endangered | Endangered | Highly unlikely to be in the project area, due to a lack of suitable habitat. |
| Sandhill Dunnart *Sminthopsis psammophila* | Endangered | Endangered | Highly unlikely to be in the project area due to a lack of suitable habitat. |
| Malleefowl *Leipoa ocellata* | Vulnerable | Vulnerable | Present in the project area in very low abundance. |
| Great Desert Skink *Liopholis kintorei* | Vulnerable | Vulnerable | Highly unlikely to be in the project area due to a lack of suitable habitat. |
| Chuditch *Dasyurus geoffroii* | Vulnerable | Vulnerable | Highly unlikely to be in the project area due to a lack of suitable habitat. |
| Grey Falcon *Falco hypoleucos* | Vulnerable | Vulnerable | Highly unlikely to be in the project area due to a lack of suitable habitat. |
| Princess Parrot *Polytelis alexandrae* | Priority 4 | Vulnerable | May infrequently be seen in the area. |
| Southern Whiteface *Aphelocephala leucopsis* | | Vulnerable | Has been recorded on multiple occasions in adjacent areas. |
| Mulgara *Dasycercus blythi* | Priority 4 | | Highly unlikely to be in the project area due to a lack of suitable habitat. |
| Oriental Plover *Charadrius veredus* | Vulnerable | Vulnerable | Unlikely to be in the project area due to a lack of recent records. |
| Fork-tailed Swift *Apus pacificus* | Vulnerable | Migratory | May very infrequently be seen in the area. |
| Grey Wagtail *Motacilla cinereal* | Vulnerable | Migratory | Highly unlikely to be present in the project area. |
| Yellow Wagtail *Motacilla flava* | Vulnerable | Migratory | Highly unlikely to be present in the project area. |
| Peregrine Falcon *Falco peregrinus* | OS | | May infrequently be seen in the area. |
| Long-tailed Dunnart *Antechinomys longicaudatus* | Priority 4 | | Unlikely to be in the project area due to a lack of suitable habitat. |

OS Other specially protected fauna

**Night Parrot (*Pezoporus occidentalis*)** – Critically Endangered under the *BC Act 2016* and Endangered under the *EPBC Act 1999*

The Night Parrot is a small, arid-adapted, nocturnal, ground-feeding parrot (Johnstone and Storr 1998, Threatened Species Scientific Committee 2016). Its length is 22-25cm with a body mass of approximately 104g (Threatened Species Scientific Committee 2016), although it was suggested that they were semi-nomadic, the Night Parrots in south-western Queensland appear to be sedentary (Murphy 2015).

The Night Parrot was probably originally distributed over much of semi-arid and arid Australia (Garnett et al. 1993, Threatened Species Scientific Committee 2016). Records in north-west and western Queensland in the early 1990-2000s were in a broad cross section of the habitats available (Garnett et al. 1993, Cupitt and Cupitt 2008, Boles et al. 2016). There have been recent sightings in the Pilbara in 1980, 2005 and 2017, central WA in 1979, north-eastern South Australia in 1979, western Queensland (including Pullen-Pullen-Mt Windsor-Diamantina population) in 1980, 1990, 1993, 2006 and 2013-17 (Davis and Metcalf 2008, Garnett et al. 2011, Charalambous 2016, Pickrell 2016, AG staff 2017, Palaszxzuk and Miles 2017, Rykers 2017, AG staff 2018), Pilbara in 2017 (Jones 2017) and the northern Goldfields (Jackett et al. 2017). Garnett et al. (2011) suggested that there were between 50-250 mature individuals in less than 5% of its previous range.

Wilson's (1937) summary of observations provided information on the early records of Night Parrots' preferred habitat and breeding sites. Recent information indicates its preferred habitat appears to be in *Triodia*

grasslands, chenopod shrublands, shrubby samphire and floristically diverse habitats dominated by large-seeded species (Threatened Species Scientific Committee 2016, McCarthy 2017, Murphy et al. 2017b). At Pullen Pullen Reserve it nests in large, more or less ring-shaped *Triodia*, and the nest consists of a tunnel (25-30$^{o}$ and 0$^{o}$ to the ground; 20-33cm long) through an apron of dead spinifex leaves that leads to a chamber under a live hummock, with a shallow depression (3-4cm) excavated into the gravelly/sandy soil (Murphy et al. 2017a). In the northern Goldfields the nest was again in a spinifex hummock, it was circular, with an excavated depression (~1.5-2.0cm) in sandy substrate (Hamilton et al. 2017, Jackett et al. 2017). The entrance tunnel was 62cm long, and was downward sloping (27$^{o}$) with the entrance 28cm above the ground (Hamilton et al. 2017). It has clutches of two to four sub-elliptical, white eggs with a lustrous appearance (Murphy et al. 2017a). Breeding followed significant rains in March for the observations in Pullen-Pullen Reserve and in April in the northern Goldfields (Hamilton et al. 2017, Murphy et al. 2017a), but it is thought that breeding generally occurs between April and October (Murphy et al. 2017a).

Murphy et al. (2017b) placed a GPS tag on Night Parrots and reported that the two birds called at dusk from their diurnal roosts among spinifex hummocks and then flew to more floristically diverse habitats dominated by large-seeded, prolifically seeding species to feed.

The Department of Biodiversity, Conservation and Attractions' (2024) survey guidelines for Night Parrots indicated that at the local level, roosting and nesting sites are in clumps of dense vegetation, primarily old and large spinifex clumps (often >50 years unburnt), especially hummocks that are ring-forming. These may be in expanses or isolated patches, but sometimes associated with other vegetation types, such as dense chenopod shrubs. Spinifex hummocks that are collapsed (i.e. less than about 40-50cm in height) are not likely to provide adequate shelter. There are no old large clumps of spinifex in the project area.

As the preferred roosting and nesting sites for Night Parrots are not present in the project area and there is a significant threatening process for the species in the area (i.e. feral cats), it is Terrestrial Ecosystems' assessment that Night Parrots are not present in the project area and will therefore not be impacted by any proposed development.

**Sandhill Dunnart (*Sminthopsis psammophila*)** – Critically Endangered under the *BC Act 2016* and Endangered under the *EPBC Act 1999*

The Sandhill Dunnart is a small (30-45g) arid adapted dasyurid that is found in the eastern part of the Western Australian section of the Great Victoria Desert, eastern Goldfields and the western and southern parts of South Australia. Recent surveys undertaken for the Great Victoria Desert Trust have increased its geographic range in the Great Victoria Desert.

The habitat in the project area is not suitable for this Dunnart and there are no records of the Sandhill Dunnart near the project area in the Atlas of Living Australia, so it is highly unlikely that they are present in the project area.

**Malleefowl (*Leipoa ocellata*)** – Vulnerable under the *BC Act 2016* and *EPBC Act 1999*

Malleefowl have been found in mallee regions of southern Australia from approximately the 26$^{th}$ parallel of latitude southwards. Malleefowl are now only found throughout these regions in fragmented patches due to clearing of habitat for agriculture, increased fire frequency, competition with exotic herbivores (sheep, rabbits, cattle, goats) and kangaroos, predation by foxes and cats, inbreeding as a result of fragmentation and possibly hunting for food.

A single inactive Malleefowl mound was recorded in the project area (Plate 15). Malleefowl tracks (Plate 16) were recorded along with a scat (Plate 17) indicating a very low abundance in the project area. There was a lack of substantial patches of dense vegetation in the project area that provide protection from feral predators, such as wild dogs, and feral cats are probably present in the project area, so it is unlikely that the Malleefowl population is ever going to increase.

**Giant Desert Skink (*Liopholis kintorei*)** - Vulnerable under the *EPBC Act 1999* and *BC Act 2016*

*Liopholis kintorei* is a large skink found in the sandy desert regions of Western Australia, Northern Territory and South Australia. It is found on sand-flats and clay-based or loamy soils vegetated with spinifex. It lives in a multi-entranced communal burrow system and uses shared defecation sites. Storr *et al*. (1999) recorded them as being in the Wanjarri area of the Great Victoria Desert, and the DBCA Threatened species database records them in Laverton in 1967.

The Giant Desert Skink prefers sandy soils vegetated with spinifex. This habitat is not present in the project area. Terrestrial Ecosystems' assessment is that *Liopholis kintorei* is very unlikely be found in the project area due to a lack of suitable habitat.

**Chuditch (*Dasyurus geoffroii*)** - Vulnerable under the *EPBC Act 1999* and *BC Act 2016*

The Chuditch is the largest extant carnivorous marsupial in WA. It is usually active from dusk to dawn. Formally known from over 70% of Australia, the Chuditch now has a patchy distribution throughout the Jarrah forest and mixed Karri/Marri/Jarrah forest of south-west WA and other isolated areas. Chuditch are solitary animals for most of their life and den in hollow logs, burrows, culverts, etc. and have also been recorded in tree hollows and rock cavities. Chuditch are opportunistic feeders, and forage primarily on the ground at night. Their diet can include other mammals, birds, lizards, bird and reptile eggs but the majority is a mixture of large invertebrates (e.g. spiders, scorpions and crickets).

How *et al*. (1988) reported Chuditch being found near the Norseman-Lake King Road and near Mount Holland. DBCA records show that one specimen was recorded in 1974 in Kambalda East. There are records south of Southern Cross and Marvel Loch and there have been other old sightings east of Kambalda and near Norseman, but none recently. As the project area is a significant distance outside of its current known geographic distribution it is highly unlikely that the Chuditch would be found in the project area. Consequently, Terrestrial Ecosystems' assessment is that vegetation clearing in the project area is unlikely to have any significant impact on this species.

**Grey Falcon (*Falco hypoleucos*)** - Vulnerable species under the *EPBC Act 1999* and *BC Act 2016*

The Grey Falcon is a moderately large raptor that is found mostly in the northern half of Western Australia, in lightly wooded, coastal or riverine areas and nests in tall trees along water courses.

There are multiple records of the Grey Falcon in the Pilbara, but very few in the Goldfields. There is a very low probability that it may forage in this area but is unlikely to breed in the project area.

**Princess Parrot (*Polytelis alexandrae*)** - Vulnerable under the *EPBC Act 1999* and Priority 4 species with DBCA

Very little is known about the Princess Parrot; even the exact extent of its geographical distribution. It is thought to be nomadic within the central desert regions of Australia, occupying arid shrub lands, particularly those dominated by Mulga, Desert Oak and spinifex. Due to the paucity of information on the species, accurate estimates of its conservation significance are difficult to make, however, this species is probably threatened by habitat loss to agricultural practices and changes in fire regimes.

Dr S. Thompson sighted this parrot in a survey near the Wanjarri Nature Reserve in 2006 and Moriarty (1972) also reported it in the same area, so it may very infrequently be seen in the general area. The proposed vegetation clearing is unlikely to significantly impact on this species as it will move away to other areas if it is disturbed.

**Southern Whiteface (*Aphelocephala leucopsis*)** - Vulnerable species under the *EPBC Act 1999*

The Southern Whiteface is a recent addition to the *EPBC Act* listing of vulnerable species. It is a small bird found in the arid and semi-arid interior from the WA coast near Hamelin Bay through the Great Victoria Desert into the arid areas of South Australia, Victoria, NSW and Queensland (Johnstone and Storr 2004, Department of Climate Change Energy the Environment and Water 2023).

It is found in open woodlands and shrublands with an understorey of grasses and low shrubs (Department of Climate Change Energy the Environment and Water 2023). It forages on the ground, feeding on insects, spiders and seeds, mostly found in the leaf-litter (Johnstone and Storr 2004, Department of Climate Change Energy the Environment and Water 2023).

The Southern Whiteface have been recorded in multiple avifauna surveys in the adjacent area and on the Granny Smith mining tenements (Plate 20). Almost every comprehensive avifauna survey undertaken recently in the nearby mulga woodland habitat has recorded the presence of Southern Whiteface. This small bush bird is widespread and relatively abundant in the northern Goldfields and will readily move if disturbed, so, it is unlikely to be significantly impacted by the development and operation of the proposed solar farm.

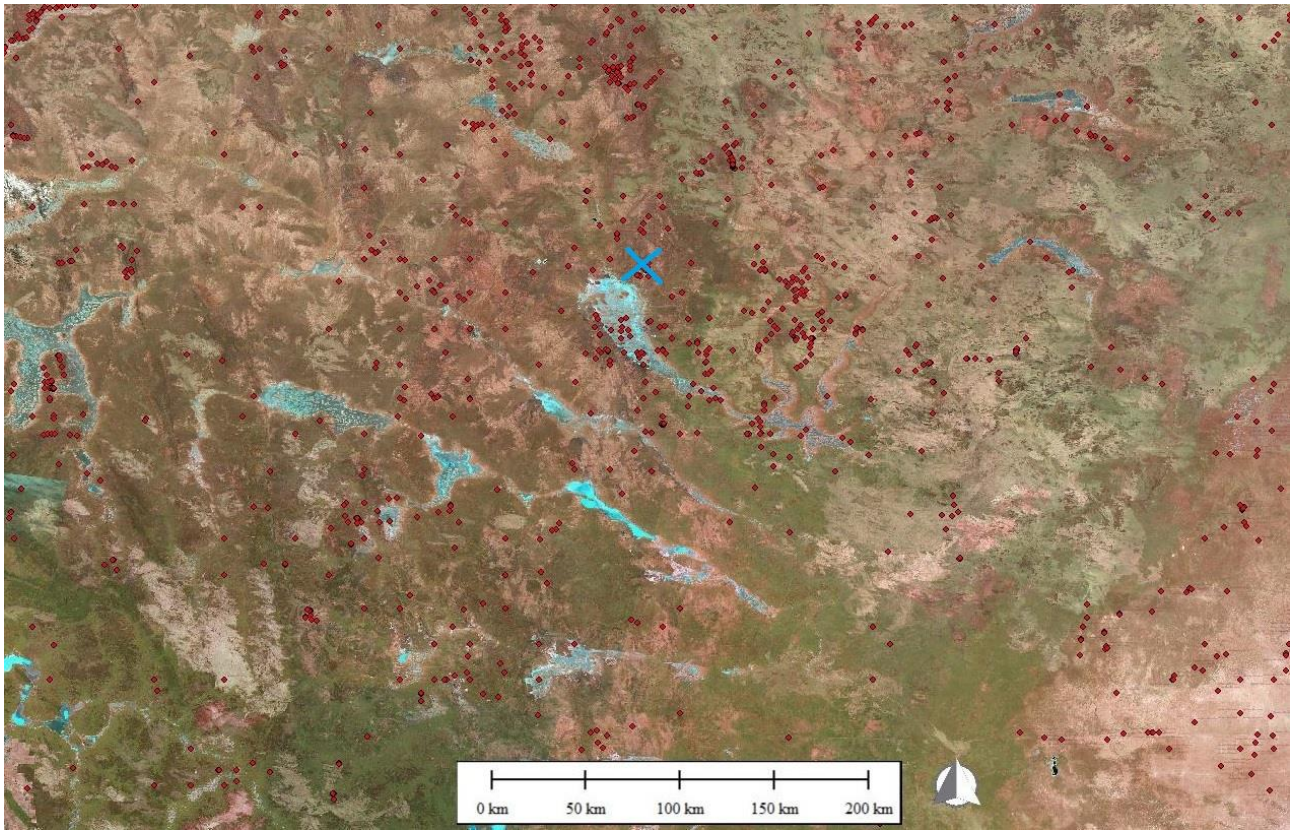



**Plate 20. Southern Whiteface records in Terrestrial Ecosystems' threatened species database**

Project area shown as a blue cross

**Brush-tailed Mulgara (*Dasycercus blythi*)** - Priority 4 with the DBCA

Woolley (2005) recognises two species of 'Mulgara'; *Dasycercus blythi* and *D. cristicauda*. *Dasycercus blythi* has a non-crested tail, two upper premolars and six nipples; *D. cristicauda* has a crested tail, three upper premolars and eight nipples. Both species potentially have overlapping distributions in arid Australia, but it is thought that D. cristicauda does not currently exist in Western Australia, although there are old records indicating its presence. Woolley (2005) suggested the common names for these two species be Brush-tailed Mulgara for *D. blythi* and Crest-tailed Mulgara for *D. cristicauda*. These two species can be sympatric in places, but probably

utilise different parts of the habitat on a local scale when they are recorded in the same area. Currently, there are insufficient data to separate the spatial ecology, burrows and reproductive biology of these two species. Information that follows is based on what is known for 'Mulgara' without distinguishing between the species.

The reported distribution of Mulgara includes much of the inland spinifex covered sandy desert and spinifex vegetated areas in the Pilbara and northern goldfields. Within these areas their distribution is patchy and it is most frequently confined to mature spinifex dominated habitat (Gibson and Cole 1992, Masters 2003, Masters et al. 2003, Thompson and Thompson 2008). In some areas, their relative abundance is positively associated with rainfall in the previous 12 to 24 months (Gibson and Cole 1992, Masters 1998, Dickman et al. 2001, Letnic and Dickman 2005) and recent burning of the spinifex does not seem to be sufficient to shift Mulgara out of an area (Thompson and Thompson 2007). Mulgara are generally sedentary in contrast with some other small dasyurids and have high site fidelity and a low propensity for dispersal once a home range has been established (Masters 1998, Dickman et al. 2001).

Fauna habitat in the project area is not suitable for Mulgara. It is therefore unlikely of be found in the project area.

**Oriental Plover (*Charadrius veredus*)** - Migratory species under the *EPBC Act 1999* and *BC Act 2016*

A migrant species with patchy distribution in Australia, the Oriental Plover is sparsely distributed across arid and semi-arid Australia, but avoids truly desert regions. Its preferred habitat is dry plains. It was not recorded in other fauna surveys undertaken near the project area. The species is under threat because of habitat reduction due to agriculture and changing fire regimes. This plover has not been recorded in the general area in any of the other regional surveys.

Terrestrial Ecosystems' assessment is that the Oriental Plover is unlikely to be seen in the project area.

**Fork-tailed Swift (*Apus pacificus*)** - Migratory species under the *EPBC Act 1999* and *BC Act 2016*

This species breeds in the northeast and mid-east Asia, northern Australia and winters in Australia and southern New Guinea. It is a visitor to most parts of Western Australia, beginning to arrive in the Kimberley in late September, in the Pilbara in October and November and in the southwest land division in mid-December, and leaving by late April. The Fork-tailed Swift is an almost exclusively an aerial species, foraging and sleeping on the wing. It rarely comes to earth, usually only for breeding. It is common in the Kimberley, uncommon to moderately common near northwest, west and southeast coasts and rare to scarce elsewhere. It is rarely seen in the Goldfields (Plate 21).

Terrestrial Ecosystems' assessment is that the Fork-tailed Swift may infrequently be seen in the project area. However, the proposed vegetation clearing is unlikely to significantly impact on this species as it will move away to other areas if it is disturbed.

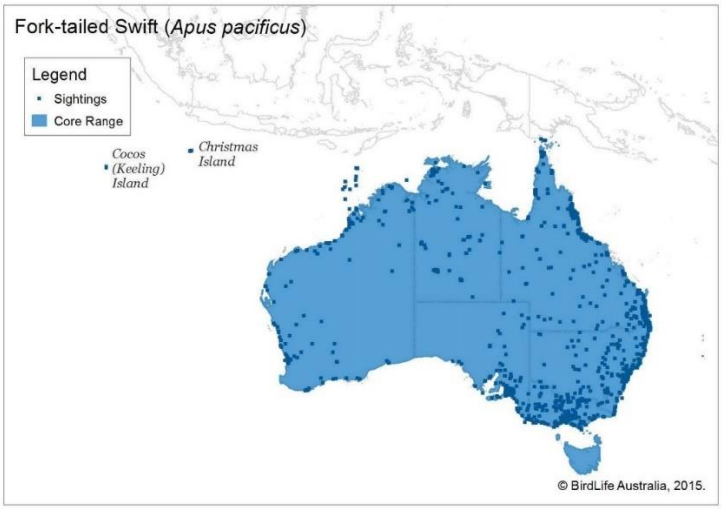



**Plate 21. Range and actual reported sightings of the Fork-tailed Swift**

**(taken from http://www.environment.gov.au/biodiversity/threatened/publications/epbc-act-referral-guidelines-migratory-birds)**

**Grey Wagtail (*Motacilla cinerea*) -** Migratory species under the *EPBC Act 1999* and *BC Act 2016*

The Grey Wagtail is a small yellow breasted bird with a grey back and head. Johnstone and Storr (2004) reported this migratory species as breeding in Palearctic from western Europe and north-west Africa to eastern Asia and wintering in Africa, south-east Asia, Indonesia, the Philippines, New Guinea and Australia. Its preferred habitat in Australia is banks and rocks in fast-running fresh water including rivers, streams and creeks where it feeds on insects.

The Atlas of Living Australia records two sightings on the south-coast of Western Australia and none around the project area (Plate 22). It is highly unlikely to be seen in the project area due to a lack of suitable habitat.

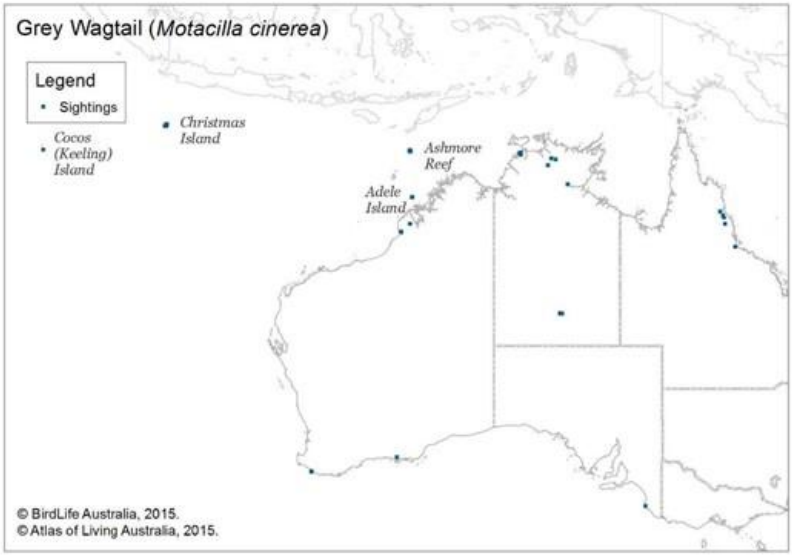



**Plate 22. Reported sightings of the Grey Wagtail**

**(taken from http://www.environment.gov.au/biodiversity/threatened/publications/epbc-act-referral-guidelines-migratory-birds)**

**Yellow Wagtail (*Motacilla flava*) -** Migratory species under the *EPBC Act 1999* and *BC Act 2016*

The Yellow Wagtail is found it the millions in the norther hemisphere and the Atlas of Living Australia records multiple records of this bird in Australia in the coastal areas. There are no records for this species in inland Western Australia near the project area, therefore it is highly unlikely to be impacted by the proposed development.

**Peregrine Falcon (*Falco peregrinus*)** – Other specially protected fauna under the *BC Act 2016*

The Peregrine Falcon is uncommon, although widespread throughout much of Australia excluding the extremely dry areas and has a wide and patchy distribution. It shows habitat preference for areas near cliffs along coastlines, rivers and ranges and within woodlands along watercourses and around lakes. Nesting sites include ledges along cliffs, granite outcrops and quarries, hollow trees near wetlands and old nests of other large bird species. There is no evidence to suggest any change in status in the last 50 years.

The Peregrine Falcon has been seen in the Wanjarri Nature Reserve (Moriarty 1972), at Honeymoon Well (Ninox Wildlife Consulting 1994), Mileura (Tingay and Tingay 1977) and Sunrise Dam (Dunlop and Payne 1999), so they could infrequently be seen in the general area.

Terrestrial Ecosystems' assessment is that the Peregrine Falcon may infrequently be seen in the project area, however, the proposed developments are unlikely to significantly impact on this species as it will move away to other areas if it is disturbed.

**Long-tailed Dunnart (*Antechinomys longicaudatus*)** – Priority 4 species with DBCA.

Burbidge et al. (2008) summarised the Long-tailed Dunnart distribution as widely scattered in arid zone where it inhabits rugged rocky areas. They went on to suggest that its striated foot-pads, long tail and behaviour in captivity indicated that it was an active and capable climber. Specimens have been recorded in several rocky ranges in the Gibson Desert, West MacDonnell National Park, Murchison, Carnarvon Basin and the Pilbara. All previous capture sites for Long-tailed Dunnarts are within rugged rocky landscapes that support a low open woodland or shrubland of Acacias (especially mulga) with an understorey of spinifex hummocks, and (occasionally) also perennial grasses and cassias.

Three adult Long-tailed Dunnarts were caught in the Granny Smith Level 2 fauna survey (Terrestrial Ecosystems 2011a) and a single individual was caught in the follow up targeted survey (Terrestrial Ecosystems 2011b). Subsequently, Long-tailed Dunnarts have been caught at other projects in the region including Mt Weld which is within 20km of the project area.

There are a few small rocky outcrops (e.g. BIFs) vegetated with sparse open Mulga woodland in the project area. However, these BIF areas are small and isolated, so it is improbable that they will support Long-tailed Dunnarts.

**Curlew Sandpiper (*Calidris ferruginea*), Common Sandpiper (*Actitis hypoleucos*), Common Greenshank (*Tringa nebularia*), Sharp-tailed Sandpiper (*Calidris acuminata*) and Pectoral Sandpiper (*Calidris melanotos*)** – Migratory under the *EPBC Act* and *BC Act*

These shore birds typically inhabit the shallow areas around fresh and salt-water estuaries, lakes, swamps and lagoons feeding on a variety of small invertebrates. They breed in the northern hemisphere and fly south in the northern hemisphere's winter to forage. They are mostly found on offshore islands, coastal and near coastal areas, but occasionally move inland after heavy rain to forage of the macroinvertebrates found in salt and freshwater lakes that fill with water. If Lake Carey was full of water, then there is a very small possibility of these birds being seen on the lake edge. If disturbed, they would readily to another section of the lake to forage and are unlikely to be significantly impacted. Lake Carey is at least 20km from the closest part of the project area, so none of these birds are likely to be impacted by vegetation clearing and mining in the project area.

# 5. DISCUSSION

## 5.1 ADEQUACY OF THE FAUNA SURVEY DATA FOR FAUNA HABITATS REPRESENTED IN THE PROJECT AREA

The EPA's (2020) Technical Guidance on terrestrial fauna surveys indicated that the type of survey should be determined based on:

- level of existing regional knowledge;
- type and comprehensiveness of recent local surveys;
- degree of existing disturbance or fragmentation at the regional scale;
- extent, distribution and significance of habitats;
- significance of species likely to be present;
- sensitivity of the environment to the proposed activities; and
- scale and nature of impact.

The two-season survey by Terrestrial Ecosystems (2011a) was undertaken in similar fauna habitat to the project area in Granny Deeps, which is approximately 20km east of the Beta project area . In addition, there are multiple other surveys (Dell et al. 1992, McKenzie et al. 1992, Ninox Wildlife Consulting 1998, 1999, 2008, Terrestrial Ecosystems 2010, Stantec 2020, Terrestrial Ecosystems 2023a) undertaken in mulga woodland habitat in the eastern Goldfields, so the vertebrate fauna assemblages in this habitat type are well known, and an additional survey is unlikely to provide new information that will alter the regulators assessment.

### 5.1.1 Amphibians

Frogs are normally only detected immediately after rainfall or around semi-permanent pools. It is likely that *C. maini, N. sutor, P. occidentalis, N kunapalari* and *N. wilsmorei* would be found in the general area. These species, other than *P. occidentalis,* burrow into the ground and aestivate between rainfall events. *Pseudophryne occidentalis* find shelter under rocks and in crevices during the dry periods and enter temporary ponds to breed after major rainfall events. All five species have a wide-spread distribution and are abundant, and because of the ephemeral creek line in the project area, some or all of these species could be present. Clearing vegetation is likely to result in a loss of individuals within the disturbed area, however, it is unlikely to have a significant impact on these species when assessed in a regional context.

### 5.1.2 Reptiles

Typically, between 25 and 35 species of reptiles are caught in open mulga woodland (Coffey Environments 2008, Terrestrial Ecosystems 2010, 2011a, 2023a). None of the species likely to be in the project area are of conservation significance. There were no characteristics of the reptile assemblage surveyed in 2011 in the Granny Deeps project area that indicated that there herpetofauna of conservation significance in the project area.

Terrestrial Ecosystems' view is that the proposed clearing of the project area is unlikely to significantly impact on the reptile fauna of the bioregion.

### 5.1.3 Birds

The number of birds and bird species in the northern Goldfields fluctuates based on seasons and recent rainfall (Craig and Chapman 2003). Semi-arid and arid areas of inland Australia support a diverse range of transient and nomadic species (e.g. Princess Parrot) that move through large areas in search of available resources. Heavy rain that is followed by flowering and seeding of many plant species is often sufficient to draw many of these

nomadic species to the general area. These species move on to other areas once the resource is depleted or better resources are available in adjacent areas.

The project area is likely to support a similar assemblage to that present in the adjacent areas. Birds of conservation significance potentially found in the general area include the Malleefowl, Southern Whiteface, Peregrine Falcon and Princess Parrot. A single Malleefowl mound was recorded, along with tracks and a scat in the Byron project area. Based on the field survey, there are very few Malleefowl in the project area, and there is no recently active breeding mound. Therefore, the potential impact on this species is likely to be low.

The Southern Whiteface has been previously recorded in the vicinity of the project area, and the available data indicates that it is wide-spread and relatively abundant. This small bush bird will readily move if disturbed. The Princess Parrot is nomadic and moves around the arid interior often in search of water and resources, and rarely recorded away from the sandy deserts. The Peregrine Falcon will normally have a very large home range and clearing a small section of vegetation in the project area, particularly when similar habitat exists in the adjacent areas, is unlikely to significantly impact on this species. All birds will readily shift to other areas when there is a disturbance.

Terrestrial Ecosystems' view is that the proposed clearing for the access road is unlikely to significantly impact on the avian fauna of the bioregion.

### 5.1.4 Mammals

The diversity of small terrestrial mammals potentially caught in the project area would be low due the sparsely vegetated and degraded habitat. The capture of Long-tailed Dunnarts (Terrestrial Ecosystems 2011b, a) in the Granny Smith mining area was unexpected as they are rarely caught, and it had not previously been caught this far south and in an open, flat, mulga woodland with no spinifex, but with low shrubs and little ground cover. However, since those individuals were caught, this species has been recorded on other banded ironstone formations in the eastern Goldfields [i.e. Mt Ida, Bottle Creek, Mt Weld, Murrin Murrin, Mt Mason (DBCA threatened species database search) and Mt Forrest (Harewood 2014)]. It is improbable that the Long-tailed Dunnart is present in the project area due to the limited habitat and isolation of the BIFs in the project area.

There are no other mammals of conservation significance likely to be in the project area.

It was noted during the site visit that there was evidence of rabbits, camels, feral cats, wild dogs and cattle in the project area and surrounds.

## 5.2 BIODIVERSITY VALUE OF THE PROJECT AREA

An ecological assessment of a site should consider its biodiversity value at the genetic, species and ecosystem levels, and its ecological functional value at the ecosystem level. There are inadequate data to assess the ecological value at the genetic level.

From a fauna perspective, the project area has been grazed resulting in degradation to the mulga and shrublands. Feral cats have been abundant in the past around the Granny Smith mine (Onus et al. 2011) and are known to significantly impact on the native fauna (Woinarski et al. 2017a, Woinarski et al. 2017b, Woinarski et al. 2018, Murphy et al. 2019, Woolley et al. 2019, Stobo-Wilson et al. 2021). Tracks of wild dogs were recorded in the project area. Together these two predators are likely to have had a significant impact on the native fauna over many decades.

The habitat types identified in the project area are also abundant in adjacent areas, indicating that any localised impacts such as vegetation clearing are unlikely to be significant in a regional context.

### 5.2.1 Ecological functional value at the ecosystem level

Vertebrate species potentially in the project area are wide-ranging and have been recorded in various other fauna surveys in the bioregion (Appendix B). There is likely to be a relatively low abundance of reptiles and mammals caught in the project area because of the sparseness of the vegetation, a general lack of leaf litter on the ground in many areas and degradation by cattle and feral fauna. The most significant impact on vertebrate fauna in the project area and surrounds will have been feral cats, foxes and wild dogs.

### 5.2.2 Maintenance of threatened ecological communities

No threatened ecological communities were identified in or near the project area.

### 5.2.3 Condition of fauna habitat

There is evidence of past mining activity (i.e. pits, waste dumps, tracks and haul roads) in all project areas. There is also evidence of disturbance by cattle and the presence of camels, wild dogs and cats. The uncleared fauna habitat present in the project area is like many square kilometres of adjacent habitat; the clearing of vegetation is therefore unlikely to have a significant impact on the vertebrate fauna when considered in a bioregional context.

There are historical exploration and mining areas and multiple areas that have been partially rehabilitated in the project area. The impact of this disturbance over many years will have reduced the vertebrate terrestrial fauna assemblages in the project area.

### 5.2.4 Ecological linkages

The project area does not provide an important ecological linkage or terrestrial fauna movement corridor.

### 5.2.5 Size and scale of the proposed disturbance

The total area assessed represents a very small fraction (i.e. Cork Tree Hill - 724ha, Beta - 249ha, Fish - 389ha and Byron - 217ha) of similar habitat in the adjacent areas.

### 5.2.6 Abundance and distribution of similar habitat in the adjacent areas

Fauna habitats present in the project area are abundant in adjacent areas. It is therefore likely that the fauna assemblage in the project area is like the many square kilometres of similar habitat in adjacent areas and the bioregion.

# 6. POTENTIAL IMPACTS

## 6.1 POTENTIAL IMPACTS ON FAUNA

The project area is small relative to the abundance of similar habitat in the bioregion. Clearing native vegetation is likely to result in the loss of very few small vertebrate fauna that are unable to move away during the clearing process. The few larger animals, such as kangaroos and large goannas and snakes, and most of the birds will move into adjacent areas once clearing commences. There will be a small loss of native fauna to vehicle strikes on access tracks, but this will be low. Shifting animals into adjacent areas may increase the pressure on resources in those areas and there may be some disruption to the ecosystems for a short period until a balance is restored.

Impacts associated with clearing vegetation in the project area in a landscape and bioregional context on the vertebrate fauna are likely to be low as it is a very small amount of clearing and there are vast tracts of similar habitat in adjacent areas.

Clearing of vegetation will potentially affect vertebrate fauna in the project area in numerous ways, including death/injury of fauna during vegetation clearing and impacts with vehicles and the loss of habitat.

Although there are anticipated short term impacts on the generic vertebrate fauna assemblage, they are not considered to result in significant impacts when considered in a bioregional context in the longer term.

## 6.2 DIRECT IMPACTS

### 6.2.1 Animal deaths during the clearing process and displacement of fauna

Clearing vegetation and activities associated with the proposed mining development will result in the loss of small fauna and those that retreat to burrows, such as reptiles and mammals. Nocturnal species are unlikely to be active when most of the land clearing and construction work is taking place which will inevitably result in these individuals being killed or injured in their burrows or as they attempt to escape. Larger terrestrial animals and avian species will most often move to adjacent areas. These species will be required to establish new activity areas and home ranges, and this could result in the temporary displacement of resident species, however, this loss of fauna is unlikely to have a significant impact when considered in a bioregional context.

### 6.2.2 Reduction or loss of activity areas and closure of burrows

Clearing vegetation and associated development activities are likely to destroy reptile and mammal burrows or foraging habitat that are currently in use or could be used again. Clearing vegetation that forms part of the activity area of individuals has the potential to force these animals into adjacent areas. These areas may offer fewer resources placing individuals under survival pressure. It could also cause individuals to move into the territories of other individuals increasing competition for resources. Forced relocations could increase the possibility of predation.

## 6.3 INDIRECT IMPACTS

### 6.3.1 Edge effects

In addition to the obvious impact of vegetation clearing there can be an equally significant or greater impact in the adjacent areas because of 'edge effects'. Edge effects can lead to the disruption of ecological processes

such as predation and dispersal, animal movements and can change assemblage structure. The consequence is that the impact area will always be much larger than the cleared area.

However, the spareness of the vegetation is likely to reduce edge effects in the project area.

### 6.3.2 Habitat fragmentation

In addition to vegetation clearing, infrastructure including tracks, has the potential to fragment habitat. Cleared linear tracks of land are 'unnatural' in much of the habitat. These linear structures that partition existing activity areas, isolate sections of established communities and may alter long and medium-term patterns of movement around established home ranges particularly for small mammals and reptiles. A reduction in the population because of this infrastructure would be difficult to detect given our current knowledge of the spatial ecology for most of the small mammals known to be in the area.

As most of the tracks within the project area will be relatively narrow and in sparsely vegetated areas, the potential impact associated with habitat fragmentation is likely to be low.

### 6.3.3 Introduced fauna and weeds

An increase in habitat fragmentation and human activity is often associated with an increase in the abundance of introduced species such as the house mouse (*Mus musculus*), foxes (*Vulpes vulpes*), cat (*Felis catus*) and wild dogs (*Canis lupus*). This increase may be due to a decline in habitat health, increased road kills, poor disposal of waste and easier access to areas via tracks.

House mice, foxes, cats and wild dogs are known to be established in the area. In many situations they have become a 'naturalised' species in the Australian bush. Increases in fox, dog or cat numbers can have a detrimental impact on native fauna because they predate on and compete with native species, severely disrupting the natural balance. The cat is a particularly damaging predator on native fauna and any increase in their numbers could have a detrimental effect on local native fauna (Kinnear 1993, Bamford 1995); hence it is important to ensure that populations of the feral predators, such as cats under control.

Infrastructure known to support feral species, such as rubbish disposal sites and bins, should be managed to minimise increases in these populations.

### 6.3.4 Road fauna deaths

An increase in road fauna deaths is likely to occur where new roads / tracks are constructed or upgraded affecting kangaroos, nocturnal birds and ground dwelling large carnivorous predators. Species such as goannas and raptors are attracted to carrion on road verges and therefore, there is an increased propensity for these species to be killed by vehicles.

### 6.3.5 Fire

Increased human activity is often associated with an altered fire regime which leads to a degradation of natural ecosystems. Fire has been identified as one of the threatening processes for some conservation significant species as several small mammal and bird species rely on long unburnt vegetation.

Large and widespread fires are unlikely to be a significant threat to native fauna species near the project area due to the sparseness of the vegetation.

### 6.3.6 Anthropogenic activity

Unnatural noises, vibrations, artificial light sources, and vehicle and human movement in an area may be sufficient to force individuals or fauna species to move from adjacent areas or alter their activity periods. This form of disturbance is likely to occur during the vegetation clearing and when mining activity commences. The overall impact is likely to be confined to a relatively small area and is unlikely to be a significant impact.

### 6.3.7 Dust

Dust generated from shifting topsoil and spoil and vehicle traffic can potentially degrade surrounding vegetation, reducing its ability to absorb sunlight and influencing photosynthetic rates. Degradation of these areas may potentially render habitat unsuitable for fauna. Dust suppression and management programs are an essential component of minimising impacts on fauna in areas adjacent to the mine. An effective dust management and monitoring program is required.

### 6.3.8 Uncapped drill holes

An ongoing potential risk to terrestrial fauna is the presence of uncapped drill holes within the project area. Small animals, particularly lizards and mammals, can become trapped in the drill holes and eventually die. Therefore drill holes that are open for periods of months or years can be particularly detrimental to small animal populations (Chapman 1991, Malnic 1997).

# 7. VERTEBRATE FAUNA RISK ASSESSMENT

Fauna surveys to support environmental approval are part of the environmental risk assessment undertaken to consider what potential impacts a development might have on the biodiversity on a particular area and region. Potential impacts on fauna from the proposed development are identified and briefly described above. Tables 12, 13 and 14 provide a summary of the risk assessment associated with this project.

Any risk assessment is a product of the likelihood of an impact occurring and the consequences of that impact. Likelihood and consequences are categorised and described below. The assessed risk level (likelihood x consequences) is then calculated as the overall risk for the development. This is followed by an assessment of the acceptability of the risk associated with each of the impacts. Disturbances and vegetation clearing have an impact on the fauna at multiple scales – site, local, landscape and regional. Each of these is considered in the risk assessment. This assessment should be considered in the context of the summary in Table 14.

**Table 12. Fauna impact risk assessment descriptors**

| Likelihood | | |
|---|---|---|
| **Level** | Description | Criteria |
| **A** | Rare | The environmental event may occur, or one or more conservation significant species may be present in exceptional circumstances. |
| **B** | Unlikely | The environmental event could occur, or one or more conservation significant species could be present at some time. |
| **C** | Moderate | The environmental event should occur, or one or more conservation significant species should be present at some time. |
| **D** | Likely | The environmental event will probably occur, or one or more conservation significant species will be present in most circumstances. |
| **E** | Almost certain | The environmental event is expected to occur, or one or more conservation significant species is expected be present in most circumstances. |
| Consequences | | |
| **Level** | Description | Criteria |
| **1** | Insignificant | Insignificant impact on fauna of conservation significance or regional biodiversity, and the loss of individuals will be insignificant in the context of the availability of similar fauna or fauna assemblages in the area. |
| **2** | Minor | Impact on fauna localised and no significant impact on species of conservation significance in the project area. Loss of species at the local scale. |
| **3** | Moderate | An appreciable loss of fauna in a regional context or a limited impact on species of conservation significance in the project area. |
| **4** | Major | Significant impact on conservation significant fauna or their habitat in the project area and/or regional biodiversity and/or a significant loss in the biodiversity at the landscape scale. |
| **5** | Catastrophic | Loss of species at the regional scale and/or a significant loss of species categorised as 'vulnerable' or 'endangered' under the EPBC Act (1999) at a regional scale. |
| Acceptability of Risk | | |
| **Level of risk** | Management action required | |
| **Low** | No action required. | |
| **Moderate** | Avoid if possible, routine management with internal audit and review of monitoring results annually. | |
| High | Externally approved management plan to reduce risks, monitor major risks annually with external audit and review of management plan outcomes annually. | |
| Extreme | Unacceptable, project should be redesigned or not proceed. | |

## Table 13. Levels of acceptable risk

| | | Likelihood | | | | |
|---|---|---|---|---|---|---|
| | | Rare or very low (A) | Unlikely or low (B) | Moderate (C) | Likely (D) | Almost certain (E) |
| Consequence | Insignificant (1) | Low | Low | Low | Low | Low |
| | Minor (2) | Low | Low | Low | Moderate | Moderate |
| | Moderate (3) | Low | Moderate | Moderate | High | High |
| | Major (4) | Moderate | Moderate | High | High | Extreme |
| | Catastrophic (5) | Moderate | High | High | Extreme | Extreme |

## Table 14. A risk assessment of the impact of ground disturbance activity on fauna

| | | | Before management | | | | With management | | |
|---|---|---|---|---|---|---|---|---|---|
| | Potential impacts | | Inherent risk | | | Risk controls | Residual risk | | |
| **Factor** | | | Likelihood | Consequence | Significance | | Likelihood | Consequence | Significance |
| **Fauna survey data** | Inadequate survey data to adequately assess the risks | Unknown loss of fauna, fauna of conservation significance, and fauna assemblages, and an incomplete fauna assessment. | B | 2 | Low | | | | |
| | Inadequacy of comparative data | Limits on the availability of comparative data reduced the capacity to assess the uniqueness of the fauna assemblages in the project area. | B | 2 | Low | | | | |
| **Clearing vegetation** | Loss of fauna habitat – local scale | Loss of terrestrial fauna in the project area. | E | 1 | Low | | | | |
| | Loss of fauna habitat – landscape scale | Loss of some fauna during vegetation clearing. | B | 1 | Low | | | | |
| | Loss of fauna habitat – regional scale | Small loss of some fauna from the region. | B | 1 | Low | | | | |
| | Loss of a threatened ecological fauna community | Loss of an undetected threatened ecological fauna community. | A | 3 | Low | | | | |
| | Habitat fragmentation | Fauna movement restricted resulting in the death of fauna and a loss of biodiversity. | A | 2 | Low | | | | |
| **Death or loss of conservation significant fauna** | Loss of a unique terrestrial fauna ecosystem | Loss of an ecosystem containing fauna with high species richness, high abundance and numerous top of the food chain predators. | A | 2 | Low | | | | |
| | Malleefowl | Death or the reduced viability of Malleefowl. | B | 3 | Mod | | | | |
| | Southern Whiteface | Death or the reduced viability of the Southern Whiteface. | A | 3 | Low | | | | |

| | | | Before management | | | | With management | | |
|---|---|---|---|---|---|---|---|---|---|
| | Peregrine Falcon | Death or the reduced viability of the Peregrine Falcon. | A | 2 | Low | | | | |
| | Fork-tailed Swift | Death or the reduced viability of the Fork-tailed Swift. | A | 2 | Low | | | | |
| | Long-tailed Dunnart | Death or the reduced viability of the Long-tailed Dunnart. | C | 2 | Low | | | | |
| **Human impacts** | Increase or spread of weeds | Changed vegetation and a resulting loss of fauna habitat. | E | 2 | Mod | Implementation of a weed management plan. | D | 2 | Low |
| | Road kills | Animals being killed by vehicles as they cross roads | E | 1 | Low | Limiting speeds | E | 1 | Low |
| | Increase in feral fauna; specifically the fox, wild dog and cat | Increased predation on the native fauna | C | 3 | Mod | Implementation of a feral animal control program(s) | C | 2 | Low |
| | Dust | Increased potential for dust | E | 2 | Mod | Implementation of a dust management plan. | C | 2 | Low |

## 7.1 NATIVE VEGETATION CLEARING PRINCIPLES AS THEY PERTAIN TO VERTEBRATE FAUNA

The *Environmental Protection Act (1986)* provides criteria to judge the potential impact of a development on clearing native vegetation on flora and fauna. These criteria have been listed below with a response to indicate how clearing of the vegetation in the project area might be judged against these principles as they relate to fauna and fauna assemblages (Table 15). Where possible, native vegetation should not be cleared if any of the following principles are compromised.

**Table 15. Assessment of impact using the native vegetation clearing principles**

| Principle | Response |
|---|---|
| It comprises a high level of biological diversity. | Clearing vegetation will not compromise a high level of biodiversity. The project area is likely to support a small population of Malleefowl and Southern Whiteface. There was no evidence of Malleefowl recently breeding in the project area, and its abundance is low. Southern Whiteface is a small bush bird listed as vulnerable under the *EPBC Act*. This bird is widespread and relatively abundant in this part of the Goldfields and will readily move it disturbed. It is improbable that Long-tailed Dunnarts are present on the small and isolated BIFs in the project area. |
| It comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia. | Clearing the vegetation will not result in the loss of a significant area of habitat for indigenous fauna. |
| It includes, or is necessary for the continued existence or, rare flora. | N/A |
| It comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community. | The area does not contain a threatened ecological fauna community. |
| It is significant as a remnant of native vegetation in an area that has been extensively cleared. | The area is not a remnant. |
| It is growing in, or in association with, an environment associated with a watercourses or wetland. | The area does not contain a wetland. |
| The clearing of the vegetation is likely to cause appreciable land degradation. | N/A |
| The clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area. | Clearing of vegetation is unlikely to impact on the environmental values of the bioregion. |
| The clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water. | N/A |
| The clearing of the vegetation is likely to cause, or exacerbate the incidence of flooding. | N/A |

## 7.2 CRITERIA FOR ASSESSING POTENTIAL IMPACTS ON THE VULNERABLE SPECIES

The significance of potential impacts of vegetation clearing in the project area are assessed in accordance with eth criteria in the Commonwealth Government's significant impact assessment criteria (Table 14; Department of the Environment 2013) in Table 16.

**Table 16. Criteria for assessing the potential impacts on Malleefowl and Southern Whiteface**

(taken from: Department of the Environment 2013)

| Vulnerable Species | Southern Whiteface | Malleefowl |
|---|---|---|
| An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will: | | |
| • lead to a long-term decrease in the size of an important population of a species | No | No |
| • reduce the area of occupancy of an important population | No | No |
| • fragment an existing important population into two or more populations | No | No |
| • adversely affect habitat critical to the survival of a species | No | No |
| • disrupt the breeding cycle of an important population | No | No |

A single inactive Malleefowl mound was recorded, along with tracks and a scat. Based on the available evidence there is a very low abundance of Malleefowl in the project area, that are not breeding. It is probable that, as these birds are not breeding, they are wandering over a large area looking for resources. The Southern Whiteface is a small bush bird that is widespread in the bioregion and if it is not breeding, then it will readily move if disturbed, so is unlikely to be significantly impacted by vegetation clearing. Based on the assessment using criteria in the Commonwealth Government's significant impact assessment criteria (Table 14; Department of the Environment 2013) the proposed action will not have a significant impact on this species

## 7.3 REFERRAL UNDER THE EPBC ACT

The proposed project is unlikely to significantly impact on a conservation significant vertebrate fauna species, so a referral under the *EPBC Act* is not recommended.

# 8. SUMMARY

Brightstar Resources is planning exploration and mining activities in its mining tenements at Cork Tree Hill (724ha), Beta (249ha), Fish (389ha) and Byron (217ha) areas (Laverton Operations 'project area'). Cork Tree Hill is ~33km north of Laverton, Beta ~32km south-east of Laverton, and the Fish and Byron areas are ~84km south-east of Laverton.

Based on a field assessment, the following five broad fauna habitats are present in the project area:

- Mulga woodland;
- Mulga drainage;
- Rocky rise;
- Open Eucalypt woodland with low shrubs;
- Sparse Sheoak woodland; and
- Disturbed areas.

The density of trees and shrubs in the relatively undisturbed areas varied across the project area but the vegetation was mostly sparse. The fauna habitats varied from highly degraded to good with the more degraded areas being due to previous mining activity (i.e. mining pits, waste dumps and supporting infrastructure).

A single, inactive and unlikely to be used again Malleefowl (Vulnerable under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* and *Biodiversity Conservation Act 2016*) mound was recorded, along with Malleefowl tracks and a scat. Based on the available evidence there is a very low abundance of Malleefowl in the project area. The Southern Whiteface (Vulnerable under the *EPBC Act*) have been recorded in other fauna surveys in adjacent areas, so it is likely to be present in low numbers in the project area. This small bush bird is relatively abundant in this part of the Goldfields and will readily move if disturbed, so vegetation clearing is unlikely to significantly impact on this species. Banded ironstone formations (BIFs) are present in the project area, however, they are very small and isolated, and it is therefore improbable that any of them support a population of Long-tailed Dunnarts (Priority 4 species with the Department of Biodiversity, Conservation and Attractions).

The project area does not provide an important ecological linkage or fauna movement corridor. Clearing native vegetation is likely to result in the loss of small vertebrate fauna on-site that are unable to move away during the clearing process, however, the few larger animals, such as kangaroos and large goannas and snakes, and most of the birds will move into adjacent areas once clearing or development commences.

The proposed vegetation clearing and operations may result in indirect impacts on the vertebrate fauna such as a reduction or loss of activity areas and closure of burrows, habitat fragmentation, increased presence of feral predators, road deaths and unnatural noises, vibrations, artificial light sources and vehicle and human movement in an area all of which may result in the death of animals or force some of them into adjacent areas. Impacts associated with clearing vegetation in the project area in a landscape or bioregional context on the vertebrate fauna are likely to be low as there are vast tracts of similar habitat in adjacent areas.

The proposed project is unlikely to significantly impact on a conservation significant species, so a referral under the *EPBC Act* is not recommended.

# 9. MANAGEMENT STRATEGIES

The purpose of this section is to identify generic management and mitigation strategies to address the potential impacts of development in the project area.

## 9.1 INDUCTION AND AWARENESS

All contractors and staff involved in vegetation clearing, development and ongoing operations should be made aware of the possible presence and issues associated with terrestrial fauna in the area through the induction process.

> **Recommendation 1:** An induction program that includes a component on managing vertebrate fauna is mandatory for staff working in the project area.
>
> **Recommendation 2:** Information on protecting fauna and reporting deaths and sightings of conservation significant species should be incorporated into the induction program.

## 9.2 DUST

Dust generated from the vegetation clearing, development and ongoing use of roads and tracks could potentially degrade surrounding vegetation, reducing its ability to absorb sunlight, and influencing photosynthetic rates. Degradation of these areas will potentially render habitat unsuitable for fauna. Dust suppression and management programs are an essential component of minimising disturbance impacts on fauna.

> **Recommendation 3:** The impact of dust on adjacent vegetation and fauna habitat is managed against appropriate KPIs and in accordance with the clients' dust management protocols.

## 9.3 MINIMISING HABITAT FRAGMENTATION

Loss of vegetation and habitat may contribute to the decline in the number of fauna on and in the vicinity of survey area. Where possible, access routes should be aligned to existing tracks and other barriers or follow the boundaries of broad-scale vegetation associations in the area to minimise the impact on the terrestrial fauna, which are often dependent upon specific habitat types. Clearing should be minimised, and fragmentation of remnant vegetation should be avoided wherever possible. Once areas are no longer required then they should be rehabilitated.

> **Recommendation 4:** All areas disturbed during exploration are rehabilitated as soon as practical after they are no longer required.
>
> **Recommendation 5:** Where possible, access routes are aligned to existing roads, tracks and other barriers or follow the boundaries of broad-scale vegetation associations in the area.

## 9.4 MINIMISING SECONDARY IMPACTS TO FAUNA AND FAUNA HABITAT

Pets and feral animals have the potential to impact on fauna. Pets should not be permitted on site and feral and pest fauna numbers monitored and controlled. To be effective, management of feral and pest species needs to be undertaken in collaboration with the landowner, pastoralist, and neighbouring tenement holders. All rubbish likely to attract animals should be suitably contained and disposed of so as not to encourage the feeding of fauna around the site.

Based on feral cat tracks and scats recorded in the study area it is highly probable that the study area currently supports a small population of feral cats. Reducing the impacts of feral cats will reduce the stress on fauna and fauna assemblages in the area. Wild dogs are also common in the area and will impacting on the local and regional vertebrate fauna assemblage.

Increased activity will result in increased traffic and a consequential increase in the fauna deaths on tracks and roads in the area. Limiting vehicle speed on access tracks can reduce collisions with fauna, particularly larger animals such as kangaroos and emus. Dead animals on the road also have the propensity to attract raptors, goannas and even cattle, which are then likely to be killed.

**Recommendation 6:** Pets are not permitted on the survey.

**Recommendation 7:** All waste and rubbish to be contained in bins and regularly removed from the survey or placed in land fill and suitably covered to exclude access to predator species.

**Recommendation 8:** Feeding of native fauna is prohibited.

**Recommendation 9**: A feral pest control program is implemented in the survey area and surrounds.

**Recommendation 10:** Vertebrate fauna management protocol be prepared and implemented for the life of the project.

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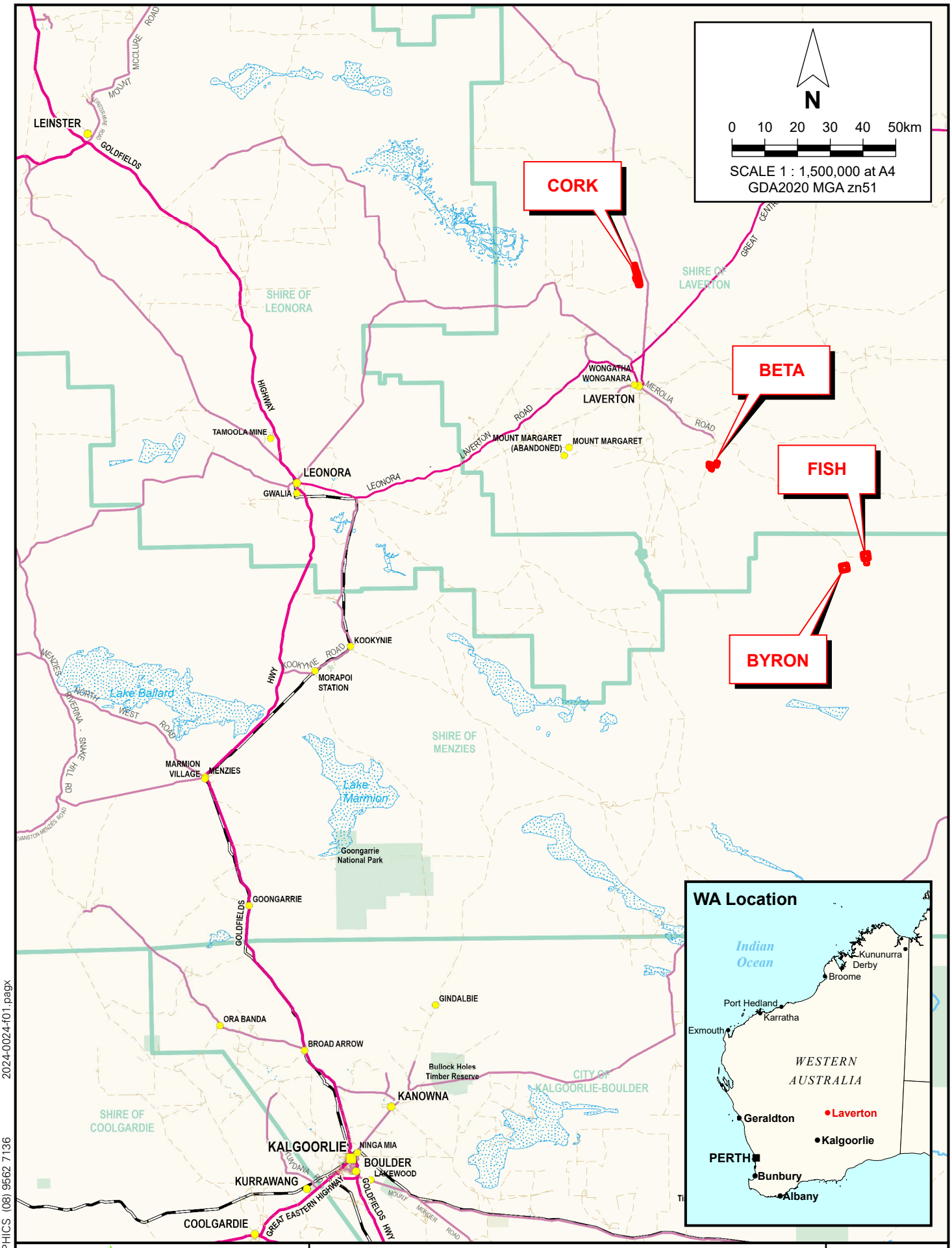
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# Figures

**Basic Vertebrate Fauna Survey and Assessment**
**Laverton Operations**






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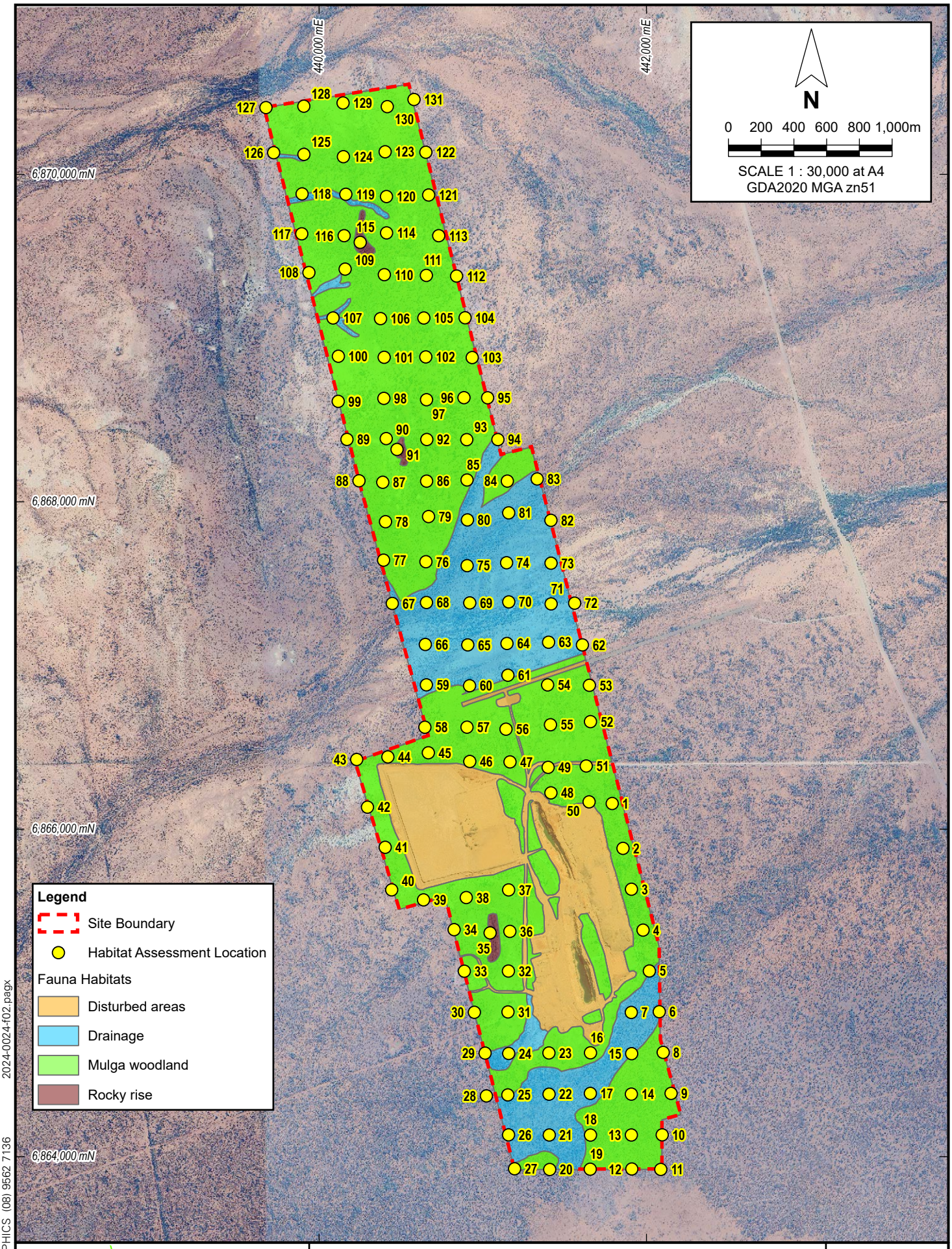
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**REGIONAL LOCATION**

**Figure 1**

Job: 2024-0024




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TERRESTRIAL ECOSYSTEMS

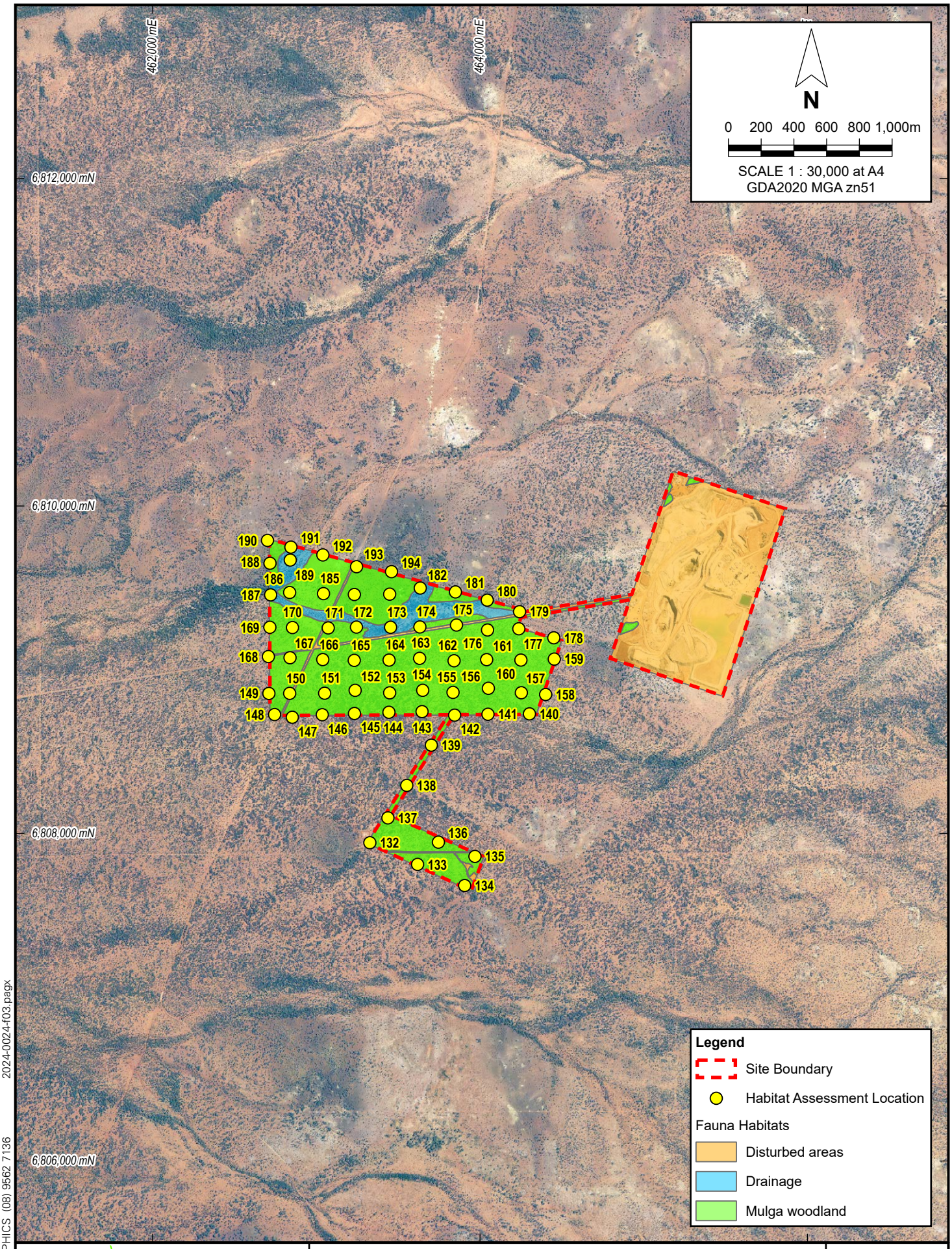
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# FAUNA HABITAT TYPES & HABITAT ASSESSMENT LOCATIONS - CORK PROJECT AREA

**Figure 2**

Job: 2024-0024




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TERRESTRIAL ECOSYSTEMS

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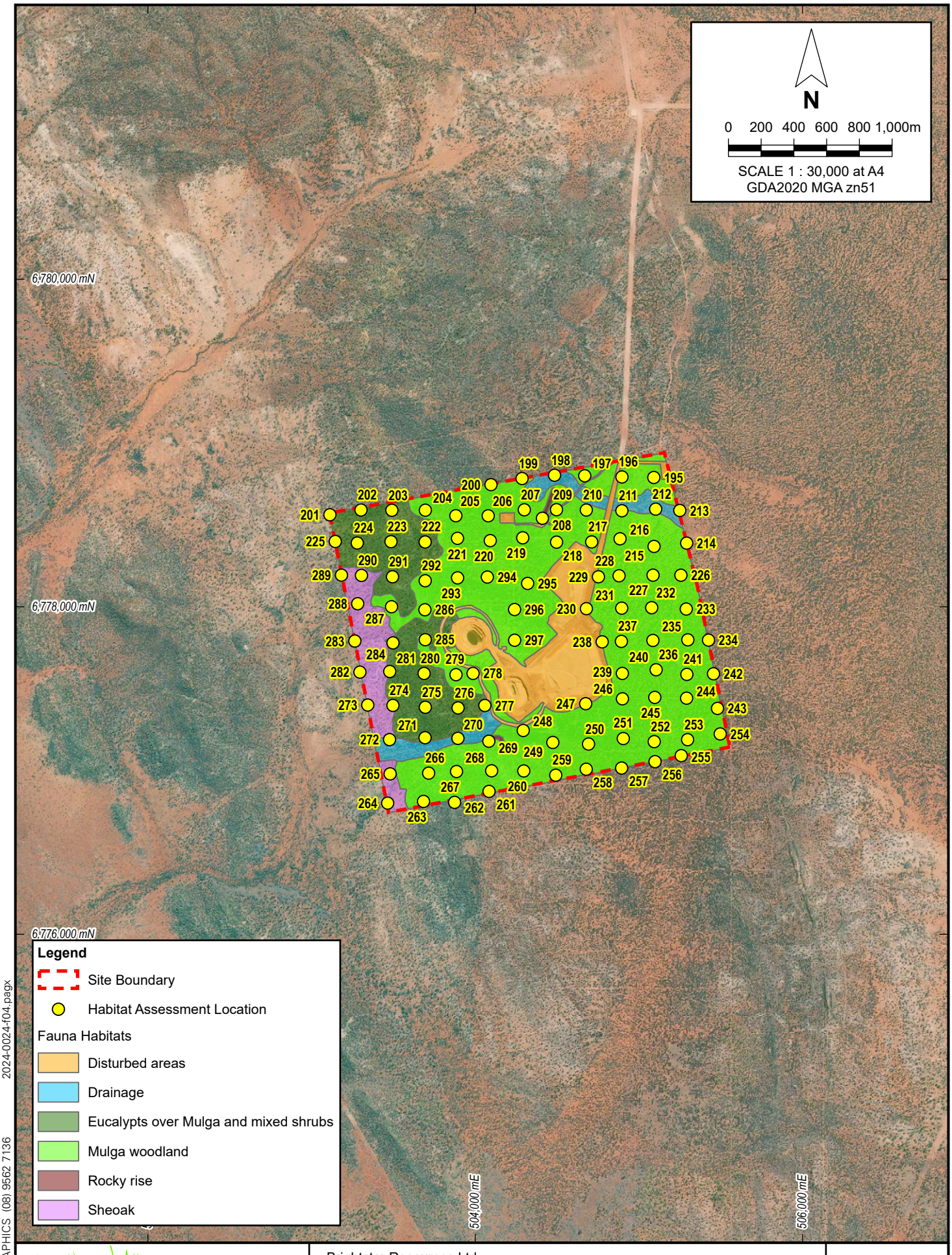
# FAUNA HABITAT TYPES & HABITAT ASSESSMENT LOCATIONS - BETA PROJECT AREA

**Figure 3**

Drawn: S. Thompson

Date: 22 May 2024

Job: 2024-0024




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TERRESTRIAL ECOSYSTEMS

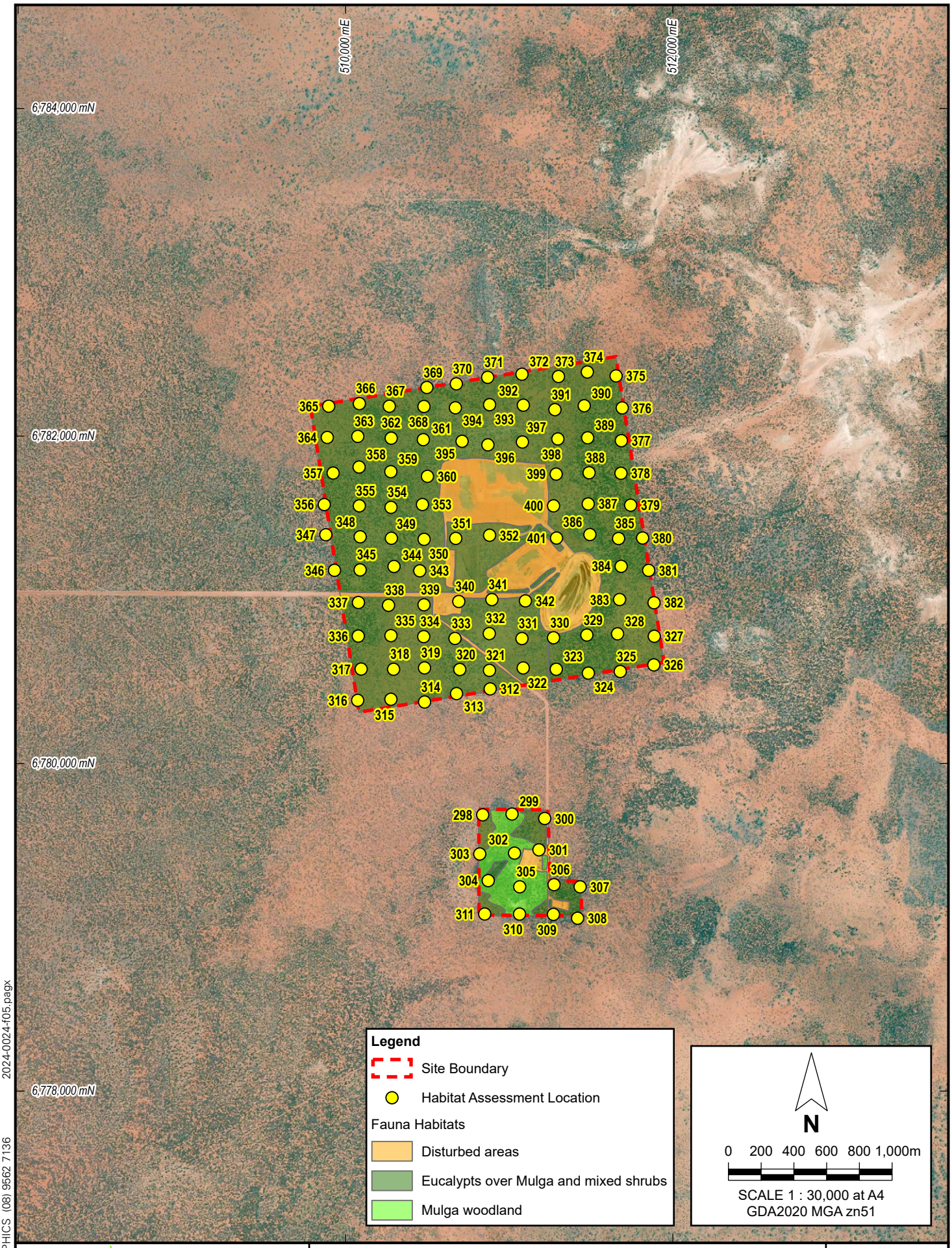
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# FAUNA HABITAT TYPES & HABITAT ASSESSMENT LOCATIONS - BYRON PROJECT AREA

**Figure 4**

Job: 2024-0024




TERRESTRIAL ECOSYSTEMS

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# FAUNA HABITAT TYPES & HABITAT ASSESSMENT LOCATIONS - FISH PROJECT AREA

**Figure 5**

Drawn: S. Thompson

Date: 22 May 2024

Job: 2024-0024

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# Appendix A. Results of the EPBC Act Protected Matters Search

**Basic Vertebrate Fauna Survey and Assessment**
**Laverton Operations**



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 23-May-2024

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

# Summary

## Matters of National Environment Significance

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

| | |
|---|---|
| World Heritage Properties: | None |
| National Heritage Places: | None |
| Wetlands of International Importance (Ramsar | None |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | None |
| Listed Threatened Ecological Communities: | None |
| Listed Threatened Species: | 13 |
| Listed Migratory Species: | 9 |

## Other Matters Protected by the EPBC Act

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

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

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

| | |
|---|---|
| Commonwealth Lands: | 7 |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 12 |
| Whales and Other Cetaceans: | None |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | None |
| Habitat Critical to the Survival of Marine Turtles: | None |

## Extra Information

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

| | |
|---|---|
| State and Territory Reserves: | 3 |
| Regional Forest Agreements: | None |
| Nationally Important Wetlands: | 2 |
| EPBC Act Referrals: | 14 |
| Key Ecological Features (Marine): | None |
| Biologically Important Areas: | None |
| Bioregional Assessments: | None |
| Geological and Bioregional Assessments: | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species | | [ Resource Information ] |
|---|---|---|
| Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.<br>Number is the current name ID. | | |
| Scientific Name | Threatened Category | Presence Text |
| BIRD | | |
| Aphelocephala leucopsis<br>Southern Whiteface [529] | Vulnerable | Species or species habitat known to occur within area |
| Calidris acuminata<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area |
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area |
| Falco hypoleucos<br>Grey Falcon [929] | Vulnerable | Species or species habitat likely to occur within area |
| Leipoa ocellata<br>Malleefowl [934] | Vulnerable | Species or species habitat known to occur within area |
| Pezoporus occidentalis<br>Night Parrot [59350] | Endangered | Species or species habitat likely to occur within area |
| Polytelis alexandrae<br>Princess Parrot, Alexandra's Parrot [758] | Vulnerable | Species or species habitat likely to occur within area |
| Tringa nebularia<br>Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area |
| MAMMAL | | |

| Scientific Name | Threatened Category | Presence Text |
|---|---|---|
| Dasyurus geoffroii | | |
| Chuditch, Western Quoll [330] | Vulnerable | Species or species habitat likely to occur within area |
| Sminthopsis psammophila | | |
| Sandhill Dunnart [291] | Endangered | Species or species habitat known to occur within area |
| PLANT | | |
| Eucalyptus articulata | | |
| Ponton Creek Mallee [56772] | Vulnerable | Species or species habitat likely to occur within area |
| Hibbertia crispula | | |
| Ooldea Guinea-flower [15222] | Vulnerable | Species or species habitat known to occur within area |
| REPTILE | | |
| Liopholis kintorei | | |
| Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160] | Vulnerable | Species or species habitat likely to occur within area |

| Listed Migratory Species | | [ Resource Information ] |
|---|---|---|
| Scientific Name | Threatened Category | Presence Text |
| 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 |
| 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 likely to occur within area |
| Calidris acuminata | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area |

| Scientific Name | Threatened Category | Presence Text |
|---|---|---|
| Calidris ferruginea | | |
| Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area |
| Calidris melanotos | | |
| Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
| Charadrius veredus | | |
| Oriental Plover, Oriental Dotterel [882] | | Species or species habitat may occur within area |
| Tringa nebularia | | |
| Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area |

## Other Matters Protected by the EPBC Act

### Commonwealth Lands [ Resource Information ]

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

| Commonwealth Land Name | State |
|---|---|
| Defence | |
| Defence - JINDALEE STATION [50256] | WA |
| Defence - JINDALEE STATION [50257] | WA |
| Unknown | |
| Commonwealth Land - [51828] | WA |
| Commonwealth Land - [51829] | WA |
| Commonwealth Land - [51827] | WA |
| Commonwealth Land - [51796] | WA |
| Commonwealth Land - [51984] | WA |

### Listed Marine Species [ Resource Information ]

| Scientific Name | Threatened Category | Presence Text |
|---|---|---|
| Bird | | |
| Actitis hypoleucos | | |
| Common Sandpiper [59309] | | Species or species habitat likely to occur within area |

| Scientific Name | Threatened Category | Presence Text |
| --- | --- | --- |
| Apus pacificus<br>Fork-tailed Swift [678] | | Species or species habitat likely to occur within area overfly marine area |
| Calidris acuminata<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area |
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area overfly marine area |
| Calidris melanotos<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area overfly marine area |
| Chalcites osculans as Chrysococcyx osculans<br>Black-eared Cuckoo [83425] | | Species or species habitat known to occur within area overfly marine area |
| Charadrius veredus<br>Oriental Plover, Oriental Dotterel [882] | | Species or species habitat may occur within area overfly marine area |
| Merops ornatus<br>Rainbow Bee-eater [670] | | Species or species habitat may occur within area overfly marine area |
| Motacilla cinerea<br>Grey Wagtail [642] | | Species or species habitat may occur within area overfly marine area |
| Motacilla flava<br>Yellow Wagtail [644] | | Species or species habitat may occur within area overfly marine area |

| Scientific Name | Threatened Category | Presence Text |
|---|---|---|
| Thinornis cucullatus as Thinornis rubricollis | | |
| Hooded Plover, Hooded Dotterel [87735] | | Species or species habitat may occur within area overfly marine area |
| Tringa nebularia | | |
| Common Greenshank, Greenshank [832] | Endangered | Species or species habitat likely to occur within area overfly marine area |

## Extra Information

| State and Territory Reserves | | [ Resource Information ] |
|---|---|---|
| Protected Area Name | Reserve Type | State |
| De La Poer Range | Nature Reserve | WA |
| Goongarrie | National Park | WA |
| Yeo Lake | Nature Reserve | WA |

| Nationally Important Wetlands | [ Resource Information ] |
|---|---|
| Wetland Name | State |
| Lake Marmion | WA |
| Yeo Lake/Lake Throssell | WA |

| EPBC Act Referrals | | | [ Resource Information ] |
|---|---|---|---|
| Title of referral | Reference | Referral Outcome | Assessment Status |
| Mt Weld Rare Earths Project ? Life of Mine Proposal | 2023/09681 | | Completed |
| Northern Star Resources - Carosue Dam TSF Cell 4 | 2021/9026 | | Post-Approval |
| Redcliffe Gold Project | 2023/09452 | | Completed |
| Controlled action | | | |
| Develop the Mulga Rock Uranium Project, WA | 2013/7083 | Controlled Action | Post-Approval |
| Tropicana Gold Project-Develop open cut gold mine, and associated infrastructure | 2008/4270 | Controlled Action | Post-Approval |
| Tropicana Joint Venture Gold Exploration Activites in the Group 2 and Group 3 T | 2008/4463 | Controlled Action | Post-Approval |

| Title of referral | Reference | Referral Outcome | Assessment Status |
|---|---|---|---|
| Not controlled action | | | |
| Construction of a bypass road, haulage contractor workshop & laydown yard | 2012/6639 | Not Controlled Action | Completed |
| Eastern Goldfields Gas Pipeline Construction, WA | 2014/7284 | Not Controlled Action | Completed |
| Exploration drilling in sand dunes for Tropicana Gold Project | 2007/3922 | Not Controlled Action | Completed |
| Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia | 2015/7522 | Not Controlled Action | Completed |
| Murrin Murrin East Nickel and Cobalt Mine Expansion | 2008/4140 | Not Controlled Action | Completed |
| Re-establish and Recommencement of Mount Windarra Nickel Mine | 2008/4016 | Not Controlled Action | Completed |
| Saracen Gold-Carosue Dam Aerodrome, WA | 2017/7925 | Not Controlled Action | Completed |
| Tropicana Gold Mine underground mining and powerline, 330 km east-north east of Kalgoorlie, WA | 2018/8357 | Not Controlled Action | Completed |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and 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

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

Where little information is available for a 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 detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# 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 B. Vertebrate Fauna Recorded in Biological Surveys in the Region

**Basic Vertebrate Fauna Survey and Assessment**
**Laverton Operations**



# B.1 VERTEBRATE FAUNA ASSESSMENTS

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | | F | G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| Amphibians | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Limnodynastidae | *Neobatrachus kunapalari* | Wheatbelt Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Neobatrachus sudelli* | Sudell's Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Neobatrachus sutor* | Shoemaker Frog | X | | | | | | | | | | | 3 | 1 | 5 | 10 | | | | | | | | | | | | | | | | | | |
| | *Neobatrachus wilsmorei* | Plonking Frog | X | | 3 | 2 | | | | | | | | 1 | | 11 | | 2 | 2 | | | | | | | | | | | | | | | | |
| | *Platyplectrum spenceri* | Spencer's Burrowing Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myobatrachidae | *Pseudophryne occidentalis* | Western Toadlet | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelodryadidae | *Cyclorana maini* | Main's Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Cyclorana occidentalis* | Western Water-holding Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Litoria moorei* | Motorbike Frog | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reptiles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Agamidae | *Ctenophorus cristatus* | Crested Dragon | | | | | 5 | 1 | 1 | | | | | | | | | | 5 | | | | | | | | | | | | | | | | |
| | *Ctenophorus fordi* | Mallee Dragon | X | 22 | 42 | 2 | 15 | 2 | 2 | 6 | 9 | | | 43 | 26 | | | | 2 | 16 | | | | | | | | | | | | | | | | |
| | *Ctenophorus infans* | Ring-tailed Dragon | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenophorus ornatus* | Ornate Crevice Dragon | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenophorus pictus* | Painted Dragon | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenophorus reticulatus* | Western Netted Dragon | X | | | | | | | | | 1 | 2 | | | 2 | 1 | | | | 4 | | | X | | | | | | | | | | | |
| | *Ctenophorus salinarum* | Saltpan Dragon | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenophorus scutulatus* | Lozenge-marked Dragon | X | | 3 | 7 | 3 | | 8 | | | 3 | 1 | | | | | | | | | | | | | 1 | 3 | 5 | 3 | 1 | | | | | |
| | *Ctenophorus vadnappa* | Red-barred Dragon | X | | | | | | | | | | | 3 | | 2 | 1 | | 7 | 3 | 2 | | | | | | | | | | | | | | |
| | *Diporiphora amphiboluroides* | Mulga Dragon | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| | *Moloch horridus* | Thorny Devil | X | | 1 | | | | 1 | 1 | 2 | | 1 | 1 | | | 1 | 2 | | | | | | | | | | | | | | | | | |
| | *Pogona minor* | Western Bearded Dragon | X | 1 | 1 | 1 | 1 | | 3 | 1 | 1 | | 3 | 1 | 1 | 2 | | 4 | 2 | 1 | 1 | | | | | | 1 | | 1 | | | | | | |
| Carphodactylidae | *Nephrurus laevissimus* | Smooth Knob-tail | X | 18 | 18 | | 2 | 1 | 1 | 12 | 9 | | | 18 | 18 | | | 1 | | 2 | | | | | | | | | | | | | | | |
| | *Nephrurus vertebralis* | Midline Knob-tail | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Underwoodisaurus milii* | Barking Gecko | X | | | | | | | | | 9 | | | | | | | | | | | | | | | | | | | | | | | |
| Diplodactylidae | *Diplodactylus granariensis* | Wheatbelt Stone Gecko | X | | | 2 | 1 | 5 | 8 | 4 | 8 | 4 | | | | | | 1 | 2 | 1 | 1 | | | | | | | | | | | | | | |
| | *Diplodactylus pulcher* | Beautiful Gecko | X | | | | | | 1 | | | 2 | 1 | | | | | | | | | | | | | | 1 | | | 1 | | | | | |
| | *Lucasium maini* | Main's Ground Gecko | X | | | 1 | 2 | 2 | | | | | | | | | | 3 | 1 | 2 | | | | | | | | | | | | | | | |

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | | D | | E | | | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| | *Rhynchoedura ornata* | Beaked Gecko | X | | 2 | 1 | 2 | 2 | 3 | 1 | | | | 2 | | 1 | | 7 | 1 | 2 | | | | | | | | | | | | | | | | |
| | *Strophurus assimilis* | Goldfields Spiny-tailed Gecko | X | | | | | | | 3 | | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| | *Strophurus elderi* | Jewelled Gecko | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Strophurus intermedius* | Southern Spiny-tailed Gecko | X | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| | *Strophurus wellingtonae* | Western Shield Spiny-tailed Gecko | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elapidae | *Brachyurophis fasciolatus* | Narrow-banded Burrowing Snake | X | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Brachyurophis semifasciata* | Half-girdled Snake | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Demansia psammophis* | Yellow-faced Whipsnake | X | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Furina ornata* | Orange-naped Snake | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Neelaps bimaculatus* | Black-naped Burrowing Snake | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Suta monachus* | Hooded Snake | X | | | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| | *Pseudechis australis* | Mulga Snake | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Pseudonaja mengdeni* | Western Brown Snake | X | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| | *Pseudonaja modesta* | Ringed Brown Snake | X | | 1 | | 3 | | | | | | | 1 | | | | | | 3 | | | | | | | | | | | | | | | | |
| | *Simoselaps bertholdi* | Jan's Banded Snake | X | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gekkonidae | *Gehyra punctata* | Spotted Dtella | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Gehyra purpurascens* | Purplish Dtella | X | | | | 2 | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | |
| | *Gehyra variegata* | Variegated Gehyra | X | 1 | 1 | | 3 | 4 | 6 | | 2 | 3 | 1 | 1 | 1 | | | 2 | | 4 | 2 | | | X | | | | | | 1 | | | | | | |
| | *Heteronotia binoei* | Bynoe's Gecko | X | | | | | | | | | | 2 | | | | | | | | 2 | | | | | | | | | | | 1 | | | | |
| Pygopodidae | *Delma australis* | Marble-faced Delma | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Delma butleri* | Unbanded Delma | X | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Delma nasuta* | Sharp-snouted Delma | X | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | |
| | *Lialis burtonis* | Burton's Legless Lizard | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| | *Pygopus nigriceps* | Western Hooded Scaly-foot | X | | | 1 | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | |
| Pythonidae | *Antaresia stimsoni* | Stimson's Python | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Scincidae | *Cryptoblepharus australis* | Inland Snake-eyed Skink | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Cryptoblepharus buchananii* | Buchanan's Snake-eyed Skink | X | | | 1 | 3 | | | | 1 | | 3 | | | | | | 1 | 3 | 1 | | | | | | | | | | | | | | | |
| | *Ctenotus atlas* | Southern Mallee Ctenotus | X | 4 | 3 | 1 | 4 | 3 | 2 | 2 | 3 | | | 3 | 4 | | | | | 1 | | | | | | | | | | | | | | | | |
| | *Ctenotus brooksi* | Wedgsnout Ctenotus | X | 17 | | | | | | 3 | | | | | 24 | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenotus leae* | Orange-tailed Finesnout Ctenotus | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ctenotus leonhardii* | Leonhardi's Ctenotus | X | | | | | | | | | | | | | 5 | 9 | | | | | | | | | 1 | 8 | 2 | 1 | | | | | | | |
| | *Ctenotus schomburgkii* | Barred Wedgesnout Ctenotus | X | 4 | 9 | 3 | 5 | 5 | 1 | | 1 | | | 9 | 4 | 1 | | | 3 | 5 | | | | | | | 1 | 1 | | | | | | | | |
| | *Ctenotus severus* | Stern Ctenotus | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | Surveys | A | B | | | | | | | | | C | | | | | | | | | D | | E | | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| | *Ctenotus uber* | Spotted Ctenotus | X | | | 1 | | | | | | 1 | 6 | | | | | | 1 | | 1 | | | | | | | | | | | | | |
| | *Ctenotus xenopleura* | Wide-striped Ctenotus | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Cyclodomorphus branchialis* | Common Slender Bluetongue | X | | | | | | | | | | | | | | | 1 | | 2 | | | | | | | | | | | | | | |
| | *Cyclodomorphus melanops* | Spinifex Slender Blue-tongue | | | | 10 | 2 | | 2 | | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| | *Egernia depressa* | Southern Pygmy Spiny-tailed Skink | X | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | 3 | | | | |
| | *Egernia formosa* | Goldfields Crevice Skink | X | | | | | | | | | | 5 | | | | | | | | | | | | | | | | | | | | | |
| | *Lerista desertorum* | Central Desert Robust Slider | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Lerista kingi* | King's Slider | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Lerista lineopunctulata* | Dotted-line Robust Slider | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Lerista macropisthopus* | Unpatterned Robust Slider | X | | | | 1 | | | 2 | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| | *Lerista picturata* | Southern Robust Slider | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Liopholis inornata* | Desert Skink | X | 3 | 2 | 1 | | 2 | | 2 | 4 | | | 1 | 3 | | | 1 | 1 | | 1 | | | | | | | | | | | | | |
| | *Liopholis striata* | Nocturnal Desert Skink | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Menetia greyii* | Common Dwarf Skink | X | 1 | 2 | 1 | 1 | 1 | 1 | | 1 | | 1 | 2 | 1 | 1 | | | 1 | 2 | | | | | | | 1 | | | 3 | | | | |
| | *Morethia butleri* | Woodland Morethia Skink | X | | | | | | | | | | 2 | | | | | | | | 2 | | | | | | | | | | | | | |
| | *Tiliqua occipitalis* | Western Blue-tongued Lizard | X | | 1 | | | | | | 1 | | | 1 | | | | 1 | | | | | | | | | | | | | | | | |
| Typhlopidae | *Anilios australis* | Austral Blind Snake | X | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Anilios bituberculatus* | Prong-snouted Blind Snake | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Anilios hamatus* | Pale-headed Blind Snake | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Varanidae | *Varanus caudolineatus* | Stripe-tailed Monitor | | | | | | | | | | | | | | 1 | | | | | | | | | 3 | 2 | | | | | | | | |
| | *Varanus giganteus* | Perentie | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Varanus gouldii* | Gould's Goanna | X | | | 2 | | 1 | | | | | | | | 1 | 1 | | 2 | | 2 | | | X | | | | | | | | | | |
| | *Varanus panoptes* | Yellow-spotted Monitor | X | | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 | 1 | 2 | | | | |
| | *Varanus tristis* | Black-headed Monitor | | | | | | | | | | 1 | | | | | | | | 3 | | | | | | | | | | | | | | |
| Birds | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Casuariidae | *Dromaius novaehollandiae* | Emu | X | | | | | | | | | | | 8 | 2 | 1 | | | | 3 | 1 | 1 | | X | | | | | | | | | | |
| Anatidae | *Chenonetta jubata* | Australian Wood Duck | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | |
| Megapodiidae | *Leipoa ocellata* | Malleefowl | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Columbidae | *Phaps chalcoptera* | Common Bronzewing | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 1 | | | | | | | | | | | |
| | *Ocyphaps lophotes* | Crested Pigeon | | | | | | | | | | | | | 2 | 6 | | | | | | 1 | | X | X | | | | | | | | | |
| | *Geopelia cuneata* | Diamond Dove | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Cuculidae | *Chrysococcyx basalis* | Horsfield's Bronze-Cuckoo | | | | | | | | | | | | 6 | | 1 | | | | 2 | 2 | 1 | | | | 1 | 2 | 2 | 1 | | | | | |
| Cuculidae | *Chrysococcyx osculans* | Black-eared Cuckoo | | | | | | | | | | | | 3 | 4 | | | | | 6 | | 1 | | | X | 1 | | | | 1 | | | | |

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| Aegothelidae | *Aegotheles cristatus* | Australian Owlet-nightjar | | | | | | | | | | | | | | | | | | 3 | | 1 | | | | | | 1 | | | | | | | |
| Podargidae | *Podargus strigoides* | Tawny Frogmouth | | | | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | |
| Turnicidae | *Turnix velox* | Little Buttonquail | | | | | | | | | | | | 13 | 3 | | | | | | | 1 | | | | | | | | | | | | | |
| Ardeidae | *Egretta novaehollandiae* | White-faced Heron | | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| Accipitridae | *Hieraaetus morphnoides* | Little Eagle | | | | | | | | | | | | | 1 | | | | | 2 | | 1 | | | | | | | | | | | | | |
| | *Aquila audax* | Wedge-tailed Eagle | | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| | *Circus assimilis* | Spotted Harrier | | | | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | |
| | *Accipiter fasciatus* | Brown Goshawk | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| | *Accipiter cirrocephalus* | Collared Sparrowhawk | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| | *Haliastur sphenurus* | Whistling Kite | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Cuculidae | *Heteroscenes pallidus* | Pallid Cuckoo | | | | | | | | | | | | | | | | | 4 | | | 1 | | | X | | 1 | 2 | 2 | 1 | | | | | |
| Strigidae | *Ninox boobook* | Southern Boobook | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Alcedinidae | *Dacelo novaeguineae* | Laughing Kookaburra | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Alcedinidae | *Todiramphus pyrrhopygius* | Red-backed Kingfisher | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Meropidae | *Merops ornatus* | Rainbow Bee-eater | | | | | | | | | | | | 3 | 1 | | | | | 5 | | 1 | | | | | | | | | | | | 7 | |
| Falconidae | *Falco cenchroides* | Nankeen Kestrel | | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| | *Falco longipennis* | Australian Hobby | | | | | | | | | | | | | | | | | | 1 | | 1 | | X | | | | | | | | | | | |
| | *Falco berigora* | Brown Falcon | | | | | | | | | | | | | 2 | | | | | 2 | | 1 | | X | X | | | | | | | | | | |
| Cacatuidae | *Eolophus roseicapilla* | Galah | | | | | | | | | | | | | | | | | | 4 | 62 | 1 | | X | X | | 2 | | | 2 | | | | | |
| | *Nymphicus hollandicus* | Cockatiel | | | | | | | | | | | | | | | | | | 11 | 4 | 1 | | X | | 13 | 3 | | 21 | 3 | | | | | |
| Psittaculidae | *Neopsephotus bourkii* | Bourke's Parrot | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 5 | | | | | | |
| | *Barnardius zonarius* | Australian Ringneck | | | | | | | | | | | | | | 10 | | | 3 | | | 1 | | X | X | 8 | 5 | 8 | 5 | 5 | | | | | 1 |
| | *Psephotus varius* | Mulga Parrot | | | | | | | | | | | | 4 | 4 | 3 | | | 2 | | | 1 | | X | | | | | | | | | | | |
| | *Melopsittacus undulatus* | Budgerigar | | | | | | | | | | | | 1 | 6 | | | | 38 | 27 | | 1 | | | | 10 | | 20 | 15 | | | | | | |
| Ptilonorhynchidae | *Chlamydera guttata* | Western Bowerbird | X | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | |
| | *Ptilonorhynchus maculata* | Spotted Bowerbird | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Climacteridae | *Climacteris affinis* | White-browed Treecreeper | X | | | | | | | | | | | | | | | | 1 | | 1 | 1 | | | X | | | | | | | | | | |
| | *Climacteris rufus* | Rufous Treecreeper | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maluridae | *Malurus pulcherrimus* | Blue-breasted Fairywren | X | | | | | | | | | | | 15 | 9 | | | | | | | | | | | | | | | | | | | | |
| | *Malurus splendens* | Splendid Fairywren | X | | | | | | | | | | | 24 | | | | | | | | 1 | | X | X | 15 | 10 | 20 | 14 | 21 | | | | | 1 |
| | *Malurus leucopterus* | White-winged Fairywren | X | | | | | | | | | | | | | 17 | | | | | | 1 | | X | | | | | | | | | | | |
| Meliphagidae | *Certhionyx variegatus* | Pied Honeyeater | X | | | | | | | | | | | 2 | | | | | | | | 1 | | | | | | | | | | | | | |
| | *Purnella albifrons* | White-fronted Honeyeater | X | | | | | | | | | | | 69 | 125 | 16 | | | 7 | 144 | 6 | 1 | 4 | | | | | | | | | | | | | |

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| | *Manorina flavigula* | Yellow-throated Miner | X | | | | | | | | | | | | | 109 | | | 3 | 74 | | 1 | | X | X | | | 1 | 7 | | | | | | 1 |
| | *Acanthagenys rufogularis* | Spiny-cheeked Honeyeater | X | | | | | | | | | | | 18 | 23 | 7 | | | 6 | 52 | 4 | 1 | | X | X | 1 | 1 | 5 | 5 | 6 | | | | | 1 |
| | *Anthochaera carunculata* | Red Wattlebird | X | | | | | | | | | | | | | 1 | | | | 5 | | | | | | | | 2 | 5 | | | | | | 1 |
| | *Gavicalis virescens* | Singing Honeyeater | X | | | | | | | | | | | 2 | | 4 | | | | 1 | | 1 | | X | X | 1 | 1 | 1 | 2 | 2 | | | | | 1 |
| | *Ptilotula ornata* | Yellow-plumed Honeyeater | X | | | | | | | | | | | | | | | | | 230 | | 1 | | | | | | | | | | | | | |
| | *Ptilotula plumula* | Grey-fronted Honeyeater | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | | | | |
| | *Conopophila whitei* | Grey Honeyeater | | | | | | | | | | | | 2 | | 1 | | | | | 17 | 1 | | | | | | | | | | | | | |
| | *Epthianura tricolor* | Crimson Chat | X | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| | *Epthianura aurifrons* | Orange Chat | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Epthianura albifrons* | White-fronted Chat | X | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| | *Sugomel nigrum* | Black Honeyeater | X | | | | | | | | | | | 7 | 4 | | | | | | | | | | | | | | | | | | | | |
| | *Lichmera indistincta* | Brown Honeyeater | X | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| | *Nesoptilotis leucotis* | White-eared Honeyeater | X | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | 1 |
| | *Melithreptus brevirostris* | Brown-headed Honeyeater | X | | | | | | | | | | | | | | | | | 6 | | 1 | | | | | | | | | | | | | 1 |
| Pardalotidae | *Pardalotus striatus* | Striated Pardalote | X | | | | | | | | | | | | 1 | | | | | 2 | | 1 | | X | | | | | | | | | | | 1 |
| Acanthizidae | *Pyrrholaemus brunneus* | Redthroat | X | | | | | | | | | | | 16 | 8 | | | | 2 | | 1 | 1 | | | | | 1 | | | 2 | | | | | 1 |
| | *Calamanthus campestris* | Rufous Fieldwren | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| | *Acanthiza iredalei* | Slender-billed Thornbill | X | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 |
| | *Acanthiza apicalis* | Inland Thornbill | X | | | | | | | | | | | 32 | 38 | | | | 1 | 15 | 2 | 1 | 2 | | X | 19 | 10 | 18 | 11 | 16 | | | | | 1 |
| | *Acanthiza chrysorrhoa* | Yellow-rumped Thornbill | X | | | | | | | | | | | 2 | | 4 | | | | 1 | | | | X | X | | 2 | | | | | | | | |
| | *Acanthiza uropygialis* | Chestnut-rumped Thornbill | X | | | | | | | | | | | 23 | 3 | 27 | | | | 46 | 10 | 1 | 2 | X | X | | | | | | | | | | 1 |
| | *Acanthiza robustirostris* | Slaty-backed Thornbill | X | | | | | | | | | | | | | | | | | | | | | | | 5 | 5 | 14 | 8 | 12 | | | | | |
| | *Smicrornis brevirostris* | Weebill | X | | | | | | | | | | | 50 | 36 | | | | 2 | 269 | 2 | 1 | | X | | 2 | | 10 | 5 | | | | | | |
| | *Gerygone fusca* | Western Gerygone | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Aphelocephala leucopsis* | Southern Whiteface | X | | | | | | | | | | | | | | | | | | 12 | 1 | | X | X | | | | | | | | | | |
| Pomatostomidae | *Pomatostomus superciliosus* | White-browed Babbler | X | | | | | | | | | | | 1 | | | | | | | 3 | 1 | | | X | | 3 | | | | | | | | 1 |
| Cinclosomatidae | *Cinclosoma castanotum* | Chestnut Quail-thrush | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| | *Cinclosoma castaneothorax* | Chestnut-breasted Quail-thrush | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Campephagidae | *Coracina maxima* | Ground Cuckooshrike | X | | | | | | | | | | | | | | | | | 6 | | 1 | | | | | | | | | | | | | |
| | *Coracina novaehollandiae* | Black-faced Cuckooshrike | X | | | | | | | | | | | | 11 | 3 | | | | 12 | | 1 | | X | X | | | 2 | | | | | | | 1 |
| | *Lalage tricolor* | White-winged Triller | X | | | | | | | | | | | 2 | | 2 | | | | 14 | 6 | 1 | | | | | | | | | | | | | |
| Neosittidae | *Daphoenositta chrysoptera* | Varied Sittella | X | | | | | | | | | | | 2 | | | | | | | | 1 | | | | | | | | | | | | | 1 |
| Oreoicidae | *Oreoica gutturalis* | Crested Bellbird | X | | | | | | | | | | | 11 | 6 | 2 | | | | 15 | 2 | 1 | 1 | X | X | 6 | 8 | 6 | 5 | 5 | | | | | 1 |

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | | F | G |
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| Pachycephalidae | *Colluricincla harmonica* | Grey Shrikethrush | X | | | | | | | | | | | 6 | 16 | | | | | 17 | 1 | 1 | | X | X | 2 | 2 | 2 | 1 | 3 | | | | | 1 |
| | *Pachycephala inornata* | Gilbert's Whistler | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Pachycephala pectoralis* | Golden Whistler | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Pachycephala rufiventris* | Rufous Whistler | X | | | | | | | | | | | | 2 | | | | | 32 | 1 | 1 | | X | X | 2 | | 1 | | | | | | | 1 |
| Artamidae | *Artamus personatus* | Masked Woodswallow | X | | | | | | | | | | | 1 | 1 | | | | | 18 | | 1 | | | | | | | | | | | | | |
| | *Artamus superciliosus* | White-browed Woodswallow | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| | *Artamus cinereus* | Black-faced Woodswallow | X | | | | | | | | | | | | | | | | | | 1 | 1 | | X | X | | | | | | | | | | |
| | *Artamus cyanopterus* | Dusky Woodswallow | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Cracticus torquatus* | Grey Butcherbird | X | | | | | | | | | | | 2 | 2 | 1 | | | | 8 | | 1 | | X | X | | | | | | | | | | 1 |
| | *Cracticus nigrogularis* | Pied Butcherbird | X | | | | | | | | | | | 3 | 2 | 14 | | | | 5 | 2 | 1 | | X | | | 1 | 1 | 2 | 1 | | | | | 1 |
| | *Gymnorhina tibicen* | Australian Magpie | X | | | | | | | | | | | | | 5 | | | | 2 | | | | | | | | | | | | | | | |
| | *Strepera versicolor* | Grey Currawong | X | | | | | | | | | | | | | 4 | | | | 1 | 1 | 1 | | | | 3 | 1 | 5 | 1 | 4 | | | | | 1 |
| Rhipiduridae | *Rhipidura leucophrys* | Willie Wagtail | X | | | | | | | | | | | | | 1 | | | | 5 | | 1 | | X | X | | | | | | | | | | 1 |
| | *Rhipidura albiscapa* | Grey Fantail | X | | | | | | | | | | | | | | | | | 13 | | 1 | | | | 1 | | | | | | | | | 1 |
| Monarchidae | *Grallina cyanoleuca* | Magpie-lark | X | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Corvidae | *Corvus orru* | Torresian Crow | X | | | | | | | | | | | | | | | | | 2 | | | | X | X | 3 | 2 | 4 | | | | | | | |
| | *Corvus bennetti* | Little Crow | X | | | | | | | | | | | | | 149 | | | | 7 | | 1 | | | | 1 | | 1 | 1 | | | | | | 1 |
| | *Corvus coronoides* | Australian Raven | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Petroicidae | *Microeca fascinans* | Jacky Winter | X | | | | | | | | | | | | | | | | | 28 | | 1 | | | | | | | | | | | | | |
| | *Petroica goodenovii* | Red-capped Robin | X | | | | | | | | | | | 8 | | 4 | | | | 20 | 4 | 1 | | X | X | | 4 | 4 | 5 | 3 | | | | | 1 |
| | *Melanodryas cucullata* | Hooded Robin | X | | | | | | | | | | | | 2 | | | | | 32 | 1 | 1 | | | | | | | | | | | | | 1 |
| | *Drymodes brunneopygia* | Southern Scrub-Robin | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Locustellidae | *Cincloramphus cruralis* | Brown Songlark | X | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| | *Cincloramphus mathewsi* | Rufous Songlark | X | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | |
| Hirundinidae | *Hirundo neoxena* | Welcome Swallow | X | | | | | | | | | | | 2 | 1 | | | | | | | 1 | | X | | | | | | | | | | | |
| | *Petrochelidon ariel* | Fairy Martin | X | | | | | | | | | | | | 5 | | | | | | | 1 | | | | | | | | | | | | | |
| | *Petrochelidon nigricans* | Tree Martin | X | | | | | | | | | | | | 7 | | | | | | | | | X | | | | | | | | | | | |
| | *Cheramoeca leucosterna* | White-backed Swallow | X | | | | | | | | | | | | | | | | | | | 1 | | X | | | | | | | | | | | |
| Dicaeidae | *Dicaeum hirundinaceum* | Mistletoebird | X | | | | | | | | | | | 3 | 1 | 4 | | | 1 | 5 | | 1 | | | | | | | | | | | | | 1 |
| Estrildidae | *Taeniopygia guttata* | Zebra Finch | X | | | | | | | | | | | | 4 | | | | | 2 | | 1 | | X | X | | | | | | | | | | |
| Motacillidae | *Anthus novaeseelandiae* | Australasian Pipit | X | | | | | | | | | | | | | 2 | | | | 4 | | 1 | | X | | | | | | | | | | | |
| Mammals | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tachyglossidae | *Tachyglossus aculeatus* | Short-beaked Echidna | X | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |

| | | Surveys | A | B | | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| Bovidae | *Bos taurus* | Cow | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| | *Capra hircus* | Goat | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| | *Ovis aries* | Sheep | | | | | | | | | | | | | | 1 | 1 | | 1 | | | | | X | | | | | | | | | | | | |
| Camelidae | *Camelus dromedarius* | Dromedary | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Suidae | *Sus scrofa* | Pig | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Canidae | *Canis lupus* | Dingo | X | | | | | | | | | | | 1 | | | | | | 1 | | | | X | | | | | | | | | | | | |
| | *Vulpes vulpes* | Red Fox | | | | | | | | | | | | 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | |
| Felidae | *Felis catus* | Cat | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Molossidae | *Austronomus australis* | White-striped Freetail Bat | X | | | | | | | | | | | | | | | | | 1 | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | | |
| | *Mormopterus planiceps* | Southern Free-tail Bat | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vespertilionidae | *Chalinolobus gouldii* | Gould's Wattled Bat | X | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | | |
| | *Nyctophilus geoffroyi* | Lesser Long-eared Bat | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Nyctophilus major* | Greater Long-eared Bat | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Scotorepens balstoni* | Inland Broad-nosed Bat | X | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | |
| | *Vespadelus baverstocki* | Inland Forest Bat | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Vespadelus finlaysoni* | Finlayson's Cave Bat | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | | |
| Dasyuridae | *Antechinomys laniger* | Kultarr | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Ningaui ridei* | Wongai Ningaui | X | 1 | | | | 4 | 3 | 5 | | | | 1 | 3 | | | | | | | | | | | | | | | | | | | | | |
| | *Ningaui yvonneae* | Mallee Ningaui | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Pseudantechinus woolleyae* | Woolley's False Antechinus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| | *Sminthopsis crassicaudata* | Fat-tailed Dunnart | X | 1 | | | | | 1 | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| | *Sminthopsis dolichura* | Little Long-tailed Dunnart | X | 1 | 1 | 1 | 1 | | 1 | 2 | 2 | 12 | | 3 | | | | | 1 | 1 | | | | | | 1 | 2 | 3 | 4 | 3 | | | | | | |
| | *Sminthopsis hirtipes* | Hairy-footed Dunnart | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Sminthopsis longicaudata* | Long-tailed Dunnart | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| | *Sminthopsis ooldea* | Ooldea Dunnart | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Macropodidae | *Osphranter robustus* | Euro | X | | | | | | | | | | | | | | | | 1 | | | | | X | | | | | | | | | | | | |
| | *Osphranter rufus* | Red Kangaroo | X | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| Leporidae | *Oryctolagus cuniculus* | Rabbit | | | | | | | | | | | | | 1 | | | | | | | | | X | | | | | | | | | | | | |
| Muridae | *Mus musculus* | House Mouse | X | | | | | 1 | | 2 | 4 | | | 4 | 2 | | | | | | | | | | | 4 | 2 | 2 | 23 | 10 | | 1 | 2 | | | |
| | *Notomys alexis* | Spinifex Hopping Mouse | X | 9 | 3 | 1 | 1 | | 2 | | | | | 2 | 9 | | | | 2 | 1 | | | | | | 5 | | | | | | | | | | |
| | *Notomys mitchellii* | Mitchell's Hopping Mouse | X | 1 | | | | | | | | | | | 3 | | | | 1 | | | | | | | | | | | | | | | | | |
| | *Pseudomys albocinereus* | Ash-grey Mouse | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | *Pseudomys bolami* | Bolam's Mouse | X | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | |

| | | Surveys | A | B | | | | | | | | | C | | | | | | | | | | D | | E | | | | | | | F | G |
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| Family | Species | Common names | | GG26 | GG27 | GG29 | GG28 | GS28 | GS29 | GS26 | GS27 | GS30 | GG30 | Site 13 | Site 3 | Site 9 | Site 9a | Site 12 | Site 21 | Site 22 | Site 21a | Goongarrie NP | Site 12a | Mine (Tarmoola Operations) | Pipeline (proposed) | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 | Site 9 | Site 8 | Unknown | Goongarrie |
| | *Pseudomys hermannsburgensis* | Sandy Inland Mouse | X | | 2 | | | | 4 | 1 | | | | 2 | 1 | | | | | | | | | | | 3 | | 1 | 2 | 1 | | | | | |

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# Appendix C. Definitions of Significant Fauna under the WA Biodiversity Conservation Act 2016 and Priority Species

**Basic Vertebrate Fauna Survey and Assessment**
**Laverton Operations**



**ATTACHMENT C**
**DEFINITIONS OF SIGNIFICANT FAUNA UNDER THE WA BIODIVERSITY CONSERVATION ACT 2016**

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.

[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).

### EN Endangered species

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

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

### VU Vulnerable species

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

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

**Extinct Species**

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

### EX Extinct species

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

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

### EW Extinct in the wild species

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

Currently there are no threatened fauna or threatened flora species listed as extinct in the pwild. 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 birds protected under an international agreement

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 dependant fauna)

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

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

## OS Other specially protected species

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

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

## P Priority species

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

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

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

## P1 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.

## P2 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.

## P3 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.

## P4 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.

# Appendix D.
# Fauna habitat assessments

**Basic Vertebrate Fauna Survey and Assessment**
**Laverton Operations**



Date: 17/04/2024 Habitat Assessment #: 1 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441790 mE 6866157 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 2 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441856 mE 6865883 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 3 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441907 mE 6865633 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 4 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441978 mE 6865383 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 5 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442017 mE 6865134 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 6 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442077 mE 6864885 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 7 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441907 mE 6864881 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 8 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442102 mE 6864637 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 9 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442150 mE 6864386 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 10 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442095 mE 6864133 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 11 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 442087 mE 6863922 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 12 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441910 mE 6863924 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 13 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441907 mE 6864132 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 14 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441907 mE 6864382 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 15 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441909 mE 6864629 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 16 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441657 mE 6864634 mN Fire History: >5y Landform: Undulating Plain

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 17 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441657 mE 6864386 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 18 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441657 mE 6864132 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 19 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441656 mE 6863923 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 20 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441408 mE 6863921 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 21 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441406 mE 6864132 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 22 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441404 mE 6864381 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 23 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441403 mE 6864633 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 24 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441158 mE 6864630 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 25 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441152 mE 6864377 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 26 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441157 mE 6864133 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 27 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441194 mE 6863926 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 28 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441021 mE 6864371 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 29 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441013 mE 6864632 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 30 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440948 mE 6864881 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 31 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441153 mE 6864884 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 32 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441156 mE 6865133 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 33 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440886 mE 6865132 mN Fire History: >5y Landform: Undulating Plain

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 34 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440824 mE 6865386 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 35 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441044 mE 6865366 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Rocky rise



Date: 17/04/2024 Habitat Assessment #: 36 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441165 mE 6865376 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Rocky rise



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 37 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441157 mE 6865629 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 38 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440898 mE 6865582 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 39 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440637 mE 6865568 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 40 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440443 mE 6865629 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 41 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440403 mE 6865889 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 42 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440295 mE 6866134 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 43 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440229 mE 6866426 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 44 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440419 mE 6866441 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 45 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440667 mE 6866467 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 46 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440920 mE 6866413 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 47 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441166 mE 6866411 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 48 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441416 mE 6866222 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 49 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441399 mE 6866378 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Degraded Surface: Sand

Habitat Type: Disturbed



Date: 17/04/2024 Habitat Assessment #: 50 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441649 mE 6866167 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 51 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441631 mE 6866386 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 52 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441657 mE 6866657 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 53 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441651 mE 6866879 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 54 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441395 mE 6866881 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 55 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441413 mE 6866638 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland

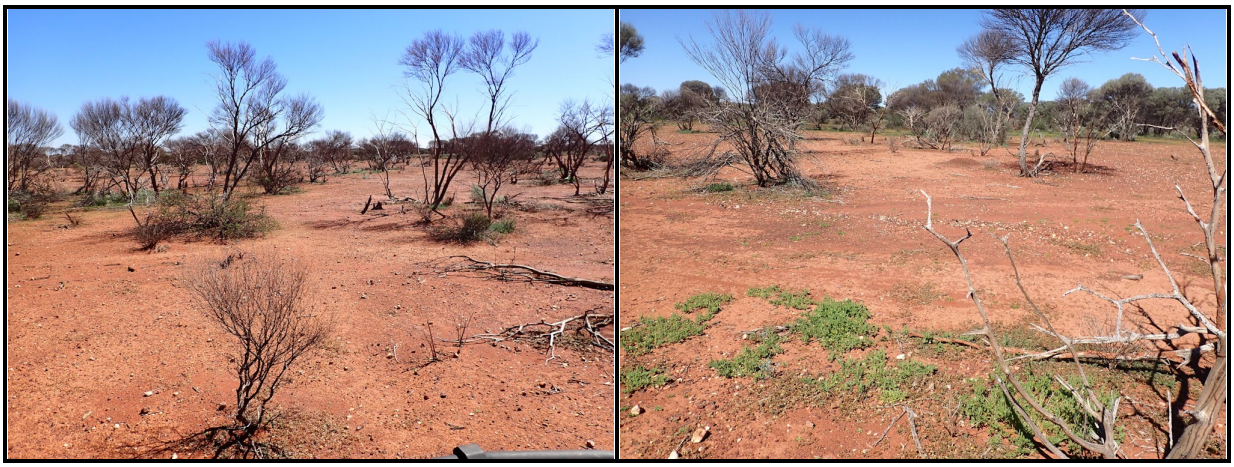


Date: 17/04/2024 Habitat Assessment #: 56 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441141 mE 6866611 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 57 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440903 mE 6866623 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 58 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440645 mE 6866623 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 59 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440655 mE 6866881 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 60 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440919 mE 6866876 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 61 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441153 mE 6866940 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 62 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441608 mE 6867125 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 63 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441401 mE 6867142 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 64 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441147 mE 6867134 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



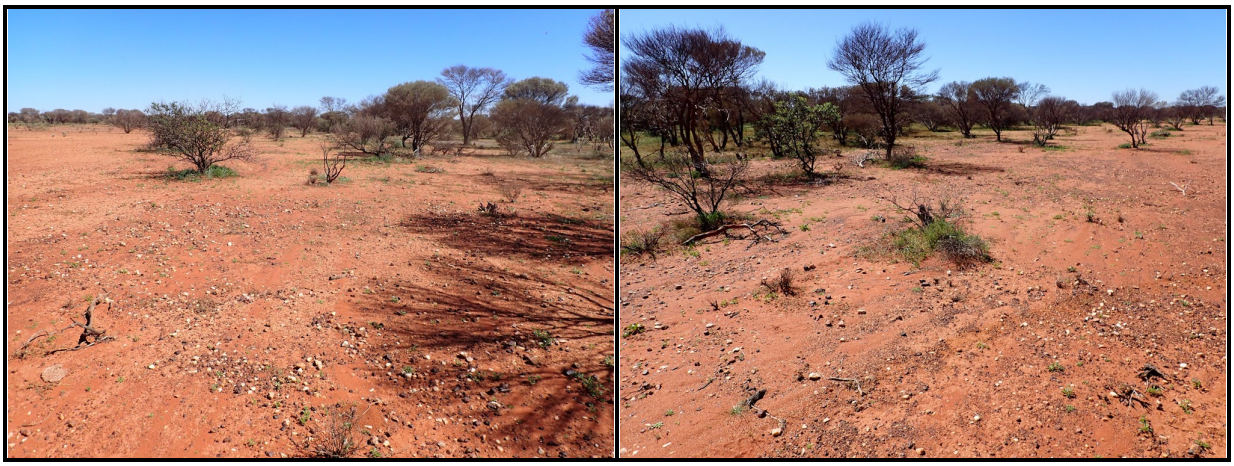
TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 65 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440908 mE 6867126 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 66 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440648 mE 6867128 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 67 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440446 mE 6867379 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 68 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440655 mE 6867384 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 69 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440920 mE 6867382 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 70 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441158 mE 6867388 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 71 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441417 mE 6867376 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 72 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441561 mE 6867380 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 73 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441416 mE 6867624 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 74 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441145 mE 6867627 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Disturbed



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 75 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440904 mE 6867609 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 76 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440652 mE 6867633 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 77 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440393 mE 6867643 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 78 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440405 mE 6867878 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 79 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440668 mE 6867909 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 80 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440905 mE 6867889 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 81 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441416 mE 6867886 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 82 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441332 mE 6868139 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



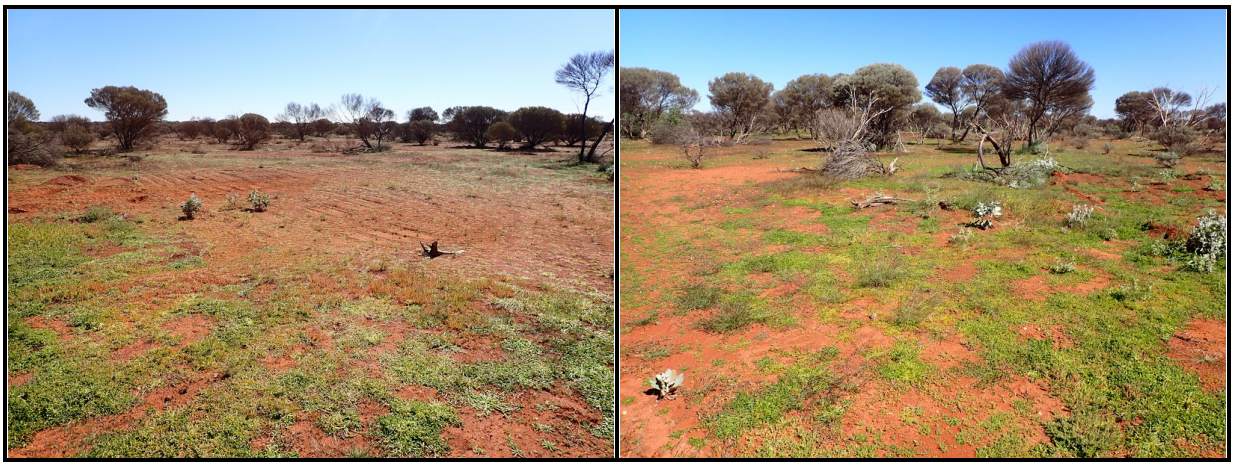
TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 83 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441149 mE 6868126 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 84 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440903 mE 6868133 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 85 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440656 mE 6868126 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 86 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440388 mE 6868119 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 87 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440243 mE 6868128 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 88 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440170 mE 6868381 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 89 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440409 mE 6868386 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland

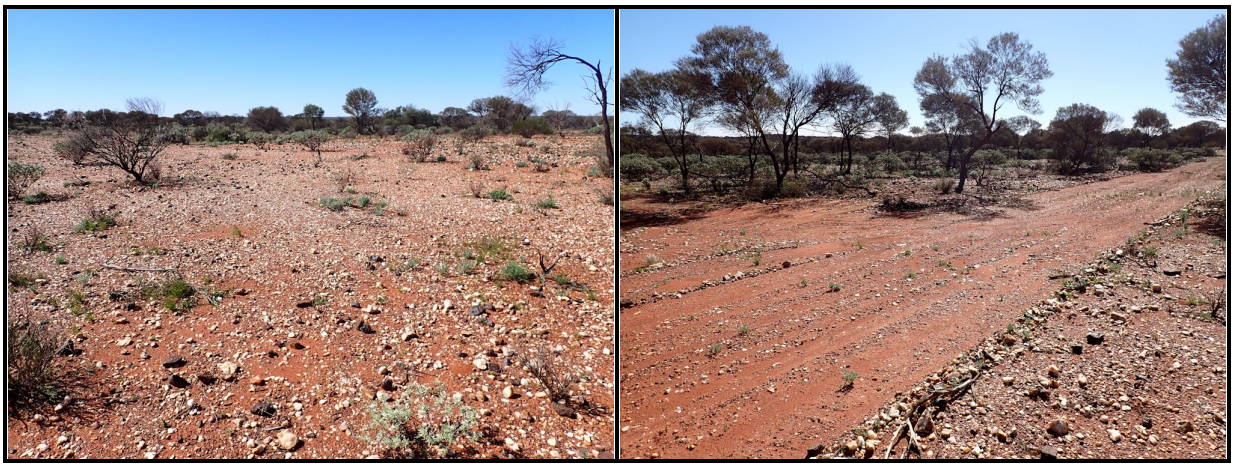


Date: 17/04/2024 Habitat Assessment #: 90 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440475 mE 6868319 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Rocky rise



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 91 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441158 mE 6867932 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Rocky rise



Date: 17/04/2024 Habitat Assessment #: 92 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440657 mE 6868380 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 93 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440901 mE 6868379 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 94 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441092 mE 6868379 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 95 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 441029 mE 6868635 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 96 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440884 mE 6868635 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 97 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440656 mE 6868623 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 98 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440395 mE 6868631 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 99 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440116 mE 6868613 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 100 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440117 mE 6868888 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 101 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440397 mE 6868882 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 102 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440651 mE 6868884 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 103 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440935 mE 6868881 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 104 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440891 mE 6869124 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 105 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440639 mE 6869122 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 106 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440375 mE 6869118 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 107 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440085 mE 6869122 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage

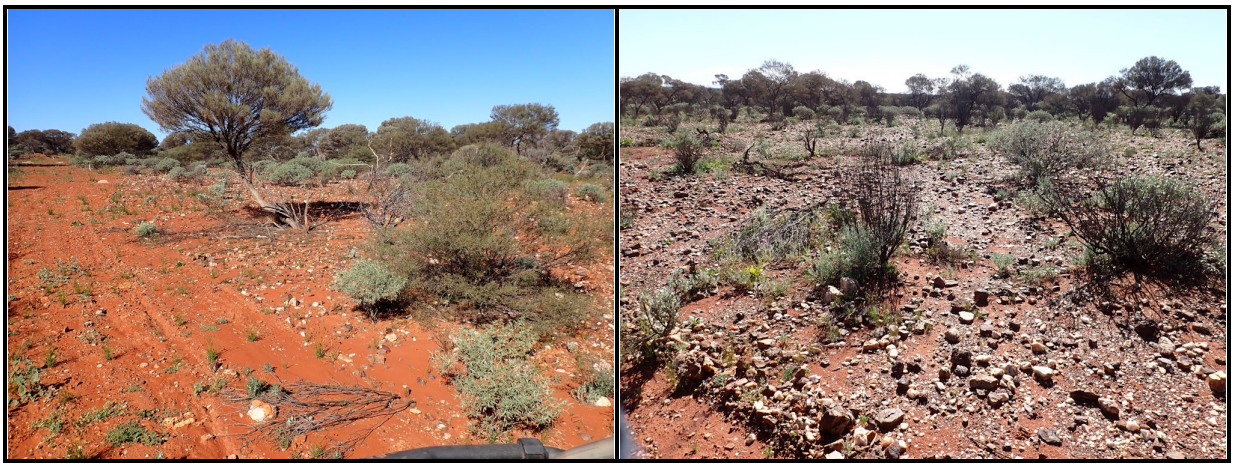


Date: 17/04/2024 Habitat Assessment #: 108 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439937 mE 6869400 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 109 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440158 mE 6869421 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 110 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440398 mE 6869387 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 111 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440655 mE 6869382 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 112 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440839 mE 6869378 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 113 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440730 mE 6869625 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 114 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440412 mE 6869642 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 115 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440250 mE 6869584 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Rocky rise



Date: 17/04/2024 Habitat Assessment #: 116 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440152 mE 6869625 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 117 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439893 mE 6869636 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 118 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439895 mE 6869880 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 119 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440163 mE 6869878 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 120 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440411 mE 6869864 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 121 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440669 mE 6869873 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 122 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440652 mE 6870135 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 123 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440403 mE 6870137 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 124 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440148 mE 6870107 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 125 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439906 mE 6870121 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



Date: 17/04/2024 Habitat Assessment #: 126 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439722 mE 6870132 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 127 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439675 mE 6870407 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 128 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 439906 mE 6870416 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 129 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440146 mE 6870436 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 17/04/2024 Habitat Assessment #: 130 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440416 mE 6870413 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 17/04/2024 Habitat Assessment #: 131 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 440579 mE 6870457 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 132 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463327 mE 6807943 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 133 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463618 mE 6807810 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 134 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463906 mE 6807681 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 135 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463969 mE 6807859 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 136 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463745 mE 6807946 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 137 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463437 mE 6808095 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 138 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463552 mE 6808293 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 139 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463702 mE 6808539 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 140 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464302 mE 6808730 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 141 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464048 mE 6808727 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 142 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463845 mE 6808722 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 143 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463646 mE 6808744 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland





Date: 18/04/2024 Habitat Assessment #: 144 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463443 mE 6808740 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland





TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 145 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463233 mE 6808732 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 146 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463036 mE 6808725 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 147 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462853 mE 6808709 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 148 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462745 mE 6808726 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 149 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462710 mE 6808855 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 150 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462837 mE 6808855 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 151 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463050 mE 6808856 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 152 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463237 mE 6808874 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 153 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463448 mE 6808858 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 154 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463650 mE 6808874 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 155 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463835 mE 6808861 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 156 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464051 mE 6808886 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 157 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464252 mE 6808859 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 158 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464401 mE 6808848 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 159 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464453 mE 6809065 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 160 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464249 mE 6809059 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 161 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464040 mE 6809061 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 162 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463841 mE 6809054 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 163 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463631 mE 6809069 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 164 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463444 mE 6809058 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 165 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463231 mE 6809057 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 166 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463039 mE 6809062 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 167 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462839 mE 6809073 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 168 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462707 mE 6809080 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Degraded Surface: Pebbles

Habitat Type: Disturbed



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 169 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462716 mE 6809259 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 170 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462854 mE 6809257 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 171 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463072 mE 6809255 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 172 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463245 mE 6809260 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 173 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463453 mE 6809259 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 18/04/2024 Habitat Assessment #: 174 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463632 mE 6809261 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 175 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463856 mE 6809272 mN Fire History: Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Disturbed



Date: 18/04/2024 Habitat Assessment #: 176 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464046 mE 6809242 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 177 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464237 mE 6809250 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 178 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464450 mE 6809195 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 179 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464241 mE 6809354 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 180 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 464044 mE 6809424 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



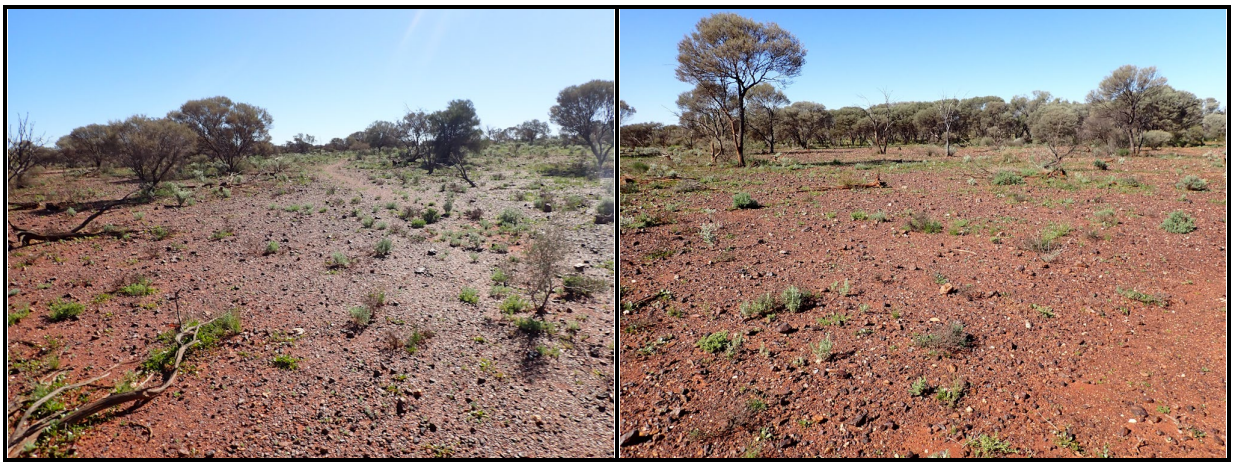
TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 181 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463850 mE 6809475 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 182 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463635 mE 6809498 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 183 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463448 mE 6809461 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 184 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463232 mE 6809459 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 185 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463043 mE 6809464 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 186 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462837 mE 6809471 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 187 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462721 mE 6809457 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 18/04/2024 Habitat Assessment #: 188 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462717 mE 6809650 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 189 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462840 mE 6809669 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Drainage



Date: 18/04/2024 Habitat Assessment #: 190 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462701 mE 6809789 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 191 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 462844 mE 6809748 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 192 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463040 mE 6809701 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 193 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463245 mE 6809629 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 194 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 463459 mE 6809599 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 195 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505090 mE 6778789 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 196 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504896 mE 6778792 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 197 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504668 mE 6778800 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 198 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504484 mE 6778803 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 199 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504285 mE 6778783 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 200 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504096 mE 6778745 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 201 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503111 mE 6778561 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



Date: 18/04/2024 Habitat Assessment #: 202 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503301 mE 6778591 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 203 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503490 mE 6778589 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Eucalypt with mixed shrubs



Date: 18/04/2024 Habitat Assessment #: 204 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503695 mE 6778589 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 205 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503881 mE 6778556 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 206 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504079 mE 6778555 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 207 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504299 mE 6778592 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 208 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504410 mE 6778540 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Rocky rise



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 209 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504496 mE 6778593 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 210 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504678 mE 6778590 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 211 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504895 mE 6778586 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



Date: 18/04/2024 Habitat Assessment #: 212 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505102 mE 6778596 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 213 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505249 mE 6778588 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



Date: 18/04/2024 Habitat Assessment #: 214 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505291 mE 6778388 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 215 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505092 mE 6778368 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 216 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504884 mE 6778415 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 217 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504711 mE 6778396 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 218 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504496 mE 6778394 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 219 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504290 mE 6778421 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 220 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504091 mE 6778404 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 221 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503891 mE 6778418 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 18/04/2024 Habitat Assessment #: 222 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503693 mE 6778395 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 223 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503485 mE 6778397 mN Fire History: >5y Landform: Undulating Plain

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



Date: 18/04/2024 Habitat Assessment #: 224 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503279 mE 6778389 mN Fire History: >5y Landform: Undulating Plain

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 18/04/2024 Habitat Assessment #: 225 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503144 mE 6778398 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland





Date: 19/04/2024 Habitat Assessment #: 226 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505256 mE 6778192 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland





TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 227 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505086 mE 6778193 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 228 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504878 mE 6778189 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 229 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504752 mE 6778183 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 230 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504679 mE 6777988 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 231 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504894 mE 6777991 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 232 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505077 mE 6777994 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 233 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505289 mE 6777986 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 234 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505425 mE 6777796 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 235 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505298 mE 6777798 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 236 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505085 mE 6777794 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 237 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504892 mE 6777788 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland





Date: 19/04/2024 Habitat Assessment #: 238 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504775 mE 6777785 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland





TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 239 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504898 mE 6777593 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 240 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505105 mE 6777615 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 241 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505292 mE 6777587 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 242 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505455 mE 6777591 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 243 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505479 mE 6777379 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 244 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505291 mE 6777441 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 245 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505096 mE 6777446 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 246 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504899 mE 6777437 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 247 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504674 mE 6777408 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 248 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504293 mE 6777244 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 249 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504473 mE 6777171 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 250 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504692 mE 6777161 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 251 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504904 mE 6777195 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 252 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505093 mE 6777176 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 253 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505297 mE 6777188 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 254 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505496 mE 6777223 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 255 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505098 mE 6777054 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 256 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504894 mE 6777015 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 257 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504678 mE 6777008 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 258 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504491 mE 6776971 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 259 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504296 mE 6776997 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 260 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504084 mE 6776872 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 261 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 505258 mE 6777090 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 262 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503873 mE 6776805 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 263 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503684 mE 6776811 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 264 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503464 mE 6776801 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Sparse Sheoak woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 265 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503479 mE 6776979 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Sparse Sheoak woodland



Date: 19/04/2024 Habitat Assessment #: 266 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503715 mE 6776984 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 267 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503885 mE 6776993 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 268 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504100 mE 6776998 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Rocky rise



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 269 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504082 mE 6777178 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 270 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503894 mE 6777196 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Drainage



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 271 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503693 mE 6777200 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 272 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503476 mE 6777188 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 273 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503343 mE 6777400 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Sparse Sheoak woodland



Date: 19/04/2024 Habitat Assessment #: 274 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503496 mE 6777397 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 275 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503694 mE 6777386 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 276 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503894 mE 6777382 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 277 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504058 mE 6777397 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 278 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503986 mE 6777593 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 279 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503882 mE 6777585 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 280 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503687 mE 6777593 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 281 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503477 mE 6777604 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 282 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503295 mE 6777601 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Sparse Sheoak woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 283 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503264 mE 6777790 mN Fire History: >5y Landform: Drainage

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Sparse Sheoak woodland



Date: 19/04/2024 Habitat Assessment #: 284 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503497 mE 6777779 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 285 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503694 mE 6777799 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 286 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503692 mE 6777981 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 287 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503488 mE 6778000 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 288 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503281 mE 6778018 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Sparse Sheoak woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 289 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503182 mE 6778193 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Sparse Sheoak woodland



Date: 19/04/2024 Habitat Assessment #: 290 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503304 mE 6778191 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Sparse Sheoak woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 291 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503494 mE 6778183 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 292 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503694 mE 6778159 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 293 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 503891 mE 6778176 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 294 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504073 mE 6778181 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 295 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504320 mE 6778142 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 296 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504240 mE 6777983 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 297 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 504240 mE 6777795 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 298 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510838 mE 6779687 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 299 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511017 mE 6779691 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 300 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511217 mE 6779664 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 301 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511181 mE 6779473 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs

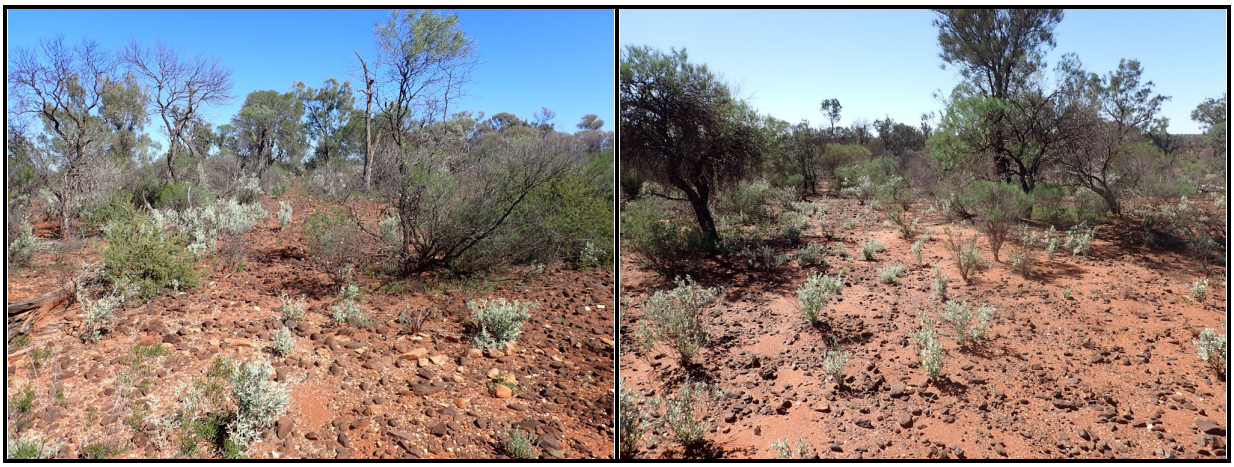


Date: 19/04/2024 Habitat Assessment #: 302 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511032 mE 6779453 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 303 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510819 mE 6779447 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 304 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510871 mE 6779285 mN Fire History: >5y Landform: Rocky rise

Soil Type: Sandy-clay Habitat Quality: Good Surface: Stone

Habitat Type: Rocky rise



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 305 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511064 mE 6779247 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Cobble

Habitat Type: Mulga woodland



Date: 19/04/2024 Habitat Assessment #: 306 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511273 mE 6779260 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 307 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511433 mE 6779247 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 308 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511417 mE 6779055 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 309 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511270 mE 6779079 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 310 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511063 mE 6779080 mN Fire History: >5y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Mulga woodland



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 311 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510850 mE 6779081 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 312 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510883 mE 6780455 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 313 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510678 mE 6780427 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 314 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510483 mE 6780376 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 315 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510277 mE 6780392 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs

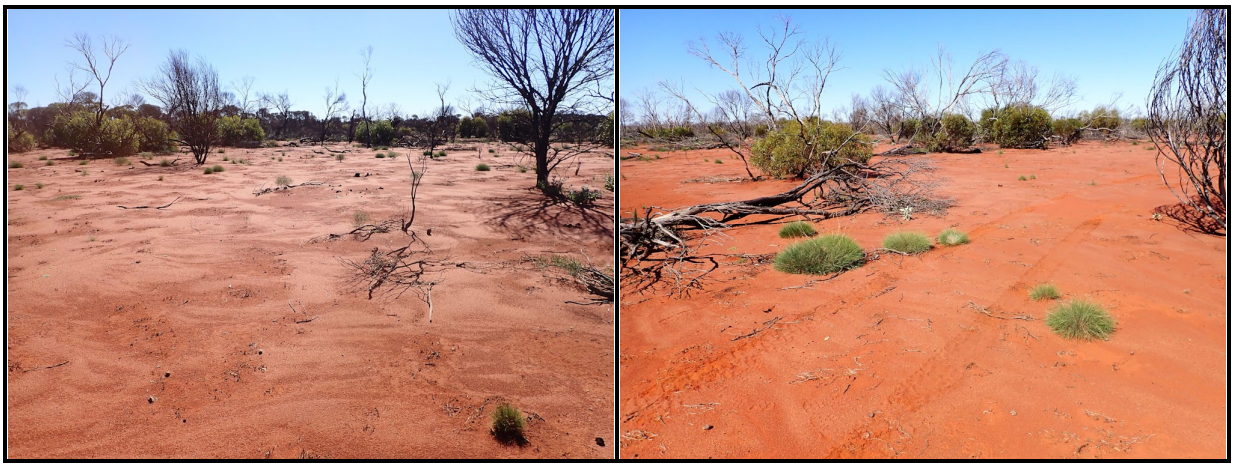


Date: 19/04/2024 Habitat Assessment #: 316 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510074 mE 6780386 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 317 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510095 mE 6780577 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 318 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510293 mE 6780575 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 319 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510482 mE 6780584 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs

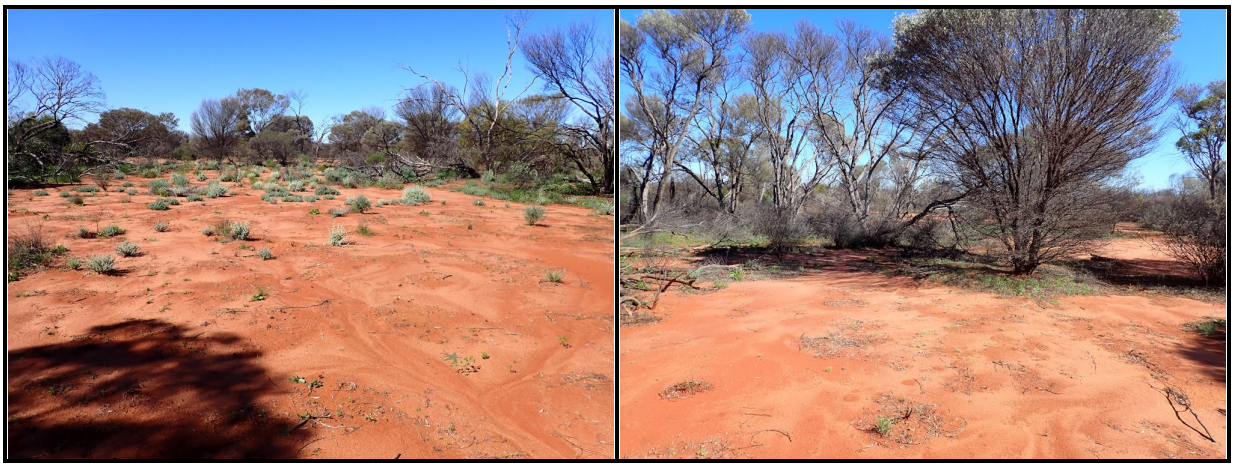


Date: 19/04/2024 Habitat Assessment #: 320 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510698 mE 6780574 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 321 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510879 mE 6780569 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 322 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511085 mE 6780584 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 323 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511287 mE 6780575 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 324 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511483 mE 6780552 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 325 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511678 mE 6780562 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 326 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511883 mE 6780602 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 327 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511886 mE 6780777 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 328 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511662 mE 6780792 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 329 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511474 mE 6780784 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 330 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511270 mE 6780768 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 331 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511078 mE 6780763 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 332 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510878 mE 6780793 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 333 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510668 mE 6780764 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 334 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510477 mE 6780775 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 335 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510277 mE 6780781 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 336 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510078 mE 6780778 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 337 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510078 mE 6780983 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 338 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510262 mE 6780966 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 339 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510479 mE 6780969 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 340 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510692 mE 6780989 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Degraded Surface: Pebbles

Habitat Type: Disturbed



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 341 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510894 mE 6781001 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 342 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511099 mE 6780993 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 343 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510453 mE 6781177 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 344 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510296 mE 6781203 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 345 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510089 mE 6781182 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 346 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509932 mE 6781180 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 347 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509879 mE 6781397 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 348 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510089 mE 6781384 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 349 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510280 mE 6781375 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 350 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510480 mE 6781369 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



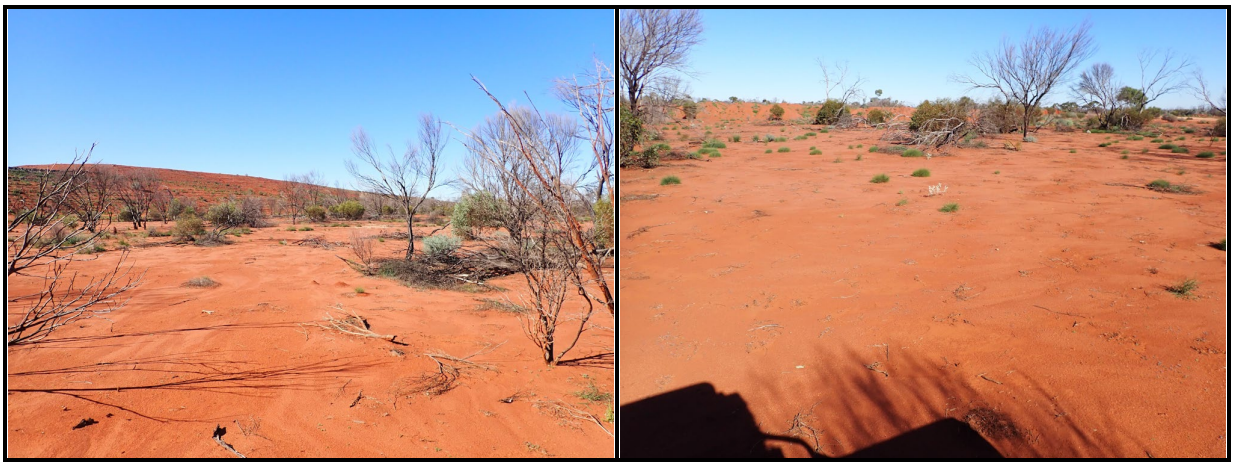
TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 351 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510673 mE 6781374 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 352 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510880 mE 6781394 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 353 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510470 mE 6781581 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 354 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510278 mE 6781564 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 355 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510084 mE 6781573 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 356 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509870 mE 6781581 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 357 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509924 mE 6781773 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 358 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510083 mE 6781810 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 359 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510276 mE 6781782 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 360 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510500 mE 6781753 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 361 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510475 mE 6781977 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 362 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510279 mE 6781986 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 363 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510075 mE 6781997 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 364 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509888 mE 6781991 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 365 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 509897 mE 6782182 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 366 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510084 mE 6782198 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 367 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510267 mE 6782181 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 368 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510479 mE 6782180 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 369 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510497 mE 6782296 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 370 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510676 mE 6782318 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 371 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510868 mE 6782358 mN Fire History: <1y Landform: Slope

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 372 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511078 mE 6782377 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 373 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511301 mE 6782363 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 374 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511477 mE 6782391 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 375 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511653 mE 6782367 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 376 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511690 mE 6782171 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 377 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511685 mE 6781971 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 378 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511682 mE 6781772 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 379 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511742 mE 6781577 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 380 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511815 mE 6781377 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 381 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511852 mE 6781179 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 382 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511884 mE 6780982 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 383 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511674 mE 6781001 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 384 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511684 mE 6781204 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 385 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511668 mE 6781374 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 386 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511492 mE 6781398 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Pebbles

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 387 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511482 mE 6781585 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 388 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511488 mE 6781775 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 389 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511479 mE 6781989 mN Fire History: >5y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 390 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511458 mE 6782185 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 391 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511279 mE 6782161 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 392 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511086 mE 6782188 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 393 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510880 mE 6782191 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 394 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510671 mE 6782172 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 395 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510712 mE 6781967 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 396 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 510869 mE 6781946 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 397 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511080 mE 6781963 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 398 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511297 mE 6781982 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 399 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511287 mE 6781767 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



Date: 19/04/2024 Habitat Assessment #: 400 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511271 mE 6781573 mN Fire History: <1y Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Good Surface: Sand

Habitat Type: Eucalypt with mixed shrubs



TERRESTRIAL ECOSYSTEMS

Date: 19/04/2024 Habitat Assessment #: 401 Observer: Mitchell Plozza & Isaac Cable

GDA94 51J; 511289 mE 6781377 mN Fire History: Landform: Flat

Soil Type: Sandy-clay Habitat Quality: Degraded Surface: Pebbles

Habitat Type: Disturbed



TERRESTRIAL ECOSYSTEMS