# West Angelas NVCP 3

## Flora, Vegetation, and Fauna Desktop Assessment

### Rio Tinto Iron Ore

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# Basis of Report

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# Executive Summary

In 2015 Rio Tinto Iron Ore (RTIO) submitted a regional purpose permit application requesting the amalgamation of several previous Native Vegetation Clearing Permits (NVCP) into one larger permit, covering current and future clearing areas of the West Angelas mining area. A replacement for NVCP 6545 is now required.

RTIO (on behalf of Robe River Mining Company Pty Ltd) commissioned SLR Consulting Australia Pty Ltd (SLR) to undertake a flora, vegetation, and terrestrial vertebrate fauna desktop assessment for the proposed NVCP 3 Application Area (AA), consolidating all previous studies of the area into one cohesive report.

## Flora and Vegetation

This flora and vegetation desktop assessment confirmed a total of 43 significant flora occurring within a 20 km buffer of the NVCP AA. Of the 43 significant taxa, thirteen have been identified as occurring within the NVCP 3 AA, 13 were assessed as having a high likelihood of occurring within the AA, seven have a medium likelihood and 10 have a low likelihood of occurrence. No Threatened flora have been recorded in the AA or were present in the 20 km database search buffer.

Two Priority Ecological Communities (PEC) were identified by the database searches as occurring within the 20km search buffers; neither PEC was recorded within the AA by previous surveys. The nearest recorded PEC is the West Angelas Cracking Clays PEC (P1), located 6 km north of the AA.

In total, 42 flora sites comprising 38 quadrats and four relevés had been established in the AA during previous detailed and reconnaissance surveys. A total of 341 confirmed flora taxa were recorded from 141 genera across 47 families, of which all but seven were native. None of the introduced flora are listed as Declared Pests by the Department of Primary Industries and Regional Development, or Weeds of National Significance. Five introduced taxa, **Cenchrus ciliaris*, **Chloris virgata*, **Malvastrum americanum*, **Rumex vesicarius* and **Setaria verticillata* are ranked as High for Ecological Impact and Rapid Invasiveness by Department of Biodiversity, Conservation and Attractions.

Fifteen vegetation types were described and mapped by Biologic in 2023 across four broad landforms (hills, plains, drainages, gorges/gullies), none of which were considered analogous to either of the two PECs identified by the database searches.

Vegetation condition within the AA ranged from Very Good to Excellent, with the majority considered to be in Excellent condition. Evidence of disturbances were largely limited to weeds and roads/tracks for mining infrastructure and drill pads.

## Vertebrate Fauna

The database searches and literature review identified 278 terrestrial vertebrate fauna taxa within the Desktop Study Area. One significant fauna was previously recorded within the AA, and 29 significant fauna taxa as potentially occurring within the AA. These taxa were assessed to determine the likelihood of their occurrence within the AA; seven significant fauna taxa were assessed as having a high likelihood, four significant fauna taxa were assessed as having a medium likelihood, and 18 significant fauna taxa were assessed as having have a low likelihood of occurrence.

Majority of the fauna habitat mapping was based on data (provided by RTIO) from other consulting companies who conducted surveys within the AA. An additional 11 hectares of fauna habitat mapping were extrapolated by SLR using this existing mapping as a reference.

Eight fauna habitats (excluding Disturbed areas) were mapped within the AA. Of these habitats, Stony Plain, Mulga Woodland and Rocky Hill are widespread and abundant at a regional scale, Gorge/Gully, and Major and Minor drainage is important for dispersal and connectivity at a landscape scale.

Gorge/Gully constitutes potential critical habitat for Northern Quoll, Pilbara Olive Python, Ghost Bat and Pilbara Leaf-nosed Bat for its breeding/denning/roosting, foraging and dispersal value. Major Drainage constitutes potential critical habitat for Northern Quoll, Pilbara Olive Python for its breeding/denning, foraging and dispersal value, and potential supporting habitat for Ghost Bat and Pilbara Leaf-nosed Bat for its foraging and dispersal value.

# Table of Contents

# Tables in Text



# Figures in Text

# Maps



# Appendices

# Acronyms and Abbreviations

| | |
|---|---|
| °C | Degrees Celsius |
| AA | Application Area (the survey area) |
| ARU | Autonomous Recording Unit |
| BAM Act | *Biosecurity and Agriculture Management Act 2007* |
| BC Act | *Biodiversity Conservation Act 2016* |
| BoM | Bureau of Meteorology |
| CR | Critically Endangered |
| DAWE | Department of Agriculture Water and Environment |
| DBCA | Department of Biodiversity, Conservation and Attractions |
| DCCEEW | Department of Climate Change, Energy, the Environment and Water |
| DEE | Department of the Environment and Energy |
| DEWHA | Department of the Environment, Water, Heritage and the Arts |
| Desktop Study Area | The area that was studied during the desktop assessment encompassing the AA and surrounds |
| DoE | Department of the Environment |
| DP | Declared Pest |
| DEMIRS | Department of Energy, Mines, Industry Regulation and Safety |
| DPIRD | Department of Primary Industries and Regional Development |
| DSEWPaC | Department of Sustainability, Environment, Water, Population and Communities |
| DWER | Department of Water and Environmental Regulation |
| EIA | Environmental Impact Assessment |
| EN | Endangered |
| EP Act | *Environmental Protection Act 1986* |
| EPA | Environmental Protection Authority |
| EPBC Act | *Environment Protection Biodiversity and Conservation Act 1999* |
| ESA | Environmentally Sensitive Area |
| GIS | Geographic Information System |
| GDE | Groundwater Dependent Ecosystem |
| ha | Hectare |
| IBRA | Interim Biogeographic Regionalisation for Australia |
| ILUA | Indigenous land Use Agreement |
| km | Kilometres |
| Lat | Latitude |
| Long | Longitude |
| m | Metres |
| MI | Migratory |

| | |
|---|---|
| mm | Millimetres |
| mths | Months |
| MNES | Matters of National Environmental Significance |
| NVCP | Native Vegetation Clearing Permit |
| OS | Other Specially Protected Fauna |
| P | Priority |
| PEC | Priority Ecological Community |
| PMST | Protected Matters Search Tool |
| RTIO | Rio Tinto Iron Ore |
| Sp. | Species |
| Spp. | More than one species |
| SLR | SLR Consulting Australia |
| T | Threatened |
| TEC | Threatened Ecological Community |
| TPFL | Threatened and Priority Flora Database |
| VU | Vulnerable |
| WA | Western Australia |
| WAH | Western Australian Herbarium |
| WoNS | Weeds of National Significance |

# 1.0 Introduction

## 1.1 The Project Background and AA Location

Rio Tinto Iron Ore (RTIO) submitted a regional purpose permit application to DEMIRS in 2015 requesting the amalgamation of several existing NVCPs into one larger permit, covering current clearing and future clearing areas under Part V of the EP Act 1986. The amalgamation aided in reducing the risk of non-compliance and/or reporting conditions that multiple permits across one area presented. A replacement for NVCP 6545 is now required. Due to varying levels of biological survey coverage and validity of survey data, the existing NVCP area is to be covered by three NVCPs to enable the application for areas with sufficient survey coverage to be expedited. The main purposes of the replacement NVCPs include mineral exploration and associated activities, hydrogeological, geotechnical, and environmental investigations, construction camp, and associated activities over mining tenements.

This report collates previous surveys conducted within the NVCP 3 Application Area (herein referred to as the AA) to produce one cohesive report that will be presented as part of the NVCP application process. The NVCP 3 AA comprises 3,389 ha, made up of polygons O, P and Q (**Map 1**), and is located within the Hamersley Range, approximately 90 km west of Newman.

## 1.2 Objective and Scope

The objective of the survey was to identify key flora, vegetation, and fauna values within the AA as part of the environmental impact assessment process for the Project.

The following scope of work was completed:

- Undertake a desktop assessment including relevant database searches and a literature review to compile and summarise existing records of flora, vegetation, threatened and priority ecological communities, and terrestrial vertebrate fauna in the vicinity of the AA.
- A report documenting the findings of the desktop assessment and the consolidation of previous survey efforts to understand the total current knowledge of the AA.
- Supply a geospatial data package, prepared in accordance with Rio Tinto Data Standards, consolidating all previous survey efforts to produce one cohesive data package to be presented during the NVCP application process.
- A separate report addressing the 10 Clearing Principals.

# 2.0 Background

## 2.1 Statutory and Regulatory Framework

Western Australian flora, vegetation, fauna, and ecological communities are governed by the following legislative measures:

- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act) (Commonwealth of Australia, 1999).
- *Biodiversity Conservation Act 2016* (WA) (BC Act) (Government of Western Australia, 2016).
- *Environmental Protection Act 1986* (WA) (EP Act) (Government of Western Australia, 1986).
- *Biosecurity and Agriculture Management Act 2007* (WA) (BAM Act) (Government of Western Australia, 2007).

In addition to these legislative measures, the following non-legislative lists are considered on a case-by-case basis:

- WA Department of Biodiversity Conservation and Attractions (DBCA) Priority lists for fauna, flora, and ecological communities.
- Weeds of National Significance (WoNS).
- Recognition of locally significant populations by DBCA.

The EIA process is supported by guidance documents published by the Environmental Protection Authority (EPA), DBCA and the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

**Western Australia**

- *Environmental Factor Guideline – Flora and Vegetation* (EPA, 2016a).
- *Environmental Factor Guideline – Terrestrial Fauna* (EPA, 2016b).
- *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* (EPA, 2016c).
- *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA, 2020).

**Commonwealth**

- *Matters of National Environmental Significance – Significant Impact Guidelines 1.1* (DoE, 2013).
- *EPBC Act Referral guideline for the endangered northern quoll Dasyurus hallucatus* (Department of the Environment, 2016).
- *Survey guidelines for Australia's threatened bats* (DEWHA, 2010a).
- *Survey guidelines for Australia's threatened birds* (DEWHA, 2010b).
- *Survey guidelines for Australia's threatened mammals* (DSEWPaC, 2011a).
- *Survey guidelines for Australia's threatened reptiles* (DSEWPaC, 2011b).

## 2.2 Existing Environment

### 2.2.1 Climate

The closest long-term Bureau of Meteorology (BoM) weather station with a complete dataset is Newman Aero Weather Station (007176), located approximately 100 km east of the AA.

Climate averages were calculated using data from the most current climate normal, which is defined as a 30-year interval where possible. A climate normal is a period long enough to include year-to-year variations while avoiding the influence of longer-term changes in climate (BoM, 2007).

The long-term (1996 to 2025) mean minimum temperature for Newman Aero Weather Station ranges from 25.2˚C (January) to 6.5˚C (June) and the long-term mean maximum temperature ranges from 39.4˚C (December) to 23.1˚C (June) (

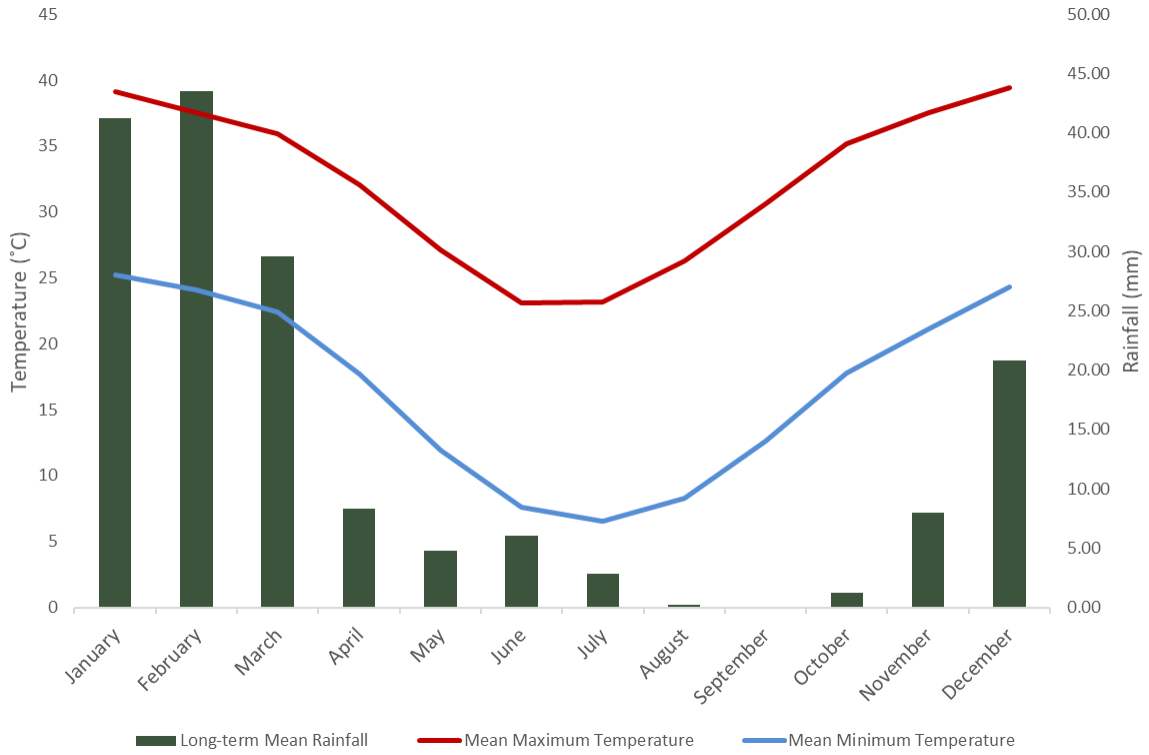


**Figure** 1) (BoM, 2025), and the long-term (1971 to 2025) annual median rainfall is 321.9 mm (BoM, 2025).

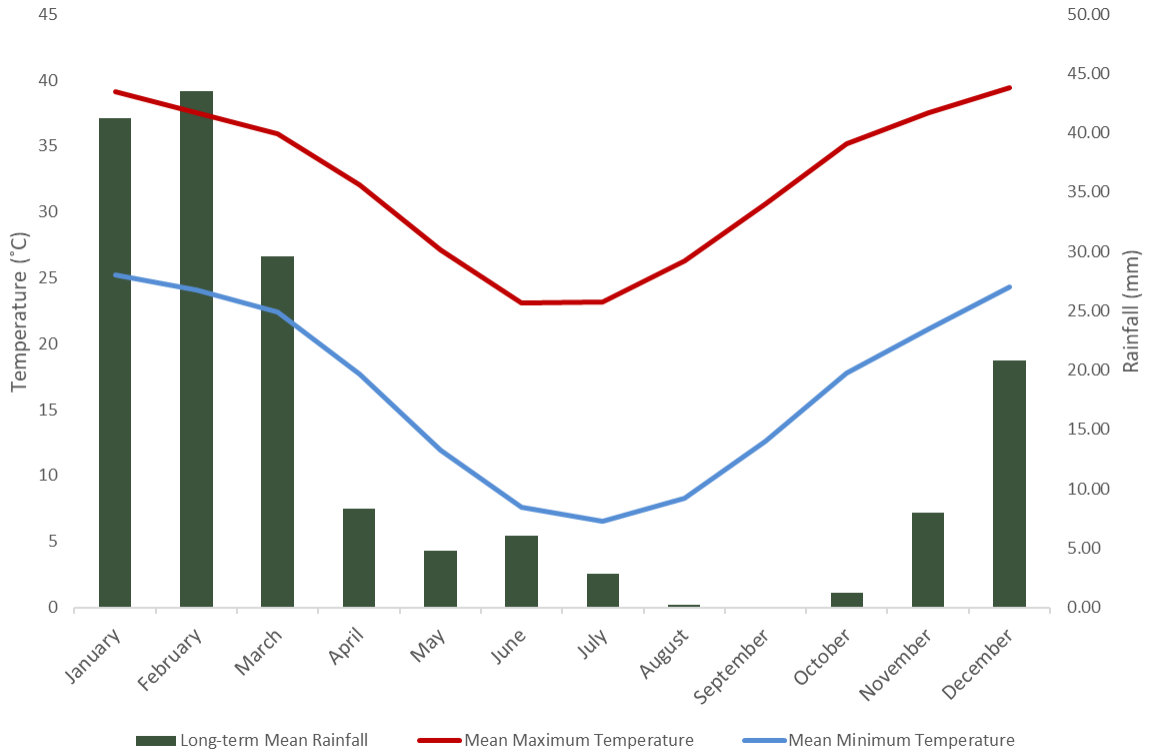


**Figure 1: Climate summary of Newman Aero Weather Station (007176).**

### 2.2.2 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic Regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological, geographical, and geological attributes. These bioregions are subdivided into 419 subregions as part of a refinement of the IBRA framework (DEE, 2016). The AA occurs within the Pilbara bioregion and the Hamersley (PIL03) subregion.

The Hamersley subregion is the southern section of the Pilbara Craton. Mountainous area of Proterozoic sedimentary ranges and plateaux, dissected by gorges (basalt, shale and dolerite). Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges.

The climate is semi-desert tropical, average 300mm rainfall, usually in summer cyclonic or thunderstorm events. Winter rain is not uncommon. Drainage into either the Fortescue (to the north), the Ashburton to the south, or the Robe to the west. Subregional area is 6,215,092ha (DBCA, 2003).

### 2.2.3 Soil Landscape Mapping

Soil landscape mapping of Western Australia consists of a compilation of various surveys at different scales varying between 1:20,000 and 1:3,000,000 (DPIRD, 2022). The mapping comprises a nested hierarchy of levels, with each level a subdivision of the preceding level. Soil landscape mapping provides an indication of potential vegetation types and fauna habitats within the AA and has been described below to the highest level of detail available for the AA.

The AA occurs across six soil landscape subsystems (**Table 1**; **Map 2**).

**Table 1: Soil landscape subsystems within the AA**

| System/ subsystem/phase | | Description | Area (ha) and percentage within AA |
|---|---|---|---|
| Name | Code | | |
| Boolgeeda System | 285Bg | Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands | 2,039.29 (60.17%) |
| Newman System | 285Ne | Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands | 779.82 (23.01%) |
| Pindering System | 285Pd | Gravelly hardpan plains supporting groved mulga shrublands with hard and soft spinifex | 43.83 (1.29%) |
| Platform System | 285Pl | Dissected slopes and raised plains supporting shrubby hard spinifex grasslands | 246.51 (7.27%) |
| Spearhole System | 285Sp | Gently undulating gravelly hardpan plains and dissected slopes supporting groved mulga shrublands and hard spinifex | 4.68 (0.14%) |
| Wannamunna System | 285Wn | Hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands and occasionally eucalypt woodlands | 274.9 (8.11%) |

### 2.2.4 Hydrography

No major or minor hydrographic features occur within the AA. All hydrographic features that occur in the vicinity of the AA are described in **Table 2** and shown in **Map 3** (DWER, 2018).

**Table 2: Hydrographic features in the vicinity of the AA**

| Hydrographic feature | Description |
|---|---|
| Mainstream | Fortescue River 6 km southeast of the AA |
| Minor River | Unnamed river 1.7 km north of the AA |
| Minor River | Angelo River 8 km southeast of the AA |
| Minor River | Unnamed river 9 km northeast of the AA |

### 2.2.5 Broad Vegetation Types

The major source of data for pre-European vegetation mapping in Western Australia is the published and unpublished mapping of J. S. Beard at 1:250,000 scale. These vegetation types were later refined by Shepherd, Beeston, and Hopkins (2002), resulting in 819 Vegetation Association-level units, and a subsequent reclassification resulted in the creation of over 2,175 finer-scale System Associations (Beard *et al.*, 2013). Three System Associations are mapped within the AA (**Table 3**; **Map 4**). Representation of System Associations at a state, regional, and local level is shown in **Table 4** (Government of Western Australia, 2019).

**Table 3: Vegetation System Associations within the AA**

| System Association | Description | Area (ha) and percentage within AA |
|---|---|---|
| Hamersley 18 | Low woodland, open low woodland or sparse woodland: Mulga (*Acacia aneura*) and associated species. | 2,178.49 (64.28) |
| Hamersley 29 | Low woodland, open low woodland or sparse woodland: Mulga (*Acacia aneura*) and associated species. | 748.12 (22.07%) |
| Hamersley 82 | Low tree-steppe: Hummock grassland with scattered bloodwoods & snappy gum *Triodia* spp., *Corymbia dichromophloia*, *Eucalyptus leucophloia*. | 462.44 (13.65%) |

**Table 4: Representation of System Associations within the AA at a state, regional, and local level**

| System Association | Extent | | | | |
|---|---|---|---|---|---|
| | Pre-European (ha) | Current (ha) | Remaining (%) | Managed in DBCA lands (%)* | Within AA (%)* |
| **Representation across Western Australia** | | | | | |
| 18 | 19,892,306.46 | 19,843,148.07 | 99.75 | 6.64 | 0.01 |
| 29 | 7,903,991.45 | 7,898,973.24 | 99.94 | 6.28 | 0.01 |
| 82 | 2,565,901.28 | 2,553,206.19 | 99.51 | 11.57 | 0.02 |
| **Representation across the Pilbara Bioregion** | | | | | |
| 18 | 676,556.72 | 671,843.35 | 99.30 | 25.35 | 0.32 |
| 29 | 1,133,219.76 | 1,131,712.01 | 99.87 | 9.39 | 0.07 |
| 82 | 2,563,583.23 | 2,550,888.14 | 99.50 | 11.58 | 0.02 |
| **Representation across the Hamersley (PIL03) Subregion** | | | | | |
| 18 | 581,246.08 | 576,541.70 | 99.19 | 29.54 | 0.38 |
| 29 | 172,082.57 | 170,747.58 | 99.22 | 12.98 | 0.44 |
| 82 | 2,177,573.90 | 2,165,224.21 | 99.43 | 13.57 | 0.02 |
| **Representation across the Shire of East Pilbara** | | | | | |
| 18 | 359,372.12 | 355,446.47 | 98.91 | 1.49 | 0.61 |
| 29 | 906,243.49 | 905,848.35 | 99.96 | 7.74 | 0.08 |
| 82 | 927,709.76 | 919,072.17 | 99.07 | 0.50 | 0.05 |

*as a portion of the current extent

### 2.2.6 Conservation Areas

Conservation areas are designated lands managed for the primary purpose of environmental protection and biodiversity conservation and include, but are not limited to, National Parks, Nature Reserves, Conservation Parks, and Regional Parks. The AA does not intersect any conservation areas (DBCA, 2023a, 2023b) as shown in **Map 5**:

- Karijini National Park (R 30082), a Class A reserve located 14 km northwest of the AA (**Map 5**) and is vested under the Conservation Commission of WA.

- Unallocated Crown Land proposed for conservation (LR3162/305, Ex Juna Downs Station), located 22.6 km to the north of the AA (**Map 5**) and is vested under the Department of Planning, Lands and Heritage.

### 2.2.7 Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) are declared by the Department of Water and Environmental Regulation (DWER) to prevent the degradation of important environmental values such as Threatened flora, TECs, or significant wetlands. The AA does not intersect any mapped ESAs (Department of Water and Environmental Regulation, 2021) as shown in **Map 5**:

- Karijini National Park (R 30082), a Class A reserve located 14 km northwest of the AA (Map 5)
- No locations of Threatened Flora within 20 km of the AA were present in the DBCA or RTIO databases. One taxon, *Seringia exastia*, whilst listed as Critically Endangered in the RTIO database, is no longer listed. The nearest Threatened species to the AA, *Thryptomene wittweri*, is located in Karijini National Park, 40km to the northwest (Biologic, 2023).

### 2.2.8 Land Use

The Robe River Mining Company Pty Ltd currently holds a mining lease over the AA (Tenement name: West Angelas, ID: AML70/00248). The lease is valid from 15 October 1971 through to 30 October 2033.

### 2.2.9 Indigenous Land Rights

The AA falls within the Yamatji Marlpa Aboriginal Corporation jurisdiction area (NNTT, 2017) and has one native title determinations over the area (Landgate, 2023a): the Yinhawangka Aboriginal Corporation (NNTT no. WC2010/011 and WC2010/016). There are three Indigenous Land Use Agreements (ILUAs) over the AA (Landgate, 2023b):

- Yinhawangka and BHP Billiton project agreement ILUA (NNTT no. WI2018/010)
- Yinhawangka and BHP project agreement initial ILUA (NNTT no. WI2016/001)
- RTIO and Yinhawangka people ILUA (NNTT no. WI2013/001).

# 3.0 Methods

## 3.1 Desktop Assessment

### 3.1.1 Literature Review

The literature review considered a selection of relevant reports detailing assessments undertaken either within or partially overlapping the current AA. These reports were provided by RTIO and are listed below in chronological order. Summarised information of these reports can be found in Appendix B**.** The surveys documented in these reports were undertaken in accordance with relevant EPA and DAWE guidelines (see **Section 2.1**).

- Angelo Project Detailed Vertebrate Fauna Survey (Biologic Environmental Survey, 2025)
- West Angelas NVCP 2 Flora, Vegetation, and Fauna Survey (SLR, 2025)
- Angelo River Project Detailed Flora and Vegetation Survey (Biologic Environmental Survey, 2023).

- Mount Ella East and Deposit J Targeted Flora and Vertebrate Fauna Survey Memorandum (Biologic Environmental Survey, 2022)
- Deposit J Riparian Flora and Vegetation Survey (Biologic Environmental Survey, 2021a)
- West Angelas Targeted *Tetratheca fordiana* Survey (Astron Environmental Services, 2018)
- Flora and Vegetation Survey at Indabiddy (Rio Tinto Iron Ore, 2013)
- Angelo River Vertebrate Fauna Baseline Survey (ENV Australia, 2012b)
- Angelo River Flora and Vegetation Assessment (ENV Australia, 2012a)
- Flora and Vegetation Survey for Proposed Exploration Drilling at ML248 (Rio Tinto Iron Ore, 2011)
- Botanical Survey for Exploration Drilling at Indabiddy Deposit (Angelo River) (Rio Tinto Iron Ore, 2010).

### 3.1.2 Database Searches

Database searches were undertaken to compile a list of flora, vegetation communities and fauna known to occur in the surrounding area and identify significant flora, fauna, and ecological communities with potential to occur within the AA (**Table 5**). These database searches had been performed as part of the NVCP 2 project conducted by SLR (2025). The AA and the database search area buffer (up to 20km) around the AA is herein referred to as the Desktop Study Area. Click or tap here to enter text.

**Table 5: Database search details**

| Database name | Date received | Search target | Buffer around the AA |
|---|---|---|---|
| RTIO Internal Database (Rio Tinto Iron Ore, 2023b) | 29 September 2023 | Inventory of flora and fauna species | 20 km |
| Threatened and Priority Ecological Communities database search (DBCA, 2024b) | 13 October 2023 | TECs and PECs | 20 km |
| Threatened and Priority Flora (TPFL) database search (DBCA, 2024d) | 13 October 2023 | Threatened and Priority flora | 20 km |
| Western Australian Herbarium Flora database search (DBCA, 2024e) | 5 December 2023 | Threatened and Priority flora | 20 km |
| Threatened and Priority Fauna database search (DBCA, 2024b) | 13 October 2023 | Threatened and Priority fauna | 20 km |
| Protected Matters Search Tool (PMST) (DCCEEW, 2024) | 15 May 2025 | Threatened flora, fauna, and ecological communities | 20 km |
| NatureMap (DBCA, 2024a) | 19 May 2025 | Flora and fauna | 20 km |

### 3.1.3 Likelihood of Occurrence

Significant flora and fauna taxa identified during the desktop assessment were assessed to determine the likelihood of their occurrence within the AA. The assessment used the likelihood of occurrence criteria presented in **Table 6**.

Taxa listed as Marine only under the EPBC Act were not considered to be significant taxa because the Marine listing does not constitute MNES under the EPBC Act. Additionally, erroneous records (i.e. records that occur well outside a taxon's known distribution) were excluded from consideration. Only taxa that have been previously recorded within the AA or were assessed as having a high or medium likelihood of occurrence are discussed in detail.

**Table 6: Likelihood of occurrence criteria**

| Rank | Criteria |
|---|---|
| Previously Recorded | The taxon has been previously recorded within the AA (Map 1) according to database search or literature review results. |
| High<br>(Likely to occur) | Suitable habitat is present within the AA, and:<br>• For flora, the taxon has been recorded within 5 km of the AA.<br>• For fauna, the taxon has been recorded more than once within the Desktop Study Area (Map 12) in the last 15 years. |
| Medium<br>(May occur) | Suitable habitat is marginal or limited in extent within the AA, or suitable habitat is present within the AA, and:<br>• For flora, the taxon has not been recorded within 5 km of the AA, however it has been recorded within 15 km of the AA.<br>• For fauna, the taxon has not been recorded more than once within the Desktop Study Area in the last 15 years. |
| Low<br>(Unlikely to occur) | Suitable habitat is not present within the AA; the AA is outside the taxon's known distribution; the taxon is very infrequently or not recorded despite previous survey effort and most likely transient or vagrant; or the taxon is believed to be extinct or locally extinct. |

## 3.2 Previous Surveys

A summary of spatial data supplied by RTIO relating to field sampling effort previously conducted within and overlapping the AA is presented in **Table 7** and presented in **Map 6**. Data supplied included field site locations, conservation significant flora and fauna locations, tracklogs, survey boundaries, survey records, vegetation type mapping, and fauna habitat mapping. These data have been collated to inform the results of this report and produce a spatial data package as part of the NVCP application process.

An overview of the distribution of flora sampling effort within the AA using datasets supplied by RTIO is presented in **Map 7** and summarized in **Table 8** below.

**Table 7: Summary of Survey Data provided by RTIO**

| FMDS_No | Source | Author |
|---|---|---|
| **Flora and Vegetation** | | |
| RTIO-1039347 | Angelo River Project Detailed Flora and Vegetation Survey | (Biologic Environmental Survey, 2023) |
| RTIO-HSE-0358574 | Deposit J Riparian Flora and Vegetation Survey | (Biologic Environmental Survey, 2021a) |
| RTIO-HSE-0204192 | Flora and Vegetation Survey at Indabiddy | (Rio Tinto Iron Ore, 2013) |
| RTIO-HSE-0142330 | Angelo River Flora and Vegetation Assessment | (ENV Australia, 2012a) |

| FMDS_No | Source | Author |
|---|---|---|
| RTIO-HSE-0120152 | Flora and Vegetation Survey for Proposed Exploration Drilling at ML248 | (Rio Tinto Iron Ore, 2011) |
| RTIO-HSE-0084348 | Botanical Survey for Exploration Drilling at Indabiddy Deposit (Angelo River) | (Rio Tinto Iron Ore, 2010) |
| RTIO-HSE-0336262 | West Angelas Beyond 2020 Detailed Flora and Vegetation Survey: Phases 1 and 2 | (Biota Environmental Services, 2020) |
| RTIO-HSE-0193467 | Statement Addressing the 10CP for the Angelo River Evaluation Drilling_AR-12-10464 | (2013 Rio Tinto Iron Ore, 2013) |
| RTIO-0331917 | West Angelas Targeted Tetratheca fordiana survey | (Astron Environmental Services, 2018) |
| **Fauna** | | |
| RTIO-0999604 | Angelo Project Detailed Vertebrate Fauna Survey | (Biologic Environmental Survey, 2025) |
| RTIO-HSE-0142972 | Angelo River Vertebrate Fauna Baseline Survey | (ENV Australia, 2012b) |
| RTIO-HSE-0204192 | Flora and Vegetation Survey at Indabiddy (Includes terrestrial fauna records) | (Rio Tinto Iron Ore, 2013) |
| RTIO-HSE-0084348 | Botanical Survey for Exploration Drilling at Indabiddy Deposit (Angelo River) (Includes terrestrial fauna records) | (Rio Tinto Iron Ore, 2010) |
| **Biological** | | |
| RTIO-1106750 | West Angelas NVCP 2 Flora, Vegetation, and Fauna Survey | (SLR Consulting, 2025a) |
| RTIO-0982660 | Mount Ella East and Deposit J Targeted Flora and Vertebrate Fauna Survey Memorandum | (Biologic Environmental Survey, 2022) |
| RTIO-HSE-0212032 | Statement Addressing the 10 Clearing Principles - Deposit J, Angelo River | (Eco Logical Australia, 2013) |

**Table 8: Previous Flora and Vegetation survey effort for the AA**

| Sampling Method | Angelo Project Two season detailed Phase 1 (Biologic) | Angelo Project Two season detailed Phase 2 (Biologic) | Deposit J Riparian Flora and Vegetation Survey (Biologic) | Angelo River Flora and Vegetation Assessment (ENV Australia) | Total of Method |
|---|---|---|---|---|---|
| Quadrat | 17 | 14 | 7 | 0 | **38^** |
| Relevé | 1 | 1 | 1 | 1 | **4^** |
| **Total** | **18** | **15** | **8** | **1** | **42^** |

^Includes Phase 2 re-scores.

An overview of the distribution of fauna sampling effort within the AA and their associated datafile is shown in **Map 7** and summarised in **Table 9** below. In addition, a total of 20 hours of Census Bird Survey was undertaken within the AA during the previous surveys.

**Table 9: Previous fauna survey effort by sample type, dataset, and number of sites within the AA**

| Sampling Method | RTIO-0982660 | RTIO-0999604 | RTIO-HSE- 0142972 | Total |
|---|---|---|---|---|
| ARU (acoustic) | | 2 | | **2** |
| ARU (ultrasonic) | 1 | 8 | | **9** |
| Cage trap | | 8 | 12 | **20** |
| Camera trap (baited) | | 9 | | **9** |
| Elliott trap | | 80 | 20 | **100** |
| Funnel trap | | 80 | 32 | **112** |
| Habitat assessment only | 3 | 37 | | **40** |
| Pitfall trap (dry) | | 40 | 20 | **60** |
| Targeted search site | | 1 | | **1** |
| **Total of Dataset** | **4** | **265** | **84** | **353** |

## 3.3 Vegetation Type and Condition Mapping Consolidation

Vegetation mapping has been previously conducted by RTIO and multiple consultancies for various surveys encompassing the NVCP AA between 2010 and 2023 (ENV Australia, 2012a; Rio Tinto Iron Ore, 2013; Biologic Environmental Survey, 2021b; Rio Tinto Iron Ore, 2011; Rio Tinto Iron Ore, 2010; Biologic, 2023).

The most recent vegetation and condition mapping was conducted by Biologic (2023) as part of their Angelo River Project Detailed and Vegetation Survey for RTIO in 2023. This mapping combined relevant existing mapping, ground-truthing, sample site data, statistical analyses and aerial imagery to form the basis of the vegetation and condition maps for this report as requested by RTIO. SLR did not update or amend any vegetation types or condition rankings assigned by Biologic. However, at the request of RTIO, SLR extrapolated vegetation mapping for a small, unmapped area (~11 ha) in the northwest corner of the AA (AA) that was not included in the original dataset.

Mapping polygons captured by Biologic (2023) were assigned vegetation ranking codes as per the Rio Tinto Data Standards: Flora (2023) Version 11 (Rio Tinto Iron Ore, 2023a), which are in accordance with the Eremaean Botanical Provinces vegetation condition scale (EPA, 2016a).

## 3.4 Fauna Habitat Mapping Consolidation

Fauna habitat studies have been previously conducted by multiple consultancies for the West Angelas locality (see **Table 7**). The most recent and comprehensive fauna habitat

mapping was conducted by Biologic in 2024 for Rio Tinto, as part of their Angelo Project Detailed Vertebrate Fauna Survey (Biologic Environmental Survey, 2025), and was used for this Desktop Assessment as requested by RTIO. The fauna habitat types outlined in this mapping is consistent with the RTIO Fauna Habitat Guidelines and Definitions V2 (Rio Tinto Iron Ore, 2023c).

Biologic's most recent fauna habitat mapping covers the majority of the current AA, and no amendments were made to their delineation of fauna habitats. However, a comparison with current aerial imagery identified additional areas of disturbance. Using data provided by RTIO, SLR expanded the 'Disturbed' mapping unit to reflect observed changes, including recent mining activity, road widening, and other infrastructure developments.

Additionally, an 11 ha portion within the current AA was not covered by Biologic's mapping. SLR extrapolated fauna habitat types within this area based on adjacent habitats mapped by Biologic. The boundaries of areas mapped by SLR and Biologic are defined in **Map 13**.

# 4.0 Results and Discussion

## 4.1 Flora and Vegetation

### 4.1.1 Desktop Assessment

The DBCA and RTIO database results and literature review identified 43 significant flora taxa occurring within the Desktop Study Area (comprising both the AA and the 20km database search buffer); these results comprised the following:

- Two Priority 1 taxa
- 10 Priority 2 taxa
- 26 Priority 3 taxa
- Five Priority 4 taxa.

Additionally, two species of interest (*Dolichocarpa* sp. nov, and *Eremophila* aff. *magnifica*) were identified by the RTIO database results as occurring within the Desktop Study Area.

No Threatened Flora were present within the Desktop Study Area.

Key findings of the literature review are summarised in **Appendix B,** and database search results are summarised in **Appendix C** and **Map 8**.

Two PECs were identified within the Desktop Study Area:

- West Angelas Cracking Clays (Priority 1) and its associated 2000m buffer, approximately 6 km north of the NVCP 3 AA.
- Coolibah - Lignum Flats: sub type 1: Coolibah and mulga woodland over lignum and tussock grasses on clay plains (Coondewanna and Wanamunna flats and Mt Bruce Flats) (Priority 3) and its associated buffer, approximately 17.5 km north of the NVCP 3 AA.

PECs identified by database searches are presented in **Map 9**.

#### 4.1.1.1 Significant Flora Potentially Occurring Within the AA

Thirteen significant flora taxa have been recorded within the NVCP 3 AA during previous surveys:

- *Acacia subtiliformis* (P3)
- *Aristida jerichoensis* var. *subspinulifera* (P3)
- *Aristida lazaridis* (P3)
- *Eremophila naaykensii* (P3)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P3)
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
- *Indigofera gilesii* (P3)
- Oxalis sp. Pilbara (M.E. Trudgen 12725) (P3)
- *Pilbara trudgenii* (P3)
- *Rostellularia adscendens* var. *latifolia* (P3)

- *Solanum kentrocaule* (P3)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3).

Thirteen significant flora taxa were assessed as having a high likelihood of occurring within the AA, seven were assessed as having a medium likelihood of occurring within the AA and the remaining 10 were assessed as having a low likelihood of occurring within the AA.

The complete results of the significant flora likelihood of occurrence assessment are provided in **Appendix C**.

### 4.1.2 Floristic Composition

The supplied RTIO flora database contained 72,627 records from multiple consultant field surveys conducted within the AA and 20 km buffer, comprising 1,244 flora entities. The dataset required considerable vetting to reflect current taxonomic nomenclature and compatibility with the most recent Pilbara vascular species list (January 2024) issued by DBCA. Any entity that was absent from this list (i.e. not on Florabase as having been previously recorded in the Pilbara bioregion) was omitted from the total flora count. The following changes were made:

- Spelling errors were corrected.
- Phrase names (PN) were amended to current names.
- Indeterminate species were removed e.g. *Boerhavia* sp.
- Unrecognised hybrid species were removed e.g. *Acacia ayersiana* (narrow phyllode variant).
- Unconfirmed taxa that likely represented a taxon already recorded were removed (e.g. *Aristida ? jerichoensis* var. *subspinulifera* was recorded, however *Aristida jerichoensis* var. *subspinulifera* was already confirmed within the AA).
- Nine entities in the RTIO database but not on the DBCA Pilbara vascular species list were removed; these are shown below in **Table 10**. Several of these taxa were recorded relatively recently and in several locations, which indicates that these may not be erroneous records and may be considered for future DBCA Pilbara vascular species listings.

From this list, 341 taxa from 141 genera across 47 families were confirmed within the NVCP 3 AA (**Appendix D**). The most abundant genus was *Acacia* (29 taxa), and the most diverse families were Fabaceae (61 taxa), Poaceae (59 taxa), Malvaceae (40 taxa) and Asteraceae (25 taxa).

A list of all omitted entities and their rationale for omission is presented in **Appendix E.**

**Table 10: Species not in Pilbara vascular species list omitted from total species list**

| Taxon | Number of locations | Additional context |
|---|---|---|
| *Amaranthus* aff. *undulatus* (round leaves, short tepals) | 1 | Not in Pilbara vascular list but is commonly recorded during Pilbara surveys. Was recorded from a Biologic relevé in 2020/2021. |
| *Acacia ayersiana* (narrow phyllode variant) | 2 | Not in Pilbara vascular list – may be unrecognized hybrid/variant. Recorded from two Biologic relevés in 2023. |

| Taxon | Number of locations | Additional context |
|---|---|---|
| *Acacia bivenosa* hybrid | 2 | Not in Pilbara vascular list – may be unrecognized hybrid/variant. Recorded from two Biologic flora sites in 2021. |
| *Maireana planifolia* x *villosa* | 2 | Currently not in Pilbara vascular list – may be unrecognized hybrid/variant. Recorded from two Biologic flora sites in 2023. |
| *Pandorea pandorana* | 1 | Currently not in Pilbara vascular list and occurs well outside the Pilbara bioregion according to Florabase. Recorded from a Biologic relevé in 2023. |
| *Ptilotus nobilis* | 1 | Not in Pilbara vascular list and occurs well outside the Pilbara bioregion according to Florabase. May be an erroneous record. Recorded from one ENV Australia quadrat in 2011. |
| *Senna artemisioides* subsp. *oligophylla* (thinly sericeous form MET 15,035) | 3 | Currently not in Pilbara vascular list – may be unrecognized hybrid/variant. Recorded from 3 Biologic flora sites in 2023. |
| *Senna artemisioides* subsp. *oligophylla* x subsp. *helmsii* | 9 | Not in Pilbara vascular list – may be unrecognized hybrid/variant. Recorded from 9 Biologic flora sites in 2023. |

### 4.1.3 Significant Flora

A total of 43 confirmed significant flora species were identified as occurring within 20 km of the NVCP 3 AA. Of these, 13 species were recorded within the AA during flora and vegetation surveys. All 43 species, their conservation status, and a count of locations recorded within the AA and Desktop Assessment area are presented below in **Table 11**. Some priority locations were represented by both RTIO and DBCA databases, however these records have been consolidated to avoid duplication of total numbers; additionally, several species were also present in flora sites that were rescored across two phases, so these records were also not duplicated. Species that were tentatively identified (e.g. *Aristida ?jerichoensis* var. *subspinulifera*) were treated as the same confirmed species (e.g. *Aristida jerichoensis* var. *subspinulifera*), and species which have been delisted as priority species since field surveys, namely *Rhagodia* sp. Hamersley (M. Trudgen 17794), have been omitted from **Table 11**.

**Table 11: Priority flora recorded within the NVCP 3 Desktop and AA**

| Status | Taxon | Total Desktop Study locations | AA # records+ |
|---|---|---|---|
| P1 | *Isotropis forrestii* | 1 | - |
| P1 | *Sida* sp. Turee Creek (P.-L.de Kock PLDK1116) | 187 | - |
| P2 | *Eremophila pusilliflora* | 427 | - |
| P2 | *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) | 443 | 8 |
| P3 | *Pentalepis trichodesmoides* subsp. *hispida* | 1 | - |
| P2 | *Tetratheca fordiana* | 114 | - |
| P3 | *Acacia daweana* | 3 | - |

| Status | Taxon | Total Desktop Study locations | AA # records+ |
|---|---|---|---|
| P3 | *Acacia effusa* | 222 | - |
| P3 | *Acacia subtiliformis* | 32 | 4 |
| P3 | *Aristida jerichoensis var. subspinulifera* | 247 | 3 |
| P3 | *Aristida lazaridis* | 423 | 4 |
| P3 | *Dampiera metallorum* | 50 | - |
| P3 | *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) | 66 | - |
| P3 | *Eremophila magnifica* subsp. *velutina* | 7 | - |
| P3 | *Eremophila naaykensii* | 1,485 | 8 |
| P3 | *Eremophila* sp. West Angelas (S. van Leeuwen 4068) | 174 | 2 |
| P3 | *Euphorbia clementii* | 1 | - |
| P3 | *Euphorbia stevenii* | 1 | - |
| P3 | *Euphorbia inappendiculata* var. *inappendiculata* | 12 | - |
| P3 | *Geijera salicifolia* | 1 | - |
| P3 | *Goodenia lyrata* | 1 | - |
| P3 | *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) | 473 | - |
| P3 | *Grevillea saxicola* | 130 | - |
| P3 | *Indigofera gilesii* | 526 | 4 |
| P3 | *Ipomoea racemigera* | 83 | - |
| P3 | *Isotropis parviflora* | 247 | - |
| P3 | *Neptunia longipila* | 2 | - |
| P3 | *Olearia mucronata* | 13 | - |
| P3 | *Oxalis* sp. Pilbara (M.E. Trudgen 12725) | 113 | 22 |
| P3 | *Pilbara trudgenii* | 281 | 24 |
| P3 | *Rostellularia adscendens var. latifolia* | 30 | 6 |
| P3 | *Sida* sp. Hamersley Range (K. Newbey 10692) | 2 | - |
| P3 | *Solanum kentrocaule* | 756 | 23 |
| P3 | *Streptoglossa* sp. Cracking clays (S. van Leeuwen et al. PBS 7353) | 4 | - |
| P3 | *Swainsona thompsoniana* | 56 | - |
| P3 | *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) | 68 | - |
| P3 | *Triodia* sp. Mt Ella (M.E. Trudgen 12739) | 1,889 | 139 |
| P3 | *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) | 8 | 1 |
| P4 | *Acacia bromilowiana* | 46 | - |

| Status | Taxon | Total Desktop Study locations | AA # records+ |
|---|---|---|---|
| P4 | *Eremophila magnifica* subsp. *magnifica* | 112 | - |
| P4 | *Lepidium catapycnon* | 19 | - |
| P4 | *Ptilotus mollis* | 19 | - |
| P4 | *Sida* sp. Barlee Range (S. van Leeuwen 1642) | 78 | - |
| (PSI) | *Dolichocarpa* sp. nov. | 25 | - |
| (PSI) | *Eremophila* aff. *magnifica* | 1 | - |
| (PSI) | *Eremophila* sp. x ? | 2 | - |
| | **Total** | **8,881** | **244** |

+Records at Phase 2 sites (i.e. rescores) have been counted once only to avoid duplication.

### 4.1.4 Introduced Flora

A total of 24 introduced flora taxa were identified within the Desktop Study Area by the RTIO database, DBCA database searches and DBCA's Dandjoo (formerly NatureMap), with seven of these recorded within the AA. **Table 12** below shows all introduced species and their presence within the AA and/or 20km database search buffer. Locations[1] of the seven species are shown in **Map 11**.

None of these species are listed as Declared Pests under the BAM Act (Department of Primary Industries and Regional Development, 2021), or as WoNS (DAWE, 2021). However, introduced species are allocated an 'Ecological Impact' and an 'Invasiveness' ranking under the DBCA Weed Prioritisation Process (WPP) for Pilbara Region (DBCA, 2016). Of the seven introduced species identified in the AA, four species are ranked High for Ecological Impact and Rapid for Invasiveness.

**Table 12: Introduced flora taxa recorded within the AA**

| Taxon | Common name | AA | 20km database search buffer | DBCA Weed Prioritisation Process | |
|---|---|---|---|---|---|
| | | | | Ecological Impact | Invasiveness |
| **Aerva javanica* | Kapok Bush | - | ✓ | H | R |
| **Bidens bipinnata* | Bipinnate Beggartick | ✓ | ✓ | U | R |
| **Cenchrus ciliaris* | Buffel Grass | ✓ | ✓ | H | R |
| **Cenchrus setiger* | Birdwood Grass | - | ✓ | H | R |
| **Chloris barbata* | Purpletop Chloris | - | ✓ | H | R |
| **Chloris virgata* | Feathertop Rhodes Grass | ✓ | ✓ | H | R |
| **Citrullus amarus* | Camel Melon | - | ✓ | No information | No information |
| **Citrullus colocynthis* | Colocynth | - | ✓ | U | M |

[1] Note that this is not an exhaustive representation, and several species were recorded in flora sites and opportunistically, in multiple locations across the AA.

| Taxon | Common name | AA | 20km database search buffer | DBCA Weed Prioritisation Process | |
|---|---|---|---|---|---|
| | | | | Ecological Impact | Invasiveness |
| **Datura leichhardtii* | Native Thornapple | - | ✓ | U | U |
| **Erigeron bonariensis* | Flaxless Fleabane | - | ✓ | No information | No information |
| **Euphorbia hirta* | Asthma Plant | - | ✓ | L | S |
| **Flaveria trinervia* | Speedy Weed | ✓ | ✓ | No information | No information |
| **Hibiscus tridactylites* | Narrow-leaved Bladder Ketmia | - | ✓ | No information | No information |
| **Lactuca serriola* | Prickly Lettuce | - | ✓ | No information | No information |
| **Malvastrum americanum* | Spiked Malvastrum | ✓ | ✓ | H | R |
| **Oxalis corniculata* | Yellow Wood Sorrel | - | ✓ | No information | No information |
| **Physalis* sp. | Wild Gooseberry | - | ✓ | U | U |
| **Rumex vesicarius* | Ruby Dock | - | ✓ | H | R |
| **Setaria verticillata* | Whorled Pigeon Grass | ✓ | ✓ | H | R |
| **Sigesbeckia orientalis* | Indian Weed | ✓ | ✓ | U | R |
| **Solanum nigrum* | Blackberry Nightshade | - | ✓ | L | R |
| **Sonchus oleraceus* | Common Sowthistle | - | ✓ | L | R |
| **Tribulus terrestris* | Caltrop | - | ✓ | U | M |
| **Vachellia farnesiana* | Mimosa Bush | - | ✓ | H | R |

### 4.1.5 Unconfirmed Flora

Twenty-two of the 377 entities (5.8% of the taxa recorded) could not be identified to species level. This is likely due to any number of reasons, such as:

- Specimen too small or lacking reproductive features (sterile)
- Inadequate material for positive identification
- Characteristics overlapping with other similar taxa
- Potential hybrid not recognised by WAH.

Nine entities were identified to genus level. Ten entities likely represented duplicates of species/taxa already confirmed within the AA, five of which were tentatively identified to species level. An additional four were tentatively identified to species level.

One unconfirmed flora taxa was analogous to a significant flora taxa identified by the desktop assessment (*Aristida ?jerichoensis* var. *subspinulifera*).

All unconfirmed flora were omitted from the total confirmed flora taxa count and are presented in **Appendix E**.

### 4.1.6 Vegetation Condition

Vegetation condition within the AA ranged from Very Good to Excellent, with the majority (67.12%) being in Excellent condition (**Table 13**; **Map 11**). Disturbed areas comprised 2.25% of the survey area, primarily associated with clearing for mining infrastructure.

Disturbances in areas mapped as Very Good condition by Biologic (2023) were primarily in the form of **Bidens bipinnata* (Bipinnate Beggartick). Other recent surveys also identified mining infrastructure and weeds as the primary disturbances influencing vegetation condition within the AA (Biologic Environmental Survey, 2021b).

**Table 13: Summary of vegetation condition within the AA**

| Vegetation condition | Area (ha) | Percentage of AA |
|---|---|---|
| Excellent | 2,274.57 | 67.12% |
| Very Good | 1038.21 | 30.63% |
| **Subtotal** | **3312.78** | **97.75%** |
| Disturbed | 76.2 | 2.25% |
| **Total** | **3,388.98** | **100% (99.99%)** |

### 4.1.7 Vegetation Types

Fifteen natural vegetation types across four broad landforms (drainages, gorges/gullies, hills, plains) were identified and mapped within the AA based largely on consolidated mapping by Biologic in 2023 (**Table 14**; **Map 10**).

**Table 14: Summary of Vegetation types within the AA**

| Short Code | Vegetation Unit | Vegetation Description | Vegetation Condition | Extent (ha) Within Study Area | Proportion (%) of Study Area |
|---|---|---|---|---|---|
| **Vegetation of Drainages** | | | | | |
| D03 | ExChPlApyTErTHtTp | *Eucalyptus xerothermica* and/or *Corymbia hamersleyana* low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* tall open shrubland over *Tephrosia rosea* var. Fortescue Creeks (M.I.H. Brooker 2186) low open shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland to scattered hummock grasses | Very Good to Excellent | 101.8 | 3.0 |
| D07 | ChAmoTHtTp | *Corymbia hamersleyana* low open woodland over *Acacia monticola* tall shrubland over *Themeda triandra* very open tussock grassland over *Triodia pungens* very open hummock grassland | Excellent | 30.1 | 0.9 |
| D13 | ExPlAppTtEmu | *Eucalyptus xerothermica* low open woodland over *Petalostylis labicheoides*, *Acacia pyrifolia* tall sparse shrubland over *Themeda triandra*, *Eriachne mucronata* tussock grassland | Excellent | 84.8 | 2.50 |
| **Vegetation of Gorges and Gullies** | | | | | |
| G02 | AanCALcCfCAPmPToERImARbTp | *Acacia* '*aneura*', *Callitris columellaris* and/or *Corymbia ferriticola* low woodland over *Capparis mitchellii* scattered tall shrubs over *Ptilotus obovatus* low open shrubland over *Eriachne mucronata* and/or *Aristida burbidgeae* very open tussock grassland with *Triodia pungens* scattered hummock grasses | Excellent | 96.1 | 2.8 |
| G04 | ElCfChTpTsm | *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia ferriticola*, *C. hamersleyana* low open woodland over *Triodia pungens*, *T.* sp. Mt Ella (M.E. Trudgen 12739) (P3) low open hummock grassland | Excellent | 5.3 | 0.2 |
| **Vegetation of Hills** | | | | | |
| H05 | ChElAmHAgTpTw | *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Acacia maitlandii* open heath over *Halgania gustafsenii* var. Mid West (G. Perry 370) low open shrubland over *Triodia pungens*, *T. wiseana* hummock grassland | Excellent | 392.7 | 11.6 |

| Short Code | Vegetation Unit | Vegetation Description | Vegetation Condition | Extent (ha) Within Study Area | Proportion (%) of Study Area |
|---|---|---|---|---|---|
| H09 | ElCdEgTv | *Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia deserticola* subsp. *deserticola* low open woodland over *E. gamophylla* low open mallee woodland over *Triodia vanleeuwenii* low hummock grassland | Excellent | 1,496.7 | 44.2 |
| H15 | ElTpTw | *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Triodia pungens* and/or *T. wiseana* open hummock grassland | Excellent | 96.7 | 2.9 |
| H17 | ElChEkTwTsmERIm | *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamersleyana* low open woodland over *E. kingsmillii* low open mallee woodland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) (P3) low open hummock grassland over *Eriachne mucronata* low isolated tussock grasses | Excellent | 8.9 | 0.3 |
| H18 | ChElMvTwTsm | *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Mirbelia viminalis* low open shrubland over *Triodia wiseana*, *T.* sp. Mt Ella (M.E. Trudgen 12739) (P3) low hummock grassland | Very Good | 84.3 | 2.5 |
| **Vegetation of Plains** | | | | | |
| P05 | AanApERfoTp | *Acacia* '*aneura*' and/or *A. pruinocarpa* low woodland to low open forest over *Eremophila forrestii* subsp. *forrestii* open shrubland over *Triodia pungens* very open hummock grassland | Excellent | 7.9 | 0.2 |
| P17 | AapAanAcaTHtCfARjsARcPr | *Acacia aptaneura*, *A. aneura*, *A. catenulata* subsp. *occidentalis* low open woodland over *Themeda triandra*, *Chrysopogon fallax*, *Ar. jerichoensis* var. *subspinulifera* low sparse tussock grassland over *Ar. contorta*, *Perotis rara* low open bunch grassland on clays and clay loams on hardpan plains, drainage areas/floodplains and claypans | Very Good | 182.3 | 5.4 |
| P19 | AapAayAcaApERfrTpTmENpARc | *Acacia aptaneura*, *A. ayersiana*, *A. catenulata* subsp. *occidentalis*, *A. pruinocarpa* low woodland over *Eremophila fraseri* subsp. *fraseri* mid isolated shrubs over *Triodia pungens*, *T. melvillei* low isolated clumps of hummock grasses over *Enneapogon polyphyllus*, *Aristida contorta* low isolated clumps of tussock grasses | Very Good | 348.4 | 10.3 |
| P20 | CccAanAapAptARcENpARo | *Corymbia candida* subsp. *candida* mid isolated trees over *Acacia aneura*, *A. aptaneura* and *A. pteraneura* low woodland over *Aristida contorta*, *Enneapogon polyphyllus* and *Ar. obscura* low sparse tussock grassland | Very Good | 18.8 | 0.6 |

| Short Code | Vegetation Unit | Vegetation Description | Vegetation Condition | Extent (ha) Within Study Area | Proportion (%) of Study Area |
|---|---|---|---|---|---|
| P21 | AapApAayAca ERfrERfoERpoSgSePsTpTv | *Acacia aptaneura*, *A. pruinocarpa*, *A. ayersiana*, *A. catenulata* subsp. *occidentalis* low woodland over *Eremophila fraseri* subsp. *fraseri*, *E. forrestii subsp. forrestii*, *E. phyllopoda* subsp. *obliqua* mid sparse shrubland over *Senna glaucifolia*, *Sida ectogama*, *Ptilotus schwartzii* low isolated shrubs over *Triodia pungens*, *T. vanleeuwenii* low sparse hummock grassland | Very Good | 357.9 | 10.6 |
| **Other Units** | | | | | |
| Dis | Disturbed | Devoid of vegetation. | Cleared | 76.2 | 2.2 |
| | | | **Total** | **3,389.0 (3388.9)** | **100%** |

*Brackets indicate species that may or may not be present but were observed as dominant at some of the sites that make up the vegetation type.

^Minor discrepancies in totals shown and additions of individual proportions are due to rounding.

### 4.1.8 Significant Vegetation

#### 4.1.8.1 Threatened and Priority Ecological Communities

None of the vegetation types within the AA were considered analogous to either of the two PECs identified in the database search results. Whilst Biologic (2023) mapped one vegetation type as analogous to the community, this was located approximately 4.5km to the southeast of the AA.

#### 4.1.8.2 Locally Significant Vegetation

Ten vegetation types were considered locally significant, primarily for supporting Priority listed flora (Biologic, 2023). These vegetation types are considered locally significant only and do not meet EPA guidance on significant vegetation. The reason each is considered locally significant is provided below in **Table 15**.

**Table 15: Other significant vegetation recorded within the AA**

| Vegetation condition | Area (ha) | Percentage of AA | Reason for significance |
|---|---|---|---|
| Very Good | 182.2 (P17) | 5.4% (P17) | Portions of vegetation type P17 and P19 were identified by Biologic (2023) as having high local significance due to supporting the only known occurrences of the two novel taxa, *Dolichocarpa* sp. nov and *Sida* sp. nov.<br>Whilst there are no records of either of the two novel taxa within the NVCP3 AA, *Sida* sp. nov was recorded just outside the southern boundary of the AA, and the vegetation types in which both taxa were recorded extend into the NVCP3 AA (Biologic, 2023).<br>(Following these surveys, *Sida* sp. nov was described and named *Sida* sp. Turee Creek (P.-L.de Kock PLDK1116)). |
| | 348.4 (P19) | 10.3% (P19) | |
| Excellent, Very Good | 96.1 (G02) | 2.8% (G02) | Vegetation types G02, G04, H15, H17 and P21 were identified by Biologic (2023) as having high local significance for supporting a suite of priority flora that are restricted within the Survey Area and are of limited occurrence in the Hamersley subregion. Species found in these vegetation types were:<br>• *Aristida jerichoensis* var. *subspinulifera*<br>• *Eremophila naaykensii*<br>• *Eremophila* sp. West Angelas (S. van Leeuwen 4068)<br>• *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)<br>• *Oxalis* sp. Pilbara (M.E. Trudgen 12725)<br>• *Solanum kentrocaule*<br>• *Pilbara trudgenii*<br>• *Rostellularia adscendens* var. *latifolia*<br>• *Triodia* sp. Mt Ella (M.E. Trudgen 12739) |
| | 5.3 (G04) | 0.2% (G04) | |
| | 96.7 (H15) | 2.9% (H15) | |
| | 8.9 (H17) | 0.3% (H17) | |
| | 357.9 (P21) | 10.6% (P21) | |

| Vegetation condition | Area (ha) | Percentage of AA | Reason for significance |
|---|---|---|---|
| | | | • *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) |
| Excellent, Very Good | 96.1 (G02) | 2.8% (G02) | Biologic identified a number of vegetation types that had medium local significance in supporting priority flora (G02, H15, H17, H18, P05, P17, P19, P20 and P21). These taxa were either:<br>• restricted within the AA but are common across the Hamersley subregion; or<br>• common within the AA but restricted across the Hamersley subregion<br>These flora taxa included the aforementioned 10 species (excluding *Eremophila* sp. West Angelas (S. van Leeuwen 4068)), as well as *Aristida lazaridis* and *Indigofera gilesii*.<br>The aforementioned vegetation types were also considered by Biologic (2023) to have some medium local significance as they support Ecosystems at Risk:<br>• Mulga grove/inter-grove, valley and lower slower communities of the Hamersley Range<br>• Hilltop/mountain top floras of the Hamersley Range |
| | 96.7 (H15) | 2.9% (H15) | |
| | 8.9 (H17) | 0.3% (H17) | |
| | 84.3 (H18) | 2.5% (H18) | |
| | 7.9 (P05) | 0.2% (P05) | |
| | 182.3 (P17) | 5.4% (P17) | |
| | 348.4 (P19) | 10.3% (P19) | |
| | 18.8 (P20) | 0.6% (P20) | |
| | 357.9 (P21) | 10.6% (P21) | |

### 4.1.9 Groundwater Dependent Ecosystems

Most vegetation within the AA comprised xerophytic species that have no interaction with groundwater. Some of the minor drainages, mapped as vegetation type D03 by Biologic (Biologic, 2023) support one facultative phreatophyte, *Eucalyptus victrix*, however, as well as minor drainages, this species is commonly observed across low lying plains and minor floodplains.

## 4.2 Fauna

### 4.2.1 Desktop Assessment

The database searches and literature review identified 278 terrestrial vertebrate fauna taxa occurring within the Desktop Study Area, comprising:

- Six amphibians from three families, of which none are significant
- 125 birds from 47 families, of which 18 are significant
- 41 mammals from 15 families, of which seven are significant
- 106 reptiles from 10 families, of which five are significant.

Key findings of the literature review are summarised in **Appendix B**, a complete list of fauna taxa recorded within the Desktop Study Area is presented in **Appendix F**, and database search results are displayed in **Map 12**.

### 4.2.2 Fauna Habitats

Eight fauna habitats (excluding Disturbed areas) were identified and mapped within the AA. Fauna habitats are presented in **Map 13**, described below in **Table 16**. Small discrepancies

in fauna habitat extents (i.e., not adding up to the exact area extent of the AA) are due to rounding.

### 4.2.3 Fauna Habitat of Significance

Two broad fauna habitats within the AA contained microhabitats that were identified as critical and supporting habitats for significant fauna species (**Map 13**).

The desktop assessment identified the 'Gorge/Gully' habitat as potentially containing cave systems which are deep and humid enough to support Pilbara Leaf-nosed Bat and Ghost Bat roosts, as well as suitable cave habitat for Northern Quoll dens and Pilbara Olive Python hunting areas. The Gorge/Gully habitats also have areas which would be suitable for Gane's Blind Snake, and the airspace will also be utilised by birds of prey (e.g. Peregrine Falcon) while hunting. These birds of prey will typically nest on cliff faces and rock ledges which may also be found in the Gorge/Gully habitats. The desktop assessment also found that the 'Major Drainage' habitat contains suitable creek systems and wetland areas to support Pilbara Olive Pythons are suitable hunting areas for Northern Quolls, Ghost Bats, and Pilbara Leaf-nosed Bats.

Both the Gorge/Gully and Major Drainage habitats constitute a small portion of the AA (154.53 ha, 4.56%) but are widely and evenly distributed throughout the AA and the broader Hamersley sub-region. As Northern Quolls, Pilbara Olive Pythons Ghost Bats and Pilbara Leaf-nosed Bat have previously been recorded adjacent to the AA, it is likely that these species will utilise the Gorge/Gully and Major Drainage habitats within the AA.

The Rocky Hill and Stony Plain habitats were also suitable for a variety of grassland species such as the Brush-tailed Mulgara, Short-tailed Mouse, Western Pebble-mound Mouse, and Pilbara Barking Gecko. The Western Pebble-mound Mouse has previously been recorded within the AA.

**Table 16: Fauna habitats recorded within the AA**

| Fauna habitat | Total area, percentage of AA | Habitat description | Typical microhabitats | Value to Significant Fauna |
|---|---|---|---|---|
| Alluvial Plain | 6.04 ha, 0.18% | Associated with the flood plains adjacent to drainage lines. Often contains tussock grasses and has a high vegetation cover. Substrate of alluvial, silt loamy/clay. Low lying areas that have a very slight to no gradient. | • Increased vegetation cover compared to other plains habitats<br>• Leaf litter<br>• Soft substrate for burrowing species<br>• Logs and hollows | Ghost Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Northern Quoll: Moderate - Provides potential foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides potential foraging and dispersal habitat.<br>Pilbara Olive Python: Low - Provides low quality foraging and dispersal habitat. |
| Claypan | 1.19 ha, 0.04% | Claypan habitat consists of heavy clay-based soils (both cracking and non-cracking surfaces). Low lying areas that have very slight to no gradient and are often drainage depressions. Typically have no vegetation cover. | • Seasonally inundated | Ghost Bat: Moderate - Provides value foraging and dispersal habitat.<br>Northern Quoll: Low - Provides low quality foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides value foraging and dispersal habitat.<br>Pilbara Olive Python: Low - Provides low quality foraging and dispersal habitat. |

| Fauna habitat | Total area, percentage of AA | Habitat description | Typical microhabitats | Value to Significant Fauna |
|---|---|---|---|---|
| Gorge/Gully | 118.63 ha, 3.50% | Gorge/Gully habitat is characterized by rugged, incised rock features that have moderate to steep sides and slopes. Gorges tend to be deeply incised with vertical cliff faces, while gullies are more open. Caves and water pools are most often encountered in this habitat type, Vegetation can be dense and complex in areas of soil deposition or sparse and simple where erosion has occurred. | • Rocky outcrops, crevices<br>• Boulder piles<br>• Scree<br>• Overhangs/caves<br>• Pools<br>• Ficus sp. stands | Ghost Bat: High - Provides core roosting habitat (caves).<br>Northern Quoll: High - Provides core habitat (shelter, denning and foraging).<br>Pilbara Leaf-nosed Bat: High - Provides core roosting habitat (caves).<br>Pilbara Olive Python: High - Provides core denning and shelter habitat. |
| Major Drainage | 35.90 ha, 1.06% | Major Drainage Line habitat is prone to flooding and is more likely to retain water when inundated. The structure and condition of vegetation often varies seasonally, particularly following rainfall events. This habitat supports an upper story of relatively tall Eucalyptus. | • Seasonally inundated<br>• Seasonal presence of pools<br>• Contains mature *Eucalyptus/Corymbia*<br>• Roosting sites for bird in canopy<br>• Hollow logs/tree hollows<br>• Supports fauna dispersal<br>• Breakaways/rock faces | Ghost Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Northern Quoll: Moderate - Provides potential foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Pilbara Olive Python: High - Provides shelter, foraging, and dispersal habitat. |

| Fauna habitat | Total area, percentage of AA | Habitat description | Typical microhabitats | Value to Significant Fauna |
|---|---|---|---|---|
| Minor Drainage | 34.23 ha, 1.01% | Minor Drainage Line habitat usually lacked a tall dense upper story but with a dense mid story, including sparse Eucalyptus sp. and *Acacia* sp. over tussock grasses and *Triodia* sp. hummock grasses. Does not include the minor drainage depressions that flow off high ground features. It is less likely to support surface water for long after rainfall. | • Seasonally inundated<br>• Contains occasional mature<br>• Eucalyptus/Corymbia<br>• Hollow logs/tree hollows<br>• Supports fauna dispersal | Ghost Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Northern Quoll: Moderate - Provides potential foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Pilbara Olive Python: High - Provides shelter, foraging, and dispersal habitat. |
| Mulga Woodland | 756.31 ha, 22.32% | Stands or bands of Mulga Woodland, over clay or stony substrates. Floodplain landforms or minor drainage systems subject to sheet flow following rainfall. Vegetation dominated by open Mulga with sparse to no understory of mixed small shrubs and tussock grasses. | • Logs<br>• Leaf litter<br>• Woody debris<br>• Soft substrate for burrowing species | Ghost Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Northern Quoll: Low - Provides low quality foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Pilbara Olive Python: Low - Provides low quality foraging and dispersal habitat. |
| Rocky Hill | 617.71 ha, 18.23% | Rocky Hill habitat comprises of low undulating hills and extensive foot slopes with a gradual gradient. Low hills with rounded summits, generally without cliff faces. | • High *Triodia* cover<br>• Exposed bedrock<br>• Small rock piles | Ghost Bat: High - Provides core roosting habitat (caves).<br>Northern Quoll: High - Provides core habitat (shelter, denning and foraging).<br>Pilbara Leaf-nosed Bat: High - Provides core roosting habitat (caves).<br>Pilbara Olive Python: High - Provides core denning and shelter habitat. |

| Fauna habitat | Total area, percentage of AA | Habitat description | Typical microhabitats | Value to Significant Fauna |
|---|---|---|---|---|
| Stony Plain | 1730.66 ha, 51.07% | Stony Plain habitat comprises flat to low undulating areas with vegetation dominated by Triodia hummock grasses of various life stages with scattered eucalypts and patches of various small to medium shrub species on stony, gravelly clay loam substrates. In some low-lying areas, isolated patches of sandy substrate occur. | • Sometimes suitable for burrowing species, depending on rock cover<br>• High *Triodia* cover<br>• Termite mounds | Ghost Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Northern Quoll: Low - Provides low quality foraging and dispersal habitat.<br>Pilbara Leaf-nosed Bat: Moderate - Provides high value foraging and dispersal habitat.<br>Pilbara Olive Python: Low - Provides low quality foraging and dispersal habitat. |
| Disturbed | 88.3 ha, 2.61% | Disturbed areas include where the natural vegetation and microhabitats have been disrupted, usually devoid of native vegetation. This includes tracks, laydown areas, camps, major roads/ highways and historic, large scale clearing. | None | None |
| **Total** | **3388.98 ha** | | | |

### 4.2.4 Significant Fauna

#### 4.2.4.1 Previously Recorded Within the AA

One significant taxon, the Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 (DBCA), was previously recorded within the AA. A total of 38 Western Pebble-mound Mouse records were identified, comprising two records from trapping, 10 active mounds, and 26 mounds that were inactive, or have recently become inactive. Western Pebble-mound Mouse records within the AA are presented in **Map** 13 and **Appendix G**.

#### 4.2.4.2 Potentially Occurring Within the AA

Seven significant fauna taxa were assessed as having a high likelihood of occurring within the AA:

- Northern Quoll (*Dasyurus hallucatus*), listed as Endangered under the BC Act and EPBC Act
- Ghost Bat (*Macroderma gigas*), listed as Vulnerable under the BC Act and EPBC Act
- Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia Pilbara form*), listed as Vulnerable under the BC Act and EPBC Act
- Pilbara Olive Python (*Liasis olivaceus barroni*), listed as Vulnerable under the BC Act and EPBC Act
- Pacific Swift, Fork-tailed Swift (*Apus pacificus*), listed as Migratory under the BC Act and EPBC Act
- Gane's Blind Snake (*Anilios ganei*), listed as Priority 1 by DBCA
- Pilbara Barking Gecko (*Underwoodisaurus seorsus*), listed as Priority 2 by DBCA.

Four significant fauna taxa were assessed as having a medium likelihood of occurring within the AA:

- Common Greenshank (*Tringa nebularia*), listed as Migratory under the BC Act, and Migratory and Endangered dunder the EPBC Act
- Peregrine Falcon (*Falco peregrinus*), listed as Other Specially Protected Fauna under the BC Act
- Brush-tailed Mulgara, Ampurta (*Dasycercus blythi*), listed as Priority 4 by DBCA
- Letter-winged Kite (*Elanus scriptus*), listed as Priority 4 by DBCA.

The remaining 18 significant fauna taxa were assessed as having a low likelihood of occurring within the AA.

The complete results of the significant fauna likelihood of occurrence assessment including justification for the assessment outcome for each taxon is provided in **Appendix H**.

# 5.0 Conclusion

## 5.1 Flora and Vegetation

A total of fifteen vegetation types were identified and mapped across four broad landforms within the Assessment Area (AA), based on data from previous surveys and fieldwork conducted in 2023. No Threatened or Priority Ecological Communities (TECs or PECs) were recorded within the AA during any survey effort. The nearest PEC, the West Angelas Cracking Clays (P1), is located approximately 4.5 km southeast of the NVCP3 AA and was previously mapped by Biologic. Of the fifteen vegetation types identified, seven were assessed as having high local conservation significance, while the remaining nine were assessed as having medium local significance.

Thirteen Priority flora species were recorded within the AA, from a broader pool of 43 species known to occur within a 20 km radius. Twelve recorded Priority species are listed as Priority 3 (P3) and one is listed as Priority 2 (P2) under the Department of Biodiversity, Conservation and Attractions (DBCA) conservation codes. No flora species listed as Threatened under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or gazetted as Threatened under the *Biodiversity Conservation Act 2016* (BC Act) were recorded during any previous surveys within the AA.

Across all surveys and database records, a total of 341 confirmed flora species were identified within the AA, of which 334 are native. Seven introduced species were recorded, none of which are listed as Declared Pests by the Department of Primary Industries and Regional Development (DPIRD). However, four of these introduced species are ranked by DBCA as having high ecological impact and rapid invasiveness, indicating a potential risk to native vegetation integrity.

## 5.2 Fauna

A total of eight distinct fauna habitat types, excluding disturbed areas, were mapped within the AA. These included Alluvial Plain, Claypan, Gorge/Gully, Major Drainage, Minor Drainage, Mulga Woodland, Rocky Hill, and Stony Plain. Of these, Stony Plain, Mulga Woodland, and Rocky Hill are considered widespread and abundant at the regional scale. In contrast, Gorge/Gully and both Major and Minor Drainage systems are of higher ecological importance due to their role in facilitating fauna dispersal and maintaining landscape connectivity.

One significant fauna species, the Western Pebble-mound Mouse (*Pseudomys chapmani*), listed as Priority 4 by the Department of Biodiversity, Conservation and Attractions (DBCA), has been previously recorded within the AA.

A total of 29 significant fauna taxa were assessed as potentially occurring within the AA. Of these, seven taxa were assessed as having a high likelihood of occurrence, including four species listed under both the *Biodiversity Conservation Act 2016* (BC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act): the Northern Quoll (*Dasyurus hallucatus* – Endangered), Ghost Bat (*Macroderma gigas* – Vulnerable), Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia* Pilbara form – Vulnerable), and Pilbara Olive Python (*Liasis olivaceus barroni* – Vulnerable). Additional high-likelihood species include the Pacific Swift (*Apus pacificus* – Migratory), Gane's Blind Snake (*Anilios ganei* – Priority 1), and Pilbara Barking Gecko (*Underwoodisaurus seorsus* – Priority 2).

Four additional significant fauna taxa were assessed as having a medium likelihood of occurrence, including the Common Greenshank (*Tringa nebularia* – Migratory and Endangered), Peregrine Falcon (*Falco peregrinus* – Other Specially Protected Fauna), Brush-tailed Mulgara (*Dasycercus blythi* – Priority 4), and Letter-winged Kite (*Elanus scriptus* – Priority 4). The remaining 18 taxa were assessed as having a low likelihood of occurrence.

Gorge/Gully habitats were identified as potential critical habitat for the Northern Quoll, Pilbara Olive Python, Ghost Bat, and Pilbara Leaf-nosed Bat, supporting key ecological functions such as breeding, denning, roosting, foraging, and dispersal. Major Drainage systems were also identified as critical habitat for the Northern Quoll and Pilbara Olive Python, and as supporting habitat for the Ghost Bat and Pilbara Leaf-nosed Bat, particularly for foraging and movement across the landscape.

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# Appendices

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

# Appendix A Maps

## West Angelas NVCP 3

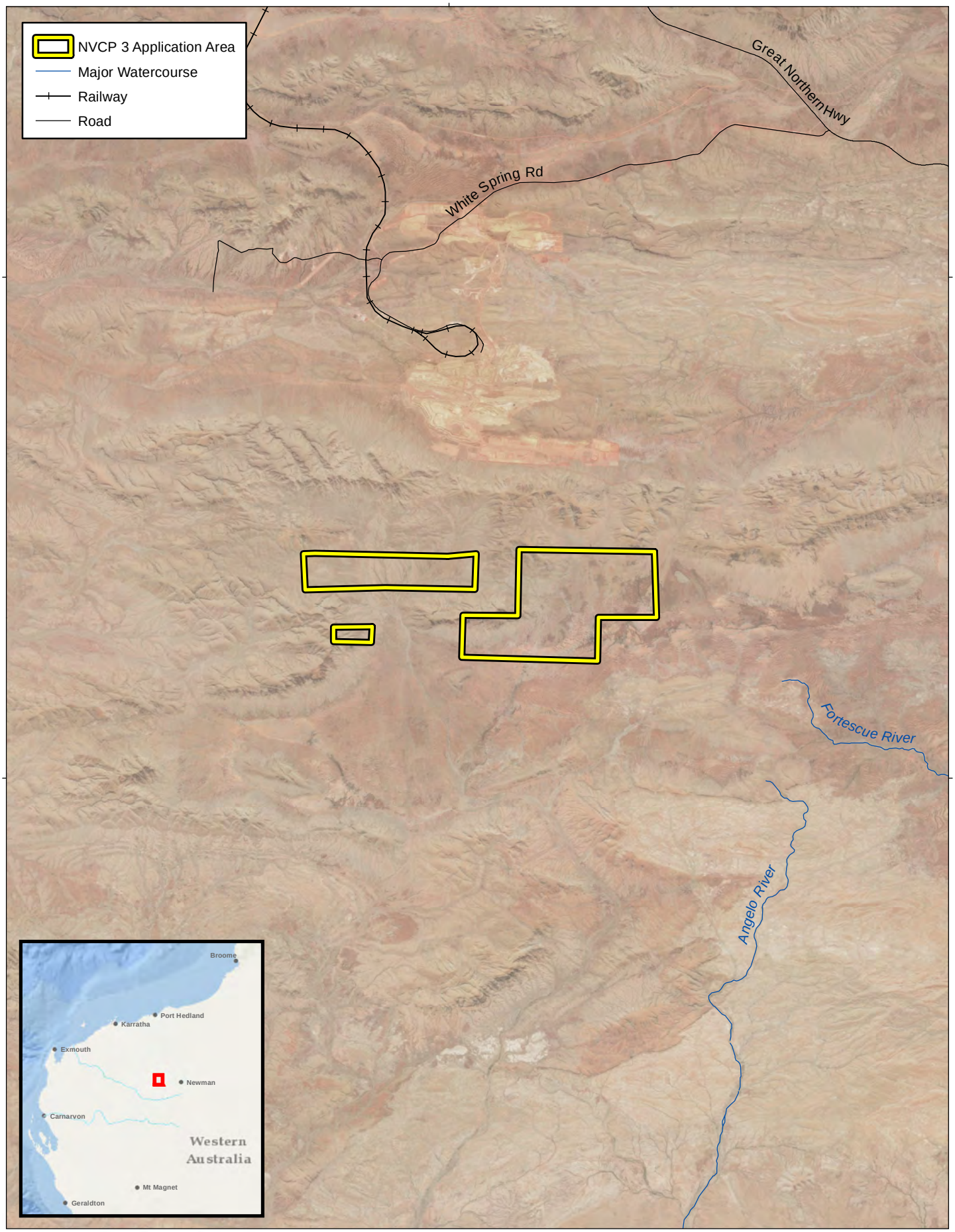
### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**Map 1: Application Area**






SLR

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N 0 2.5 5 10 km

Service Layer Credits: Landgate / SLIP

Coordinate System: GDA 1994 MGA Zone 50

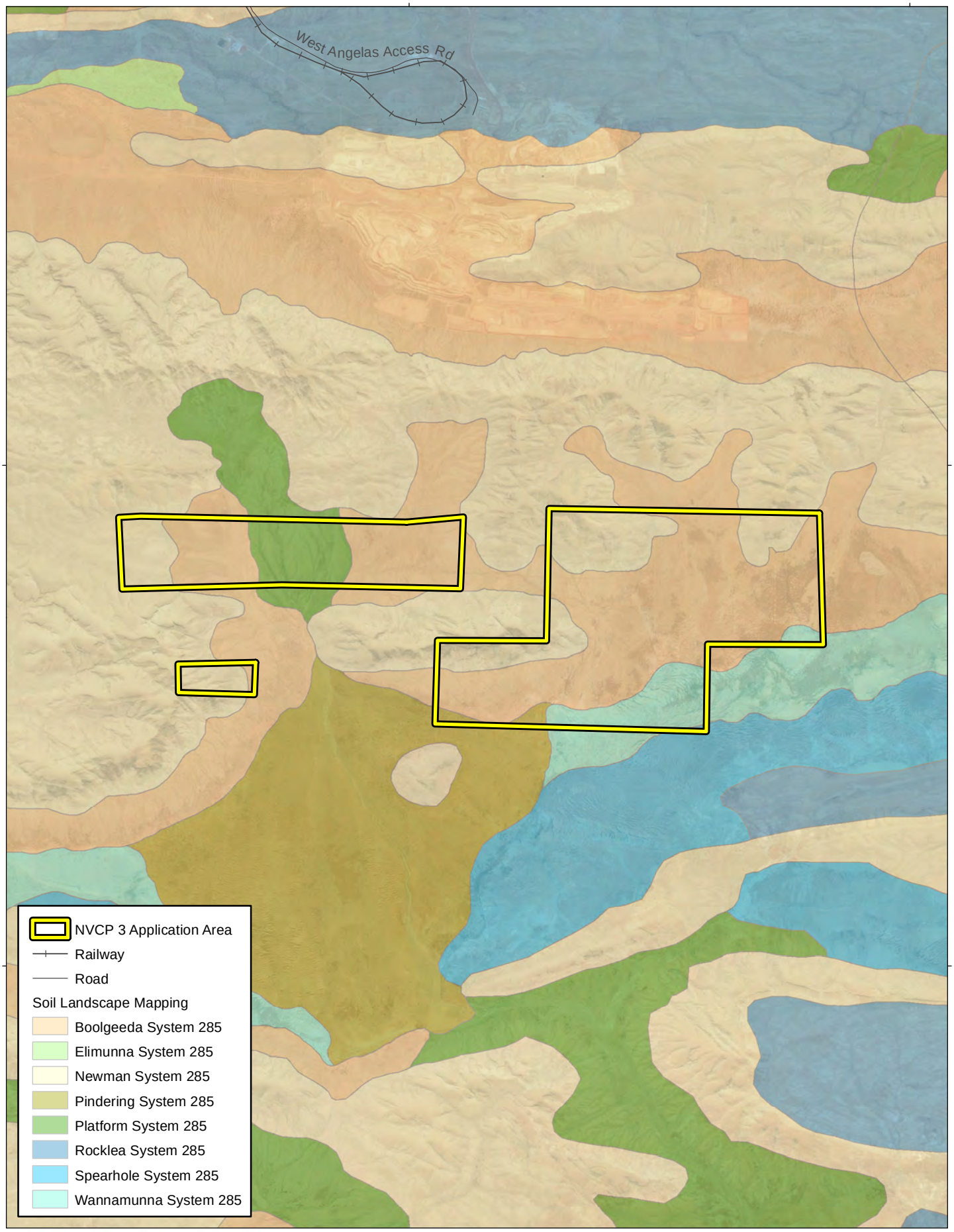
| | |
|---|---|
| Scale | : 1:200,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

# Rio Tinto Iron Ore
# West Angelas NVCP 3
# Flora, Vegetation and Fauna Desktop Assessment

## NVCP 3 Application Area
## MAP 1

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M01 NVCP 3 Application Area_250623.mxd

**Map 2: Soil and Land Systems**




N 0 1.25 2.5 5 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping DPIRD_027

Coordinate System: GDA 1994 MGA Zone 50

| | |
|---|---|
| Scale | : 1:100,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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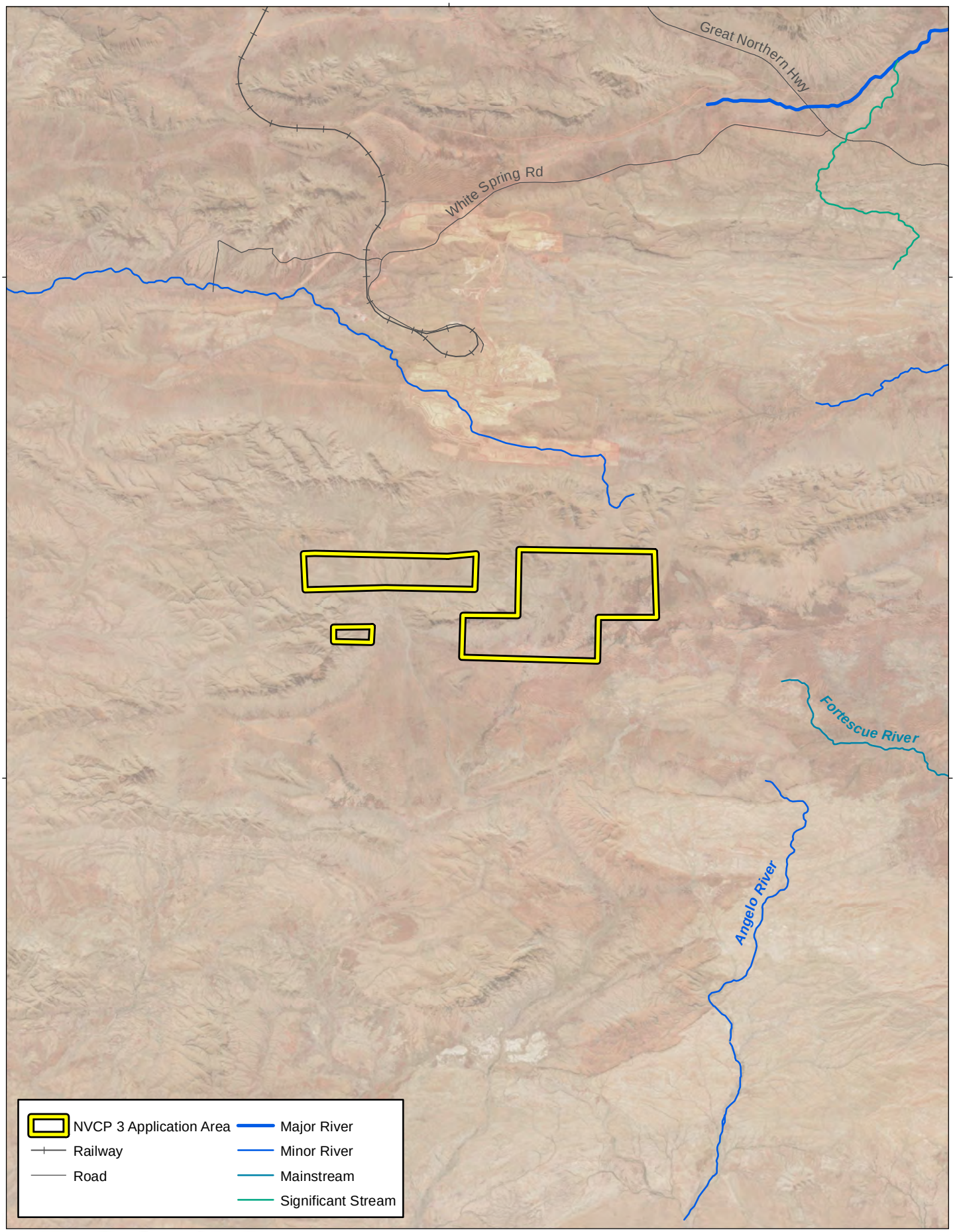
Rio Tinto Iron Ore
West Angelas NVCP 3
Flora, Vegetation and Fauna Desktop Assessment

Soil and Land Systems
MAP 2

**Map 3: Hydrography**



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N 0 2 4 8 km

Service Layer Credits: Landgate / SLIP Hydrography - DWER 031

Coordinate System: GDA 1994 MGA Zone 50

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| Scale | : 1:200,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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Flora, Vegetation and Fauna Desktop Assessment

Hydrography
MAP 3

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**Map 4: Broad Vegetation Types**


N 0 1 2 4 km

Service Layer Credits: Landgate / SLIP
Pre-European Vegetation DPIRD-006

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:100,000 @ A4 |
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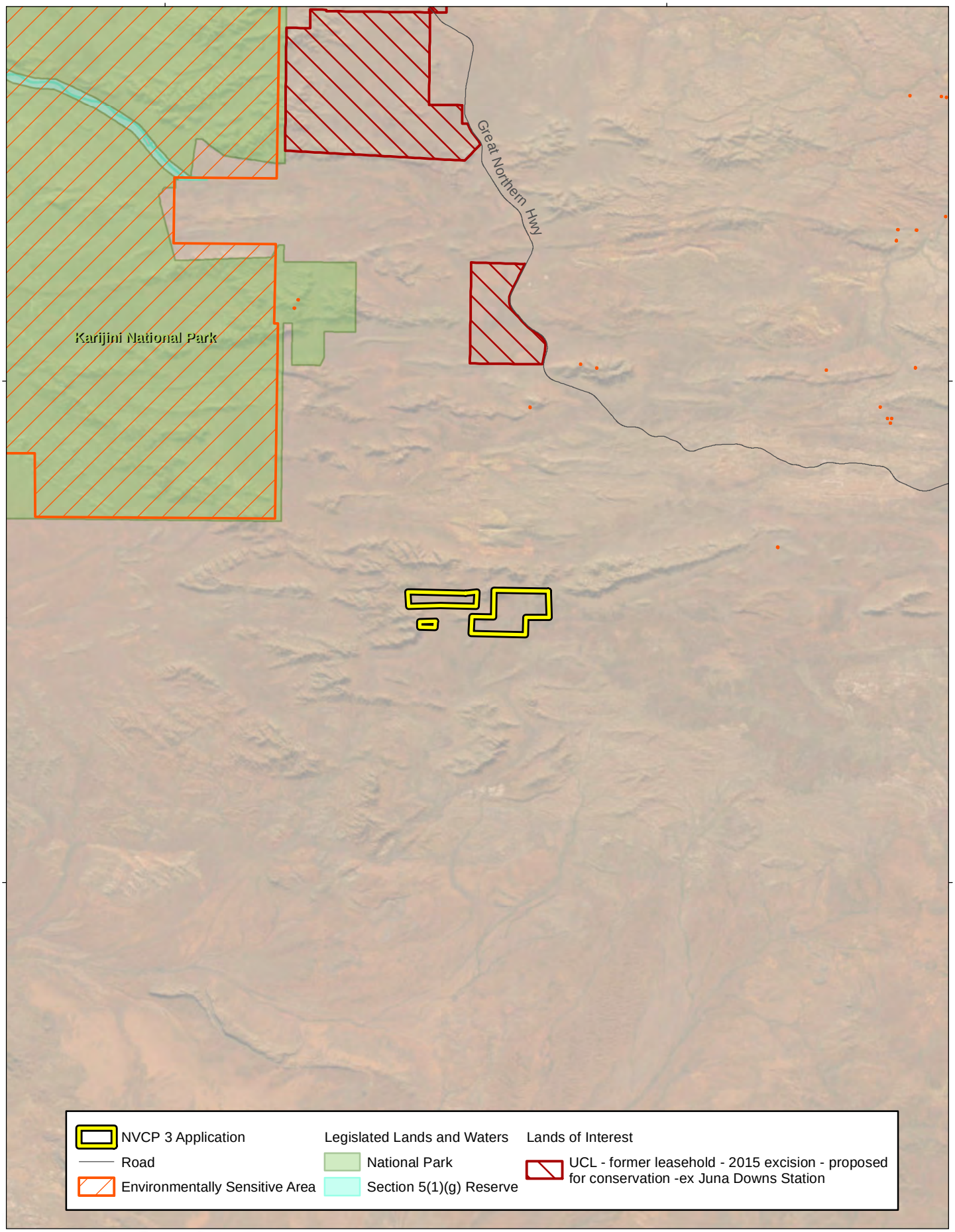
Broad Vegetation Types
MAP 4

**Map 5: Conservation Areas and ESAs**



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N 0 5 10 20 km

Service Layer Credits: Landgate / SLIP | LoI - DBCA-012
Legislated Lands and Waters DBCA-011 | ESA DWER-046

Coordinate System: GDA 1994 MGA Zone 50

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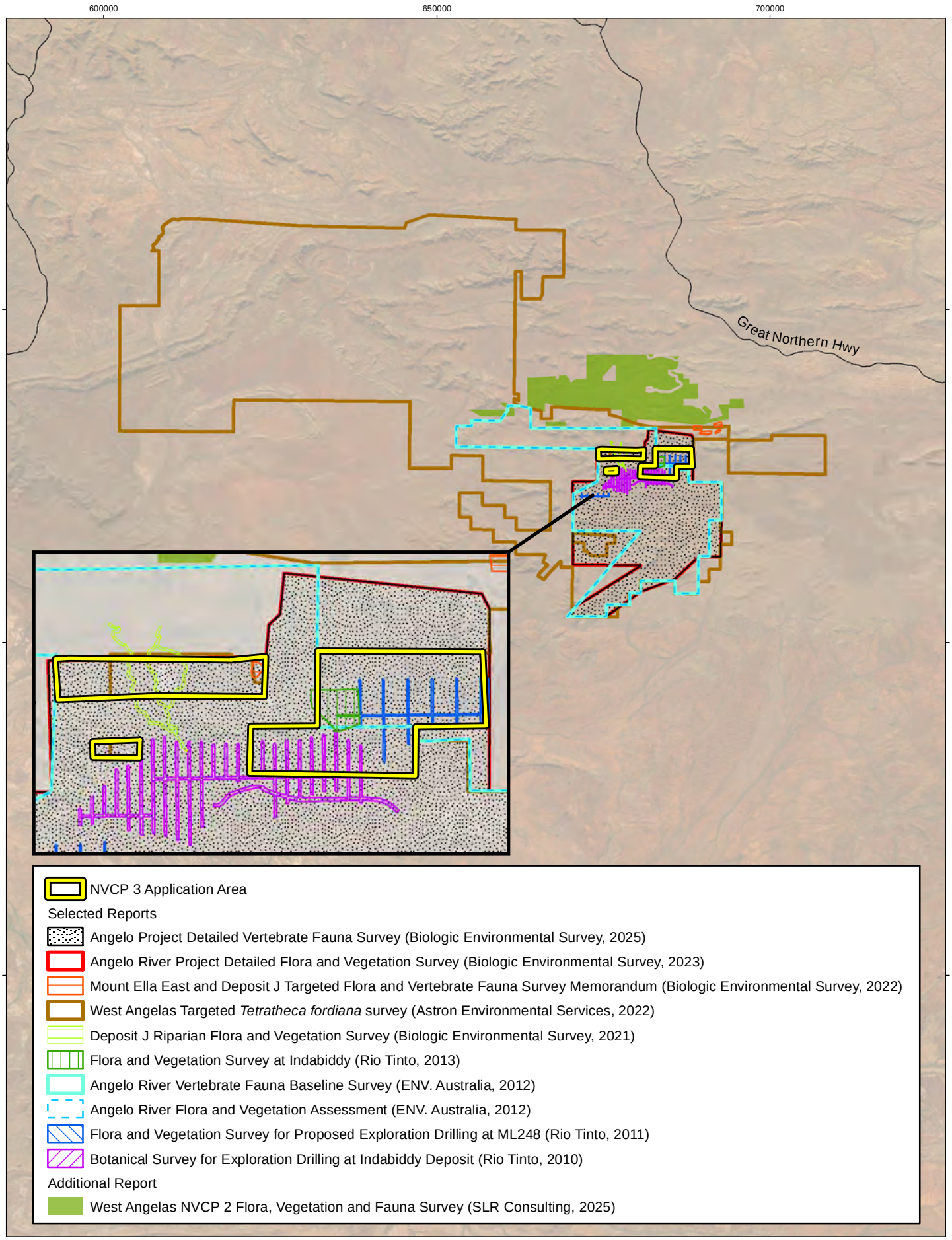
Conservation Areas and ESAs
MAP 5

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M05 Conservation Areas and ESAs_250626.mxd

**Map 6: Previous Survey Areas**




NVCP 3 Application Area

Selected Reports

- Angelo Project Detailed Vertebrate Fauna Survey (Biologic Environmental Survey, 2025)
- Angelo River Project Detailed Flora and Vegetation Survey (Biologic Environmental Survey, 2023)
- Mount Ella East and Deposit J Targeted Flora and Vertebrate Fauna Survey Memorandum (Biologic Environmental Survey, 2022)
- West Angelas Targeted *Tetratheca fordiana* survey (Astron Environmental Services, 2022)
- Deposit J Riparian Flora and Vegetation Survey (Biologic Environmental Survey, 2021)
- Flora and Vegetation Survey at Indabiddy (Rio Tinto, 2013)
- Angelo River Vertebrate Fauna Baseline Survey (ENV. Australia, 2012)
- Angelo River Flora and Vegetation Assessment (ENV. Australia, 2012)
- Flora and Vegetation Survey for Proposed Exploration Drilling at ML248 (Rio Tinto, 2011)
- Botanical Survey for Exploration Drilling at Indabiddy Deposit (Rio Tinto, 2010)

Additional Report

- West Angelas NVCP 2 Flora, Vegetation and Fauna Survey (SLR Consulting, 2025)

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N 0 5 10 20 km

Service Layer Credits: Landgate / SLIP

Coordinate System: GDA 1994 MGA Zone 50

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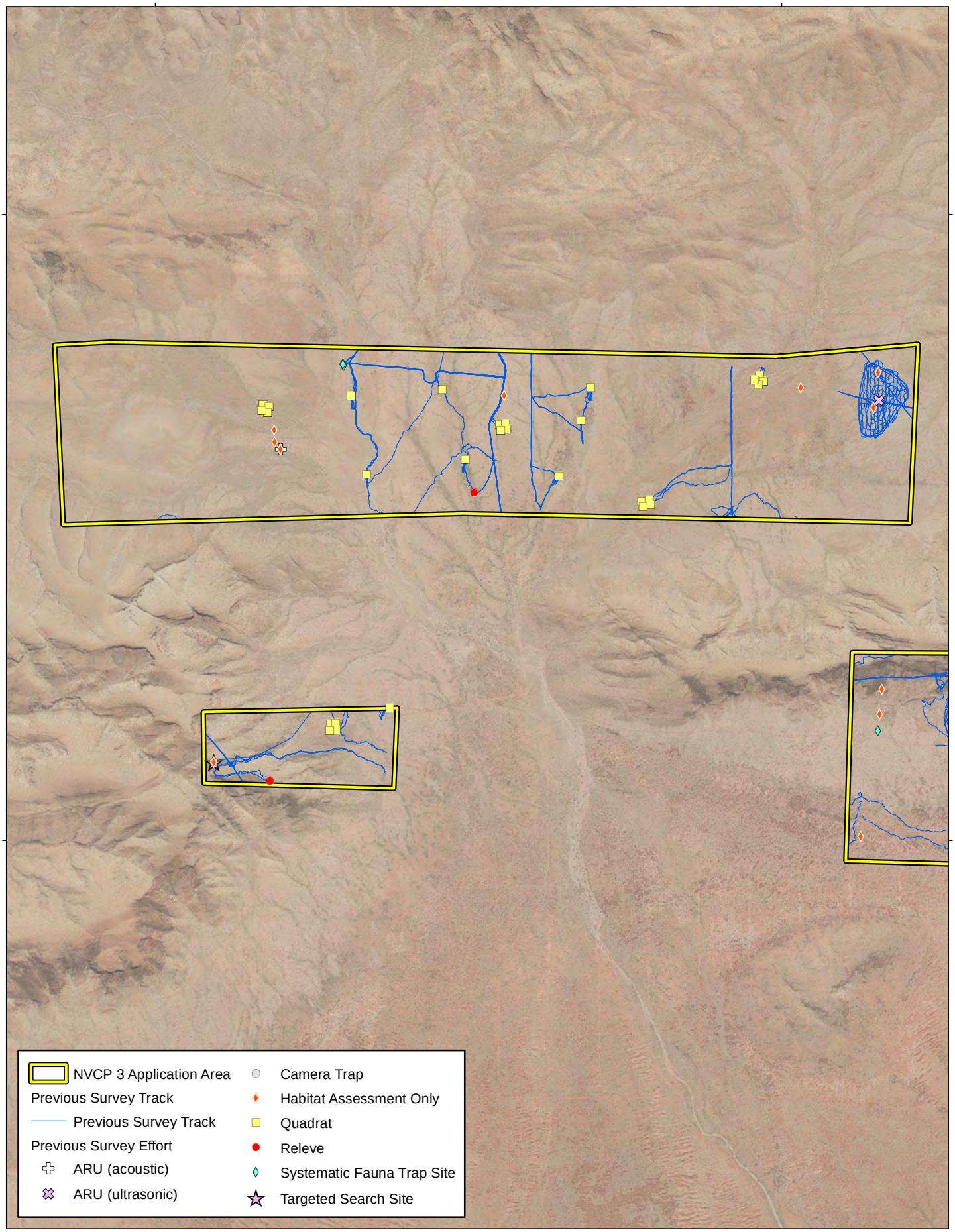
Flora, Vegetation and Fauna Desktop Assessment

Previous Surveys in the Locality
MAP 6

**Map 7: Field Survey Effort**




N 0 0.5 1 2 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:40,000 @ A4 |
| Project Number | : 675.072156.00003 |
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Previous Sampling Effort
MAP 7a



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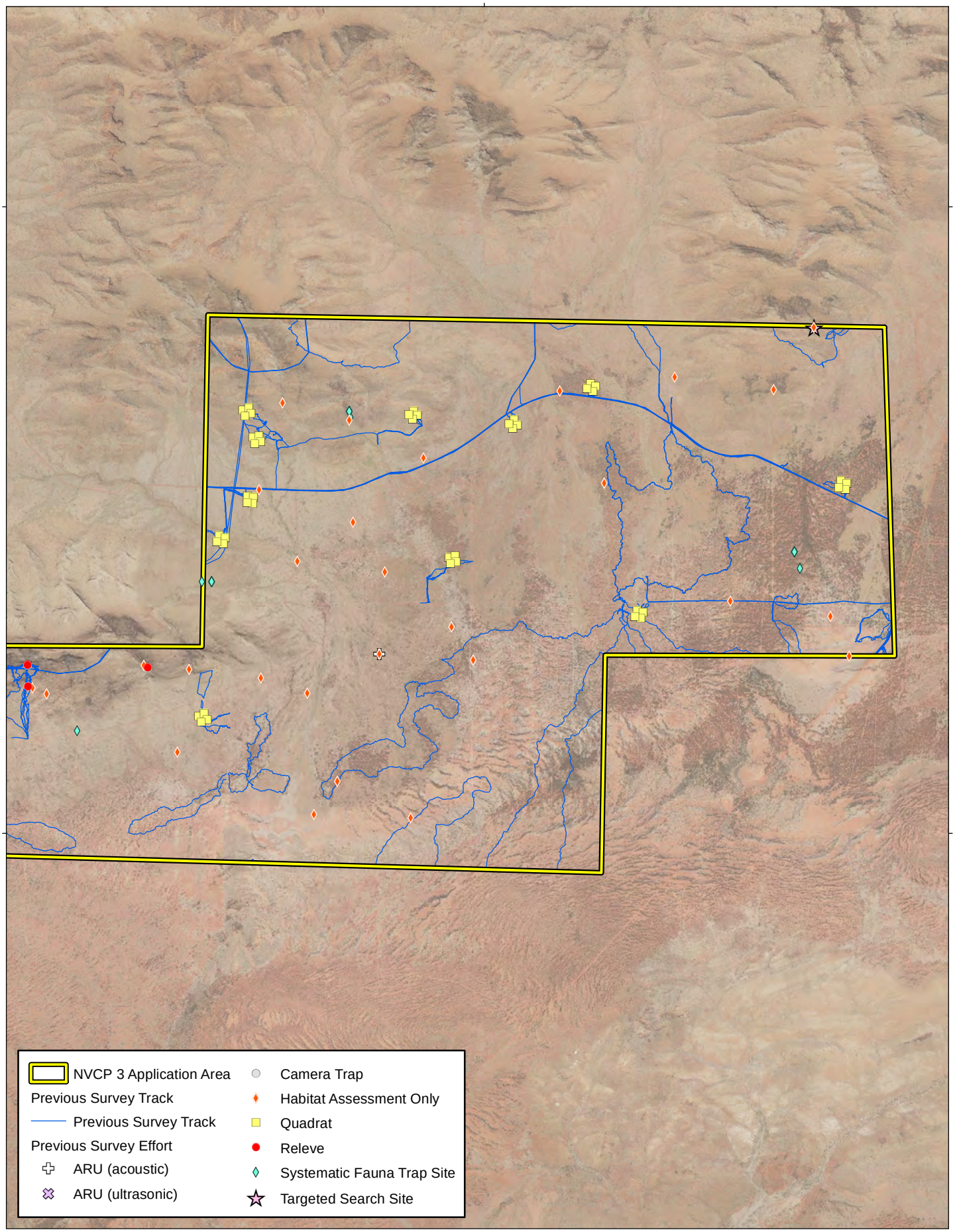


N 0 0.5 1 2 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:40,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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Previous Sampling Effort
MAP 7b

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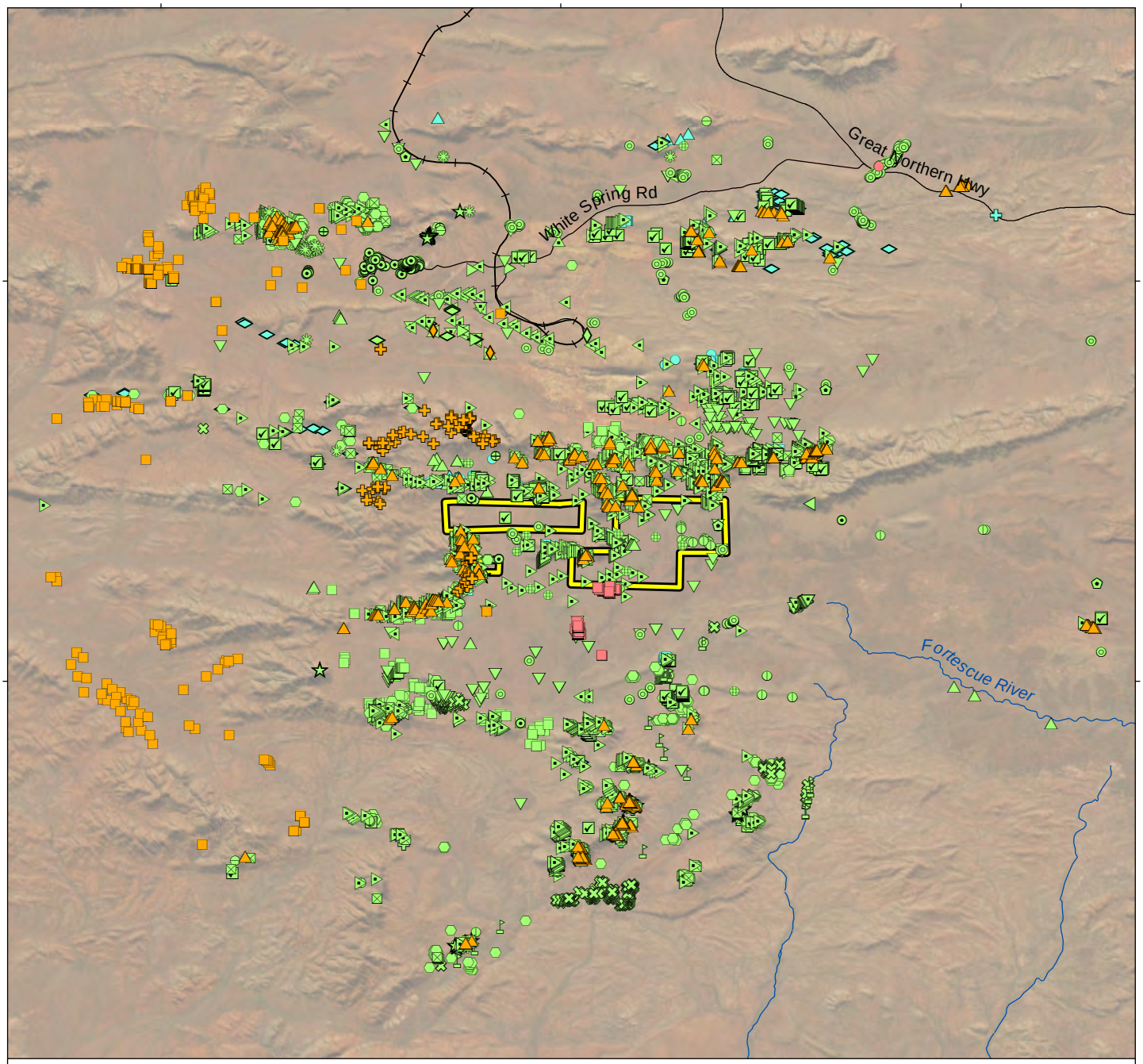
**Map 8: Threatened and Priority Flora Database Search Results**




NVCP 3 Application Area

Threatened and Priority Flora Records (DBCA and RTIO)

- *Isotropis forrestii* (P1)
- *Sida sp.* Turee Creek (P.-L.de Kock PLDK1116) (P1)
- *Eremophila pusilliflora* (P2)
- *Hibiscus sp.* Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
- *Neptunia longipila* (P2)
- *Pentalepis trichodesmoides subsp. hispida* (P2)
- *Tetratheca fordiana* (P2)
- *Acacia daweana* (P3)
- *Acacia effusa* (P3)
- *Acacia subtiliformis* (P3)
- *Aristida jerichoensis var. subspinulifera* (P3)
- *Aristida lazaridis* (P3)
- *Dampiera metallorum* (P3)
- *Dolichocarpa sp.* Hamersley Station (A.A. Mitchell PRP 1479) (P3)
- *Eremophila magnifica subsp. velutina* (P3)
- *Eremophila naaykensii* (P3)
- *Eremophila sp.* West Angelas (S. van Leeuwen 4068) (P3)
- *Euphorbia clementii* (P3)
- *Euphorbia inappendiculata var. inappendiculata* (P3)
- *Euphorbia stevenii* (P3)
- *Geijera salicifolia* (P3)
- *Goodenia lyrata* (P3)
- *Goodenia sp.* East Pilbara (A.A. Mitchell PRP 727) (P3)
- *Grevillea saxicola* (P3)
- *Indigofera gilesii* (P3)
- *Ipomoea racemigera* (P3)
- *Isotropis parviflora* (P3)
- *Olearia mucronata* (P3)
- *Oxalis sp.* Pilbara (M.E. Trudgen 12725) (P3)
- *Pilbara trudgenii* (P3)
- *Rostellularia adscendens var. latifolia* (P3)
- *Sida sp.* Hamersley Range (K. Newbey 10692) (P3)
- *Solanum kentrocaule* (P3)
- *Streptoglossa sp.* Cracking clays (S. van Leeuwen et al. PBS 7353) (P3)
- *Swainsona thompsoniana* (P3)
- *Themeda sp.* Hamersley Station (M.E. Trudgen 11431) (P3)
- *Triodia sp.* Mt Ella (M.E. Trudgen 12739) (P3)
- *Vittadinia sp.* Coondewanna Flats (S. van Leeuwen 4684) (P3)
- *Acacia bromilowiana* (P4)
- *Eremophila magnifica subsp. magnifica* (P4)
- *Lepidium catapycnon* (P4)
- *Ptilotus mollis* (P4)
- *Sida sp.* Barlee Range (S. van Leeuwen 1642) (P4)
- *Dolichocarpa sp.* nov. (PSI)
- *Eremophila aff. magnifica* (PSI)
- *Eremophila sp. x ?*(PSI)



SLR



N 0 4 8 16 km

Service Layer Credits: Landgate / SLIP

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
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| Drawn By | : Environmaps |
| Reviewed By | : GB |

Rio Tinto Iron Ore

West Angelas NVCP 3

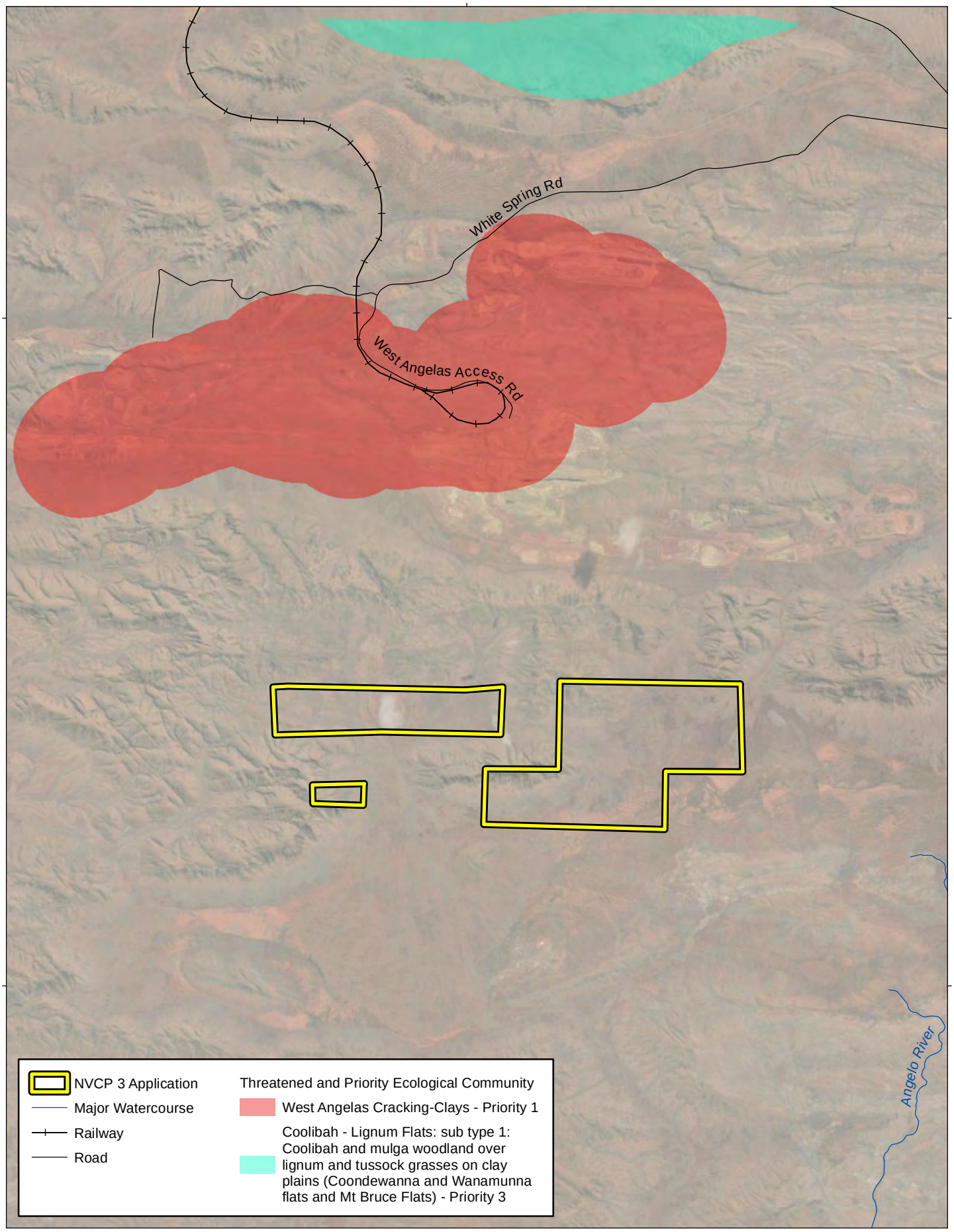
Flora, Vegetation and Fauna Desktop Assessment

# Threatened and Priority Flora Records (DBCA and RTIO)

## MAP 8

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M08 Threatened and Priority Flora Records (DBCA and RTIO)_250624.mxd

**Map 9: Threatened and Priority Ecological Community Database Search Results**




N 0 2 4 8 km

Service Layer Credits: Landgate / SLIP
TEC & PEC - DBCA

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:150,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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Flora, Vegetation and Fauna Desktop Assessment

# Threatened and Priority Ecological Community Database Search Results MAP 9

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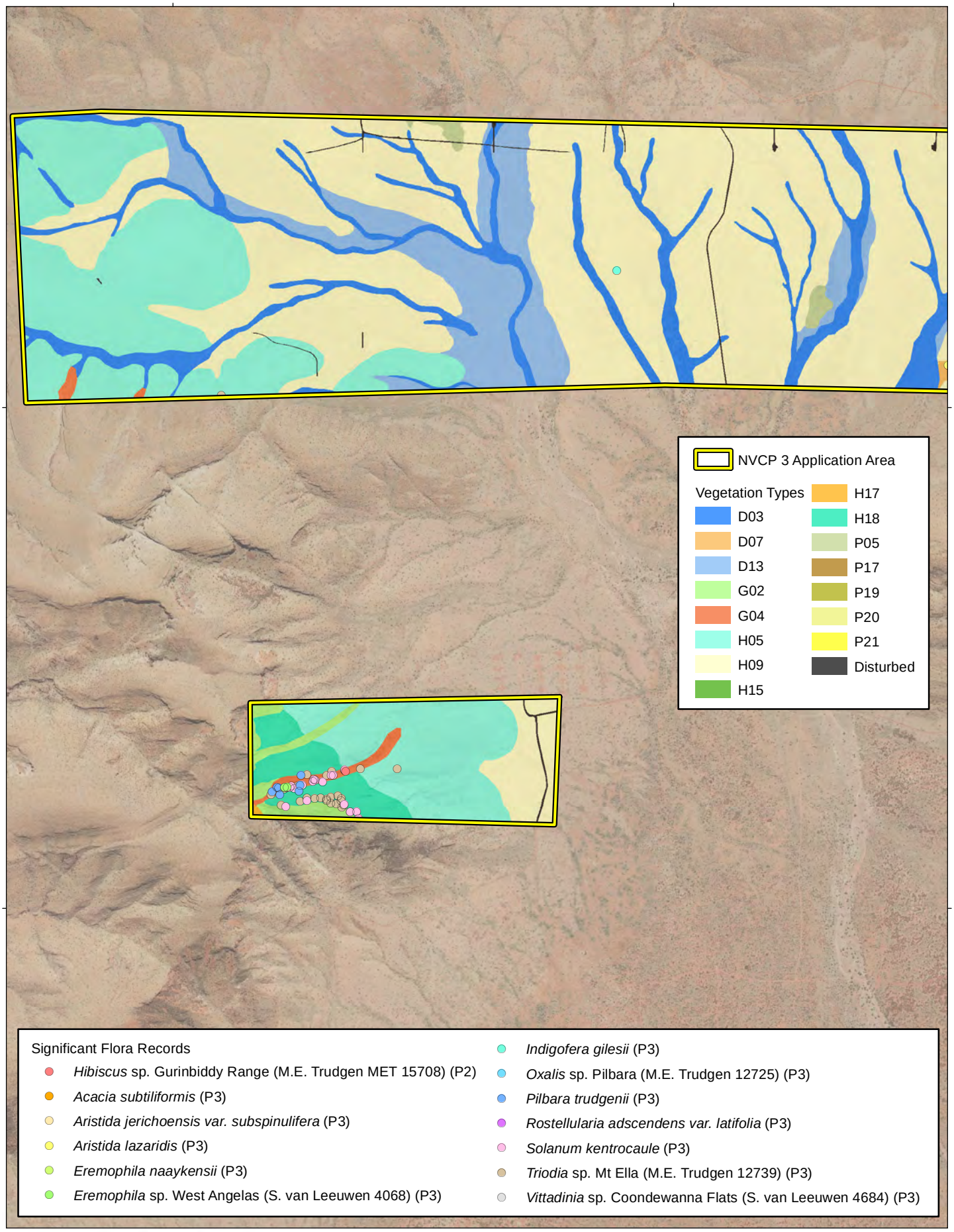
**Map 10: Vegetation Types and Significant Flora Records**




Significant Flora Records

- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
- *Acacia subtiliformis* (P3)
- *Aristida jerichoensis var. subspinulifera* (P3)
- *Aristida lazaridis* (P3)
- *Eremophila naaykensii* (P3)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P3)
- *Indigofera gilesii* (P3)
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P3)
- *Pilbara trudgenii* (P3)
- *Rostellularia adscendens var. latifolia* (P3)
- *Solanum kentrocaule* (P3)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)

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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
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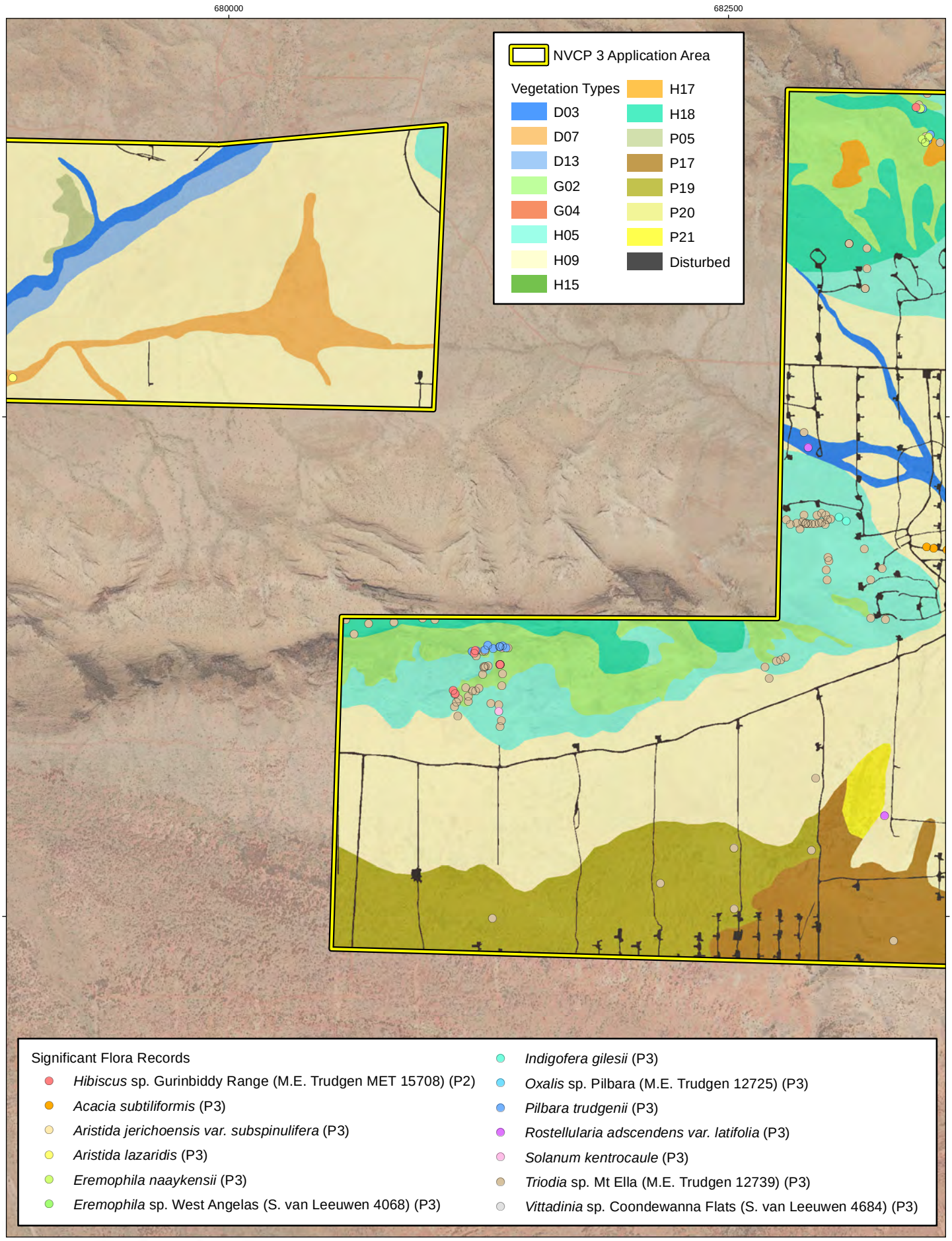
# Vegetation Types and Significant Flora Records
# MAP 10a




Significant Flora Records

- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
- *Acacia subtiliformis* (P3)
- *Aristida jerichoensis var. subspinulifera* (P3)
- *Aristida lazaridis* (P3)
- *Eremophila naaykensii* (P3)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P3)
- *Indigofera gilesii* (P3)
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P3)
- *Pilbara trudgenii* (P3)
- *Rostellularia adscendens var. latifolia* (P3)
- *Solanum kentrocaule* (P3)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)

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N 0 0.25 0.5 1 km

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Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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| Scale | : 1:25,000 @ A4 |
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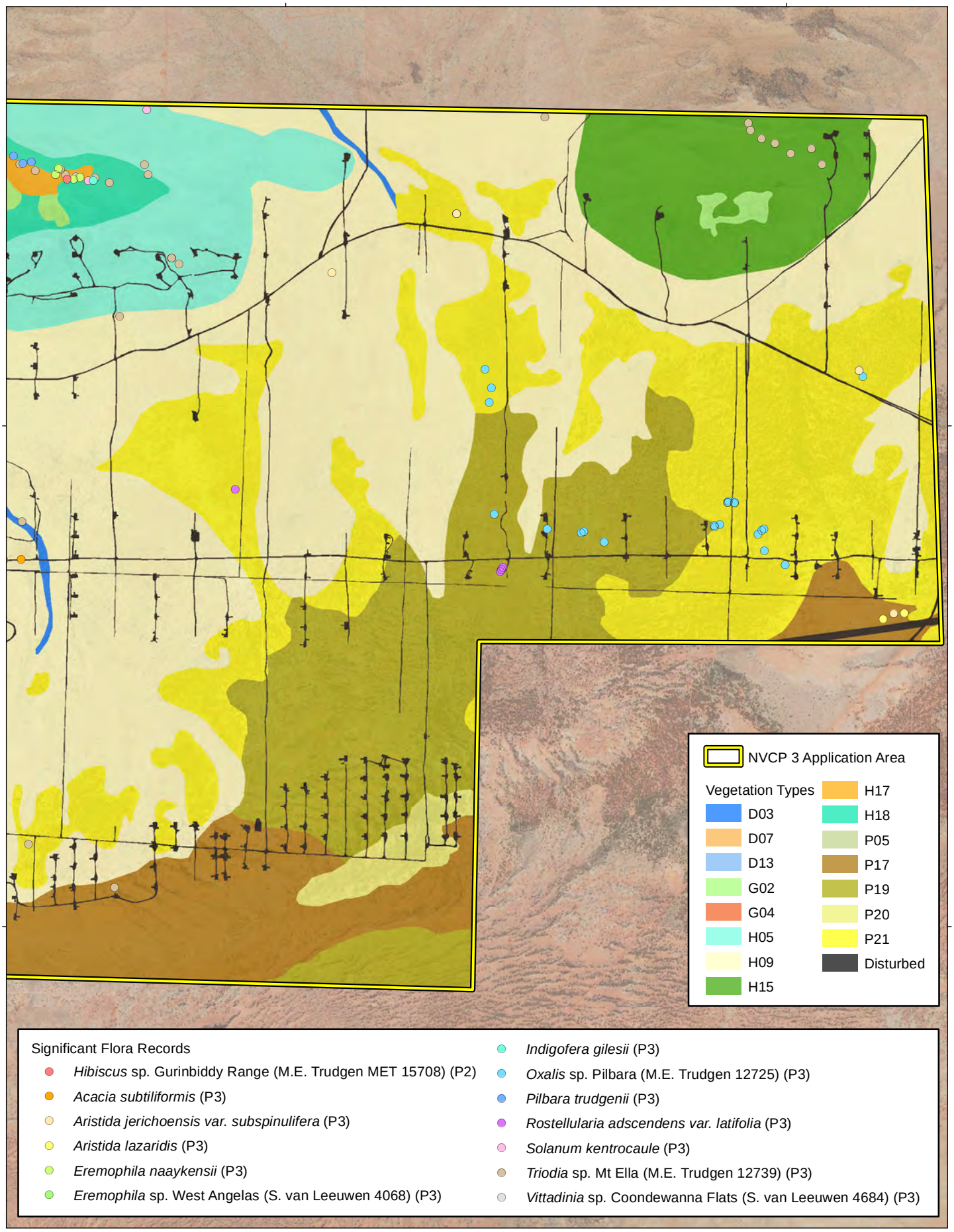
# Vegetation Types and Significant Flora Records MAP 10b



C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M10b Vegetation Types and Significant Flora Records_250623.mxd




Significant Flora Records

- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) (P2)
- *Acacia subtiliformis* (P3)
- *Aristida jerichoensis var. subspinulifera* (P3)
- *Aristida lazaridis* (P3)
- *Eremophila naaykensii* (P3)
- *Eremophila* sp. West Angelas (S. van Leeuwen 4068) (P3)
- *Indigofera gilesii* (P3)
- *Oxalis* sp. Pilbara (M.E. Trudgen 12725) (P3)
- *Pilbara trudgenii* (P3)
- *Rostellularia adscendens var. latifolia* (P3)
- *Solanum kentrocaule* (P3)
- *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)
- *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)

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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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| Scale | : 1:25,000 @ A4 |
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| Reviewed By | : GB |

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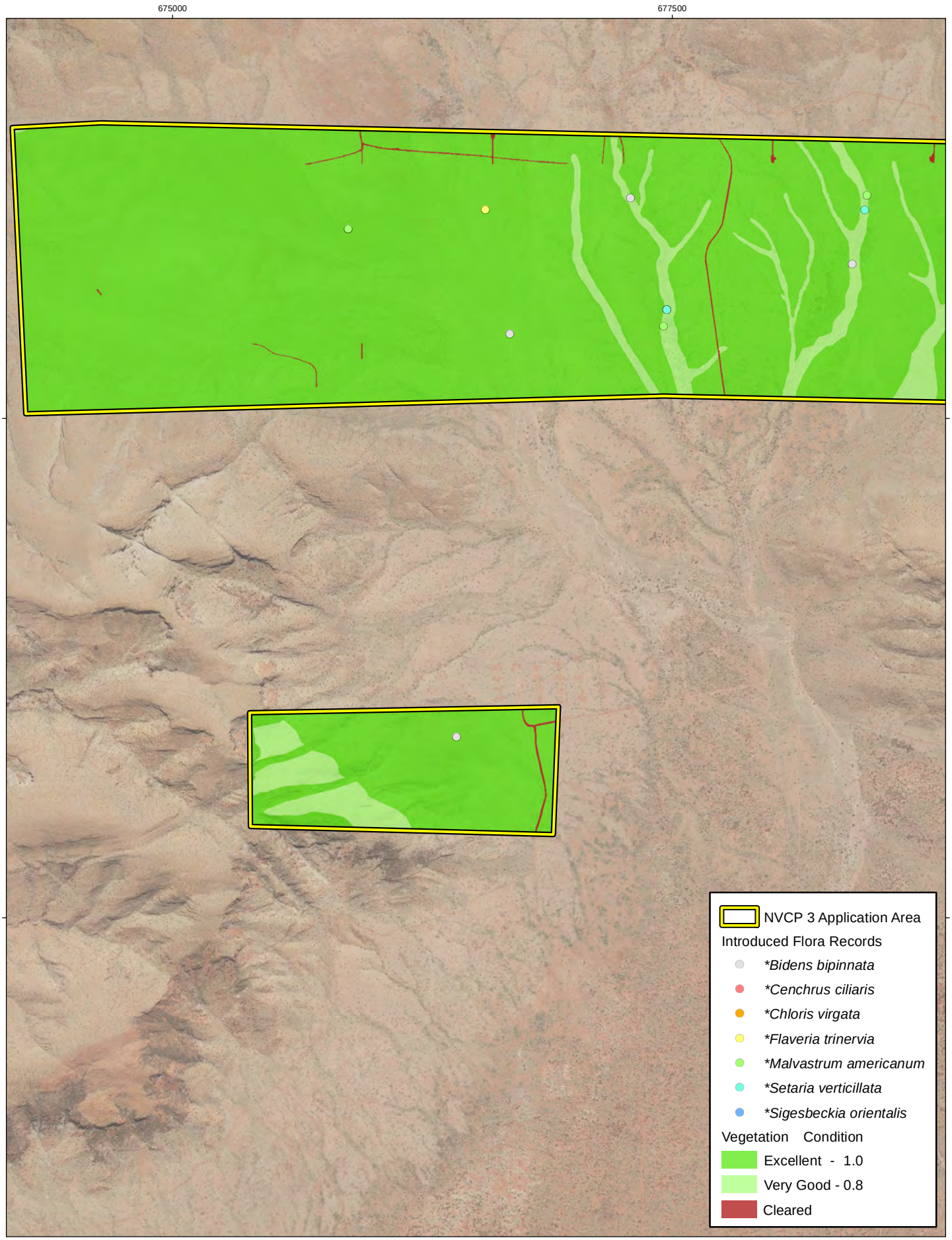
Flora, Vegetation and Fauna Desktop Assessment

# Vegetation Types and Significant Flora Records MAP 10c



C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M10c Vegetation Types and Significant Flora Records_250623.mxd

**Map 11: Vegetation Condition and Introduced Flora Records**



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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:25,000 @ A4 |
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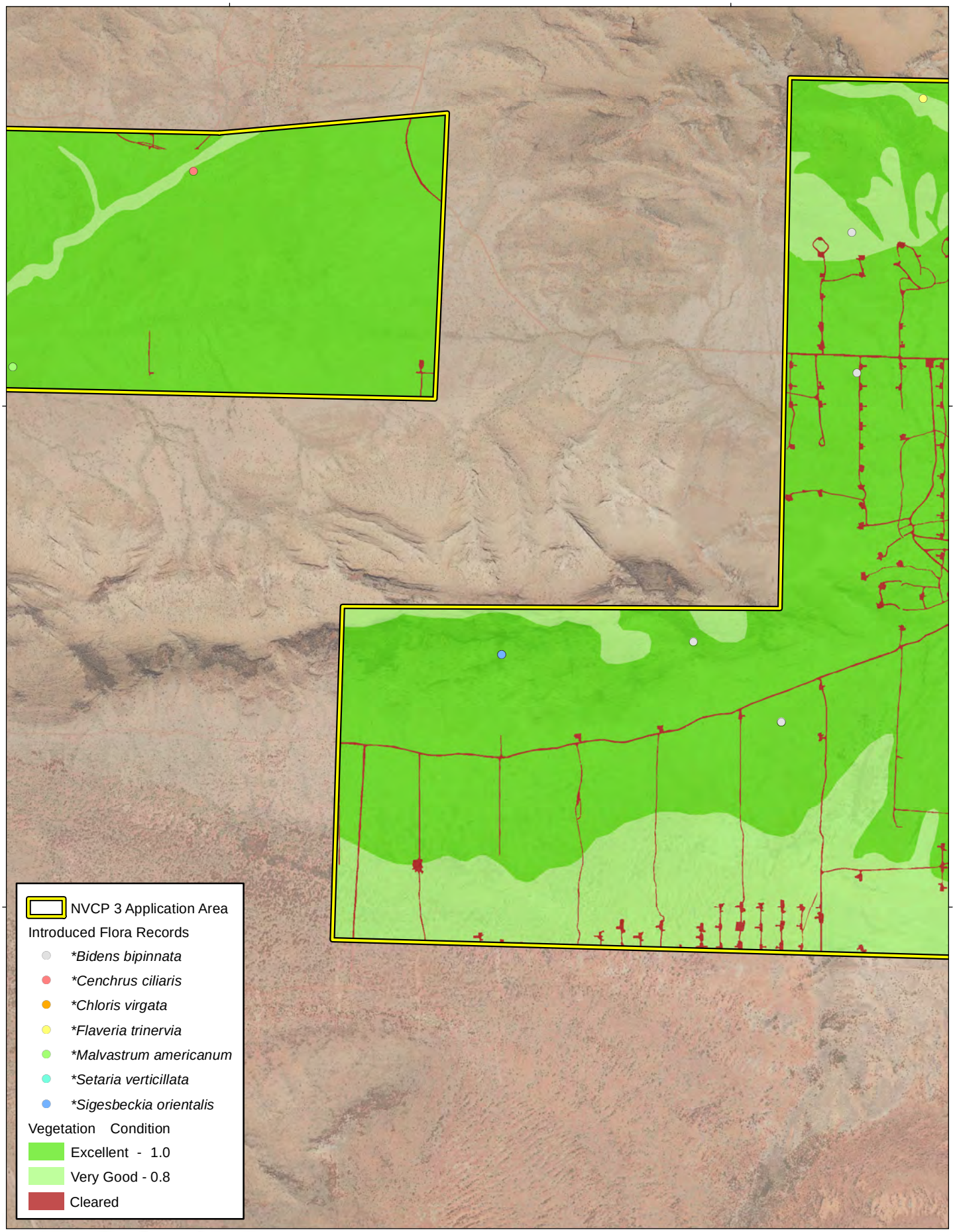
# Vegetation Condition and Introduced Flora Records
# MAP 11a

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M11a Vegetation Condition and Introduced Flora Records_250623.mxd




N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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# Vegetation Condition and Introduced Flora Records MAP 11b

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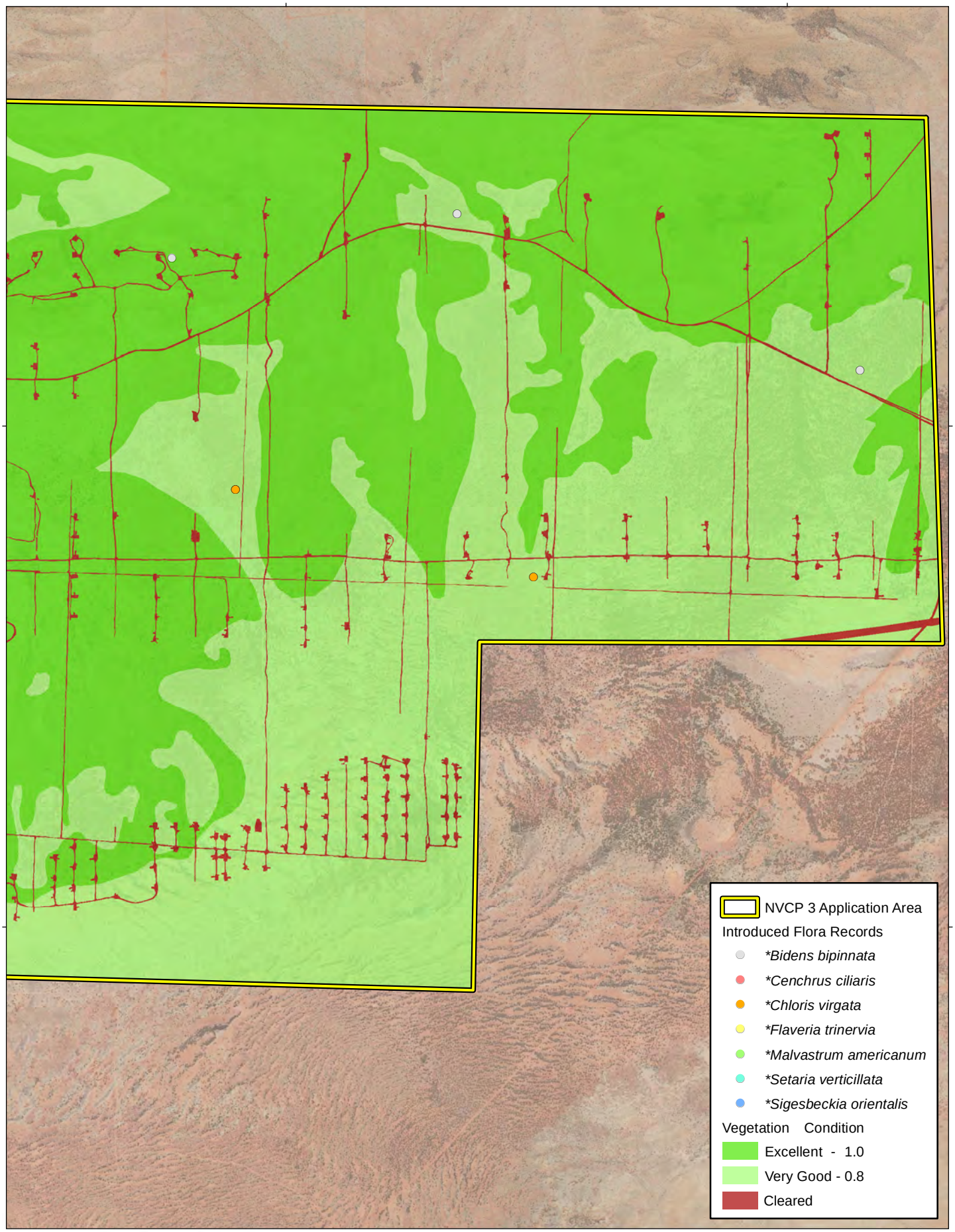
C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M11b Vegetation Condition and Introduced Flora Records_250623.mxd



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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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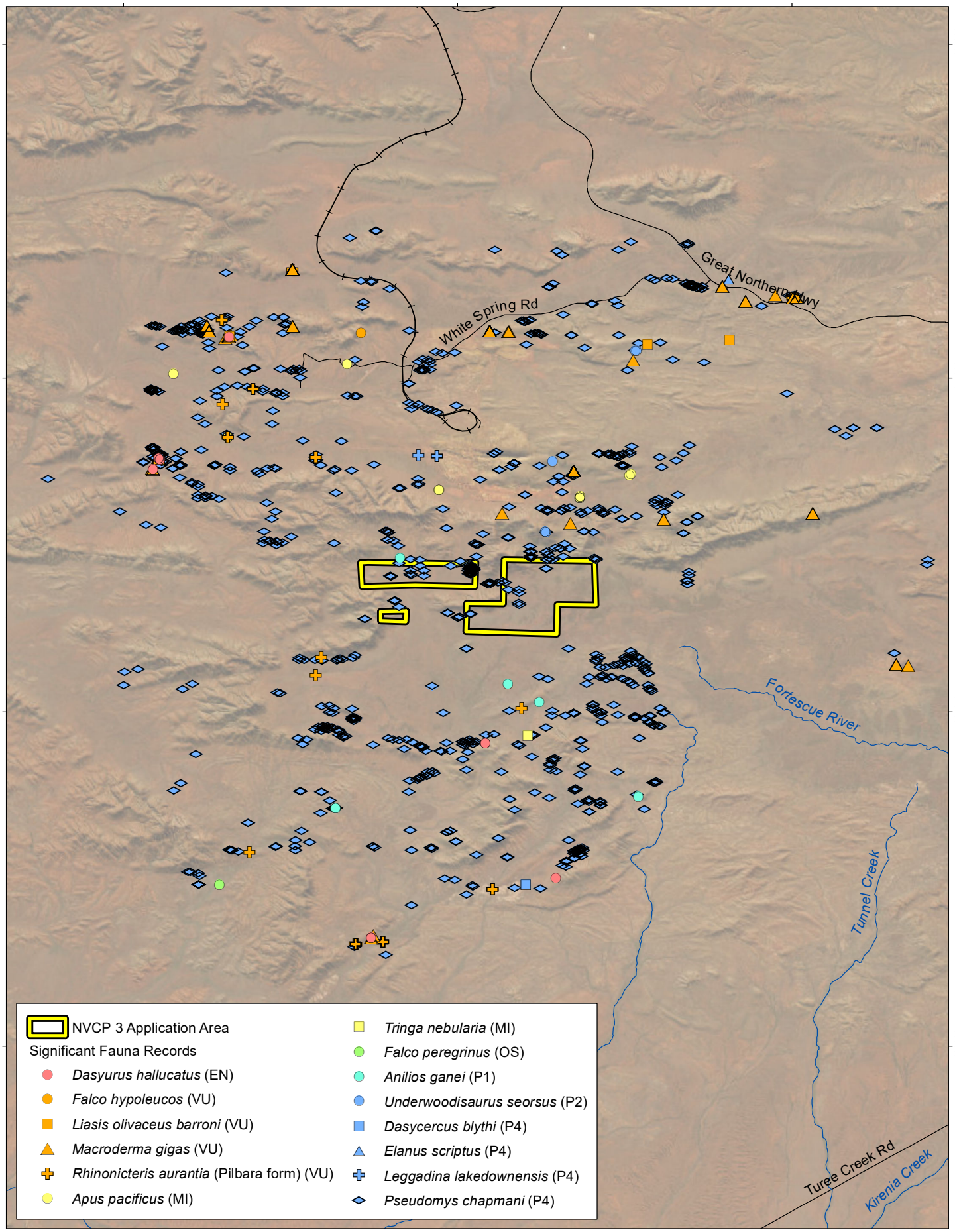
# Vegetation Condition and Introduced Flora Records MAP 11c

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M11c Vegetation Condition and Introduced Flora Records_250623.mxd

**Map 12: Significant Fauna Database Search Results**






SLR



N 0 3.75 7.5 15 km

Service Layer Credits: Landgate / SLIP

Coordinate System: GDA 1994 MGA Zone 50

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|---|---|
| Scale | : 1:300,000 @ A4 |
| Project Number | : 675.072156.00003 |
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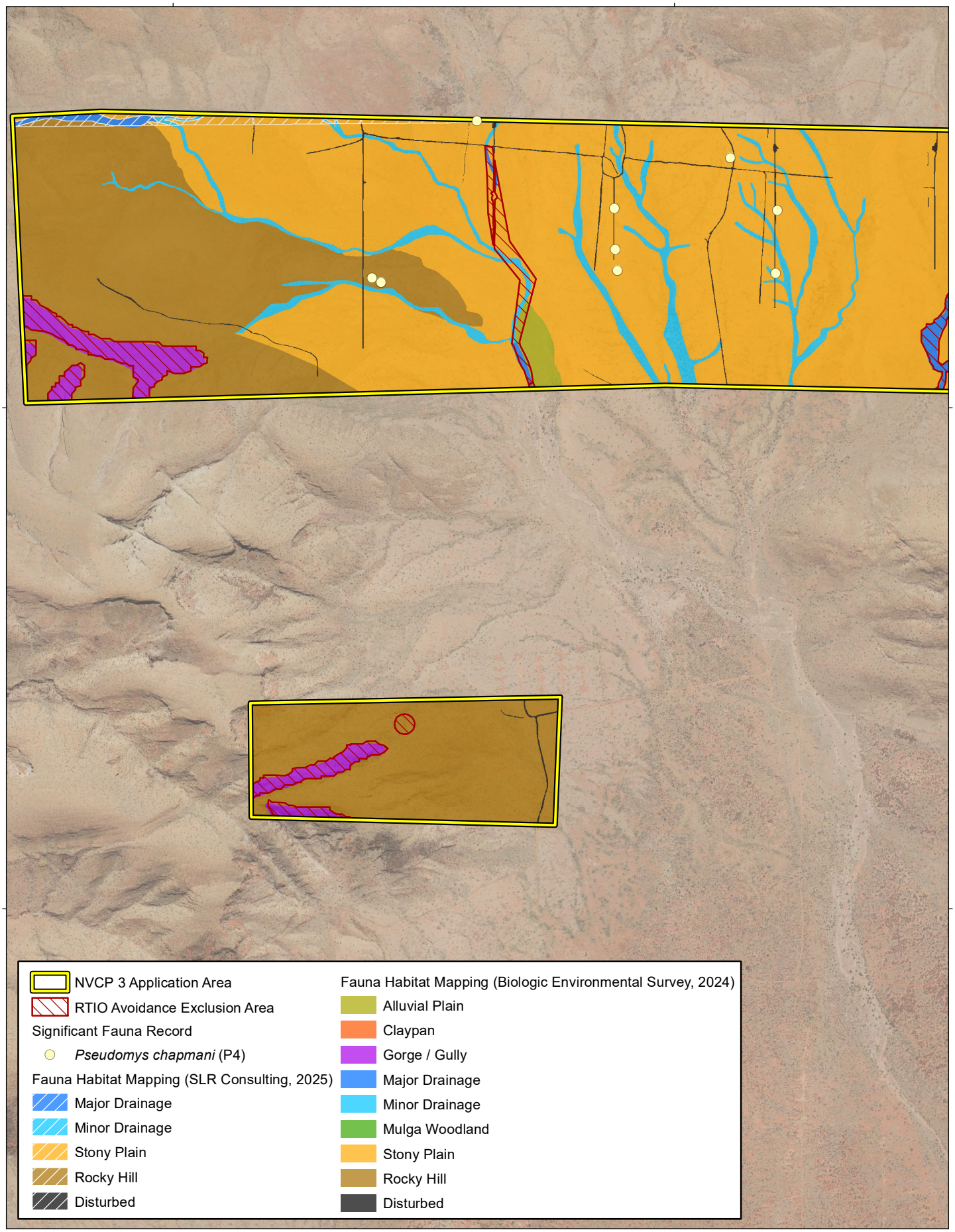
# Significant Fauna Database Search Results
# MAP 12

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M12 Significant Fauna Database Search Results_250623.mxd

**Map 13: Fauna Habitat and Significant Fauna Records**



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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

| | |
|---|---|
| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

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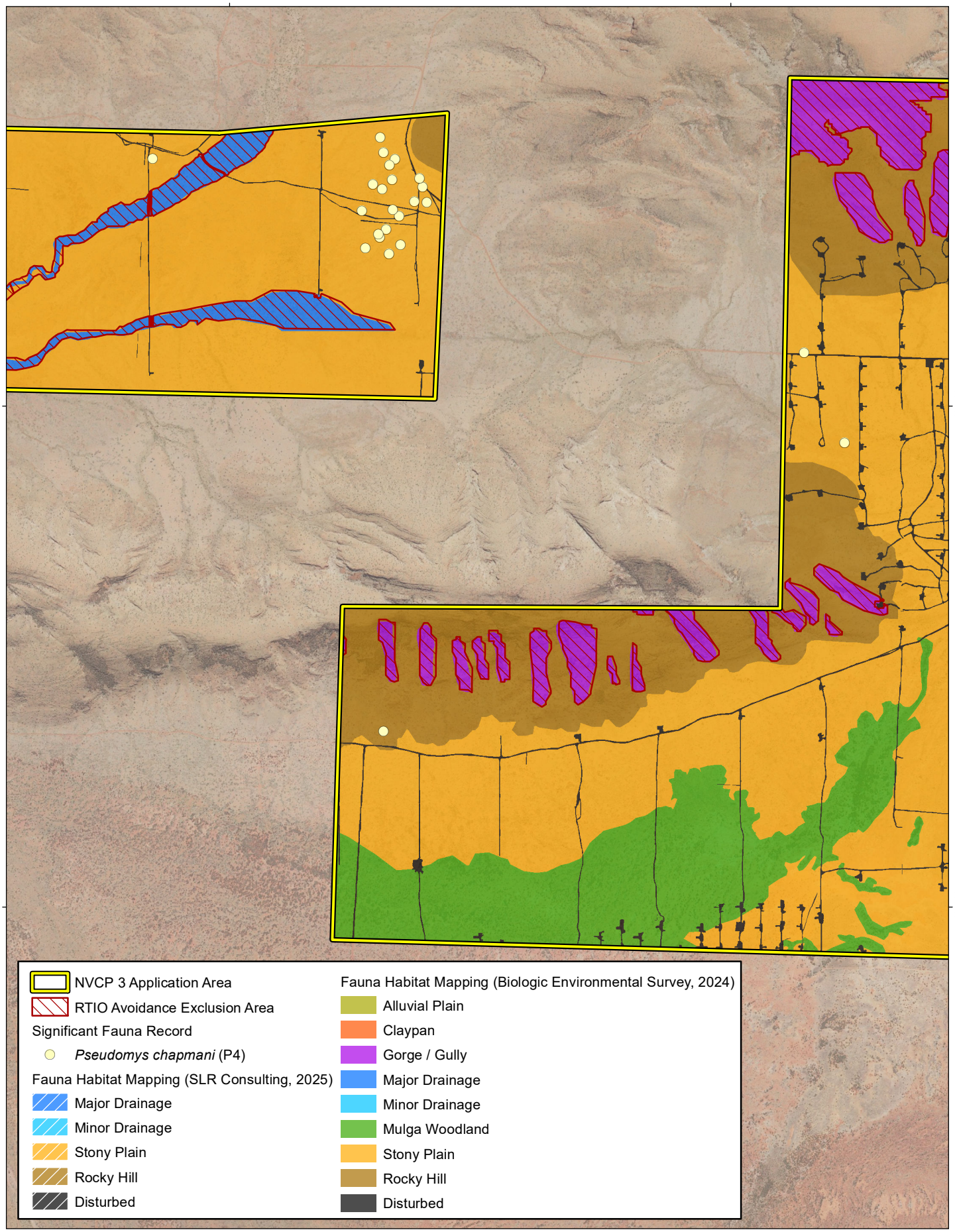
# Fauna Habitat and Significant Fauna Records MAP 13a

C:\GIS\Jobs\360\675.072156.00003 - West Ang NVCP 3 Flora, Veg Fauna Desktop Assess\Figures\675-072156-00003_M13a Fauna Habitat and Significant Fauna Records_250623.mxd




SLR

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N 0 0.25 0.5 1 km

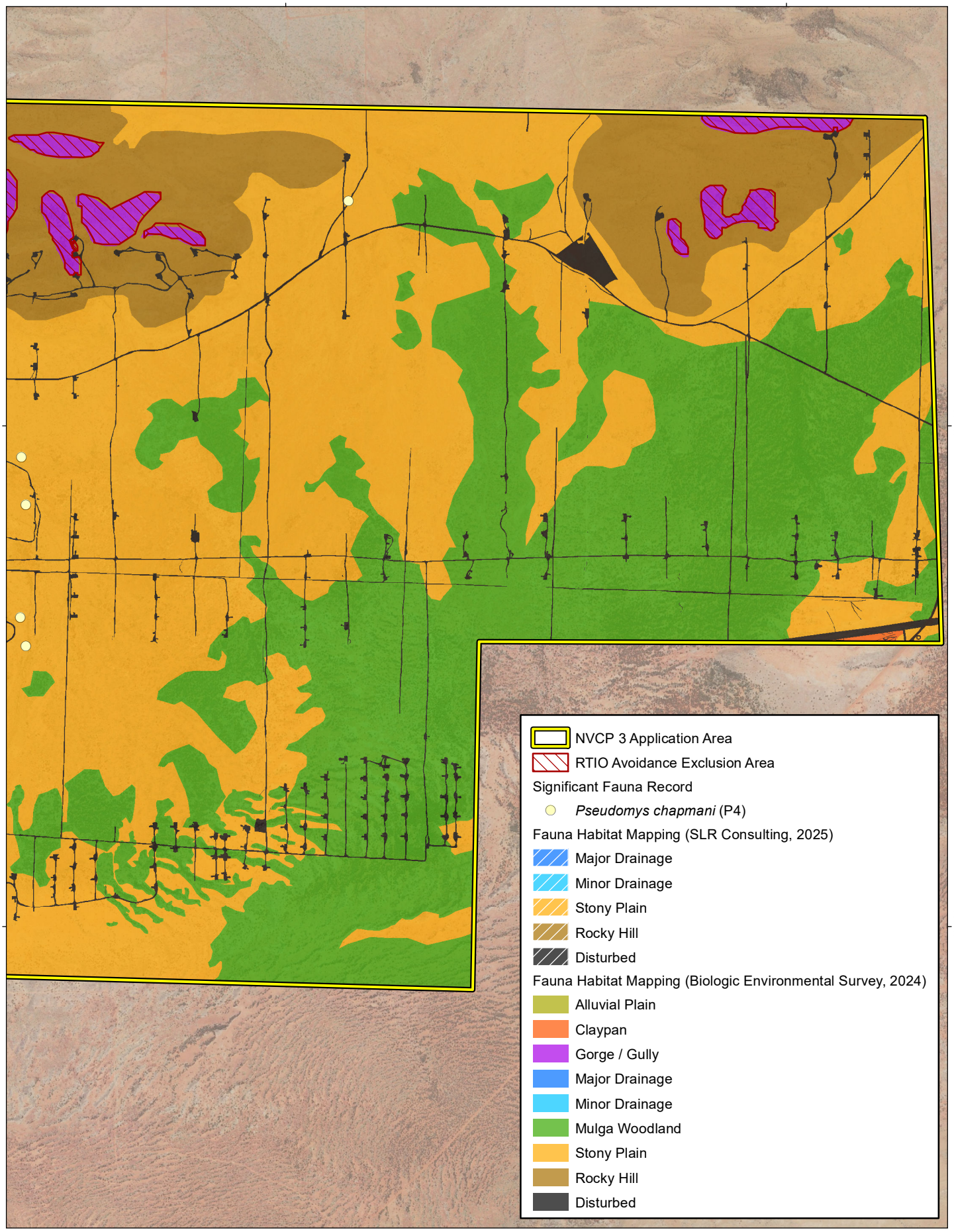
Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

| | |
|---|---|
| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
| Date Drawn | : 23/06/2025 |
| Drawn By | : Environmaps |
| Reviewed By | : GB |

Rio Tinto Iron Ore
West Angelas NVCP 3
Flora, Vegetation and Fauna Desktop Assessment

# Fauna Habitat and Significant Fauna Records MAP 13b



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N 0 0.25 0.5 1 km

Service Layer Credits: Landgate / SLIP
Soil Landscape Mapping Rangelands DPIRD_063

Coordinate System: GDA 1994 MGA Zone 50

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| Scale | : 1:25,000 @ A4 |
| Project Number | : 675.072156.00003 |
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| Reviewed By | : GB |

Rio Tinto Iron Ore
West Angelas NVCP 3
Flora, Vegetation and Fauna Desktop Assessment

# Fauna Habitat and Significant Fauna Records MAP 13c

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# Appendix B Literature Review Summary

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**NVCP3 Flora Literature Review Summary**

| Report | Survey location | Survey timing | Survey type | Significant flora recorded | Significant Ecological Communities Recorded | Introduced Flora |
|---|---|---|---|---|---|---|
| RTIO-1106750: West Angelas NVCP 2 Flora, Vegetation, and Fauna Survey (SLR Consulting, 2025) | Approx. 3.5 km north of the NVCP3 Application Area | Mar/Apr 2024 | Reconnaissance and targeted flora surveys | • Three P2 flora<br>• Eight P3 flora<br>• Two P4 flora | • One PEC - West Angelas Cracking Clays (P1) | Twelve species, including three rated high for ecological impact and rapid invasiveness:<br>• **Cenchrus ciliaris*<br>• **Cenchrus setiger*<br>• **Malvastrum americanum* |
| RTIO-1039347: Angelo Project Two Season Detailed Flora and Vegetation Survey (Biologic Environmental Survey, 2023) | Overlaps with NVCP3 Application Area | Stage 1:<br>• Phase 1: Apr 2021<br>• Phase 2: Aug 2021<br>Stage 3:<br>• Phase 1: Aug 2021<br>• Phase 2: Apr 2022 | Detailed flora and vegetation survey | • 32 confirmed priority flora, seven unconfirmed<br>• Eight confirmed P2 flora<br>• 21 confirmed P3 flora<br>• Three confirmed P3 flora | • One PEC - West Angelas Cracking Clays (P1) | 12 species, including six rated high for ecological impact and rapid invasiveness:<br>• **Aerva javanica*,<br>• **Cenchrus ciliaris*<br>• **Cenchrus setiger*<br>• **Chloris virgata*<br>• **Malvastrum americanum*<br>• **Setaria verticillata* |
| RTIO-HSE-0358574: Deposit J Riparian Flora and Vegetation Survey (Biologic | Overlaps with northwestern Application Area polygon | Aug 2020 | Single Phase Reconnaissance Survey | • *Aristida lazaridis* (P2)<br>• *Indigofera gilesii* (P3)<br>• *Rostellularia adscendens* var. *latifolia* (P3)<br>• *Triodia* sp. Mt Ella (M. E. Trudgen 12739) (P3)<br>• *Acacia subtiliformis* (P3) | • None recorded | Seven species:<br>• **Bidens bipinnata*<br>• **Cenchrus ciliaris*<br>• **Flaveria trinervia*<br>• **Malvastrum americanum*<br>• **Rumex vesicarius* |

| Report | Survey location | Survey timing | Survey type | Significant flora recorded | Significant Ecological Communities Recorded | Introduced Flora |
|---|---|---|---|---|---|---|
| Environmental Survey, 2021a) | | | | | | • **Setaria verticillata*<br>• **Sigesbeckia orientalis* |
| RTIO-HSE-0331917:<br>West Angelas Targeted *Tetratheca fordiana* Survey (Astron Environmental Services, 2018) | Overlaps with majority of NVCP3 Application Area | 2018 | Single season targeted flora survey | • *Tetratheca fordiana* | n/a | n/a |
| RTIO-HSE-0204192:<br>Flora and Vegetation Survey at Indabiddy (Rio Tinto Iron Ore, 2013) | Within NVCP3 Application Area | Aug 2013 | Detailed Flora and Vegetation Survey | • *Indigofera gilesii* (P3)<br>• *Triodia* sp. Mt Ella (M. E. Trudgen 12739) (P3)<br>• *Eremophila magnifica* subsp. *magnifica* (P4)<br>• *Rhagodia* sp. Hamersley (M. Trudgen 17794) (formerly P3, now delisted) | None recorded | • **Malvastrum americanum* |
| RTIO-HSE-0142330:<br>Angelo River Flora and Vegetation Assessment (ENV Australia, 2012a) | Overlaps with majority of NVCP3 Application Area | Apr 2011 | Level 2 Flora and Vegetation Baseline Assessment | Eight species:<br>• *Acacia effusa* (P3)<br>• *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) (P3)<br>• *Isotropis parviflora* (P2)<br>• *Oxalis* sp. Pilbara (M.E. Trudgen 12725)<br>• *Pilbara trudgenii* (P2)<br>• *Rhagodia* sp. Hamersley (M. Trudgen 17794) | None recorded | • **Bidens bipinnata*<br>• **Flaveria trinervia*<br>• **Malvastrum americanum*<br>• **Portulaca oleracea* |

| Report | Survey location | Survey timing | Survey type | Significant flora recorded | Significant Ecological Communities Recorded | Introduced Flora |
|---|---|---|---|---|---|---|
| | | | | (formerly P3, now delisted)<br>• *Rostellularia adscendens* var. *latifolia* (P3)<br>• *Triodia* sp. Mt Ella (M. E. Trudgen 12739) (P3) | | |
| RTIO-HSE-0120152:<br>Flora and Vegetation Survey for Proposed Exploration Drilling at ML248 (Rio Tinto Iron Ore, 2011) | Within NVCP3 Application Area | July 2011 | Detailed Flora and Vegetation Survey | • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (formerly P3, now delisted)<br>• *Triodia* sp. Mt Ella (M. E. Trudgen 12739) (P3) | None recorded | • **Echinochloa colona*<br>• **Bidens bipinnata*<br>• **Portulaca oleracea*<br>• **Sigesbeckia orientalis* |
| RTIO-HSE-0084348:<br>Botanical Survey for Exploration Drilling at Indabiddy Deposit (Angelo River) (Rio Tinto Iron Ore, 2010) | Overlaps with NVCP3 Application Area | Oct/Nov 2009 | Detailed Flora and Vegetation Survey | • *Rhagodia* sp. Hamersley (M. Trudgen 17794) (formerly P3, now delisted)<br>• *Triodia* sp. Mt Ella (M. E. Trudgen 12739) (P3) | None recorded | • **Bidens bipinnata*<br>• **Malvastrum americanum* |

**Fauna Literature Review Summary**

| Report | Survey location | Survey timing | Survey type | Significant fauna recorded | Fauna habitats recorded |
|---|---|---|---|---|---|
| RTIO-0999604:<br><br>Angelo Project Detailed Vertebrate Fauna Survey (Biologic Environmental Survey, 2025) | Overlaps with current Application Area | Stage 1:<br>• Phase 1: Apr 2021<br>• Phase 2: Nov 2021<br><br>Stage 2:<br>• Phase 1: Oct 2021<br>• Phase 2: Feb - Mar 2022<br><br>Stage 3:<br>• Phase 1: Sep 2021<br>• Phase 2: Apr 2022 | Detailed vertebrate fauna survey | • Pilbara Flat-headed blind-snake *(Anilios ganei)* – Priority 1 (DBCA)<br>• Pilbara Barking Gecko *(Underwoodisaurus seorsus)* – Priority 2 (DBCA)<br>• Brush-tailed Mulgara (*Dasycercus blythi)* – Priority 4 (DBCA)<br>• Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 (DBCA) | Ten (including Disturbed) fauna habitats were identified:<br>• Rocky Hill<br>• Stony Plain<br>• Low Hills and Slopes<br>• Mulga Woodland<br>• Gorge/Gully<br>• Alluvial Plain<br>• Major Drainage<br>• Disturbed<br>• Minor Drainage<br>• Breakaway/Cliff<br>• Claypan |
| RTIO-0982660:<br><br>Mount Ella East and Deposit J Targeted Flora and Vertebrate Fauna Survey Memorandum (Biologic Environmental Survey, 2022) | Southwest polygon overlaps with current Application Area | Aug 2021 | Targeted significant fauna survey | • Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 (DBCA) | Four fauna habitats were identified:<br>• Footslope and Plain<br>• Hillcrest and Hillslope<br>• Mixed Acacia Woodland<br>• Gorge/Gully |
| RTIO-HSE-0142972:<br><br>Angelo River Vertebrate Fauna Baseline Survey (ENV Australia, 2012) | Overlaps with current Application Area | Jun – Jul 2011 | Single season detailed vertebrate fauna survey | • Pilbara Leaf-nosed Bat (*Rhinonycteris aurantius* Pilbara form) – Vulnerable (BC Act); Vulnerable (BC Act)<br>• Australian Bustard (*Ardeotis australis*) – Priority 4 (DBCA, | Four fauna habitats were identified:<br>• Alluvial Plain<br>• Drainage Line<br>• Hill<br>• Gorge |

| Report | Survey location | Survey timing | Survey type | Significant fauna recorded | Fauna habitats recorded |
|---|---|---|---|---|---|
| | | | | conservation status has been downgraded)<br>• Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 (DBCA) | |
| RTIO-1106750<br><br>West Angelas NVCP 2 Flora, Vegetation, and Fauna Survey (SLR Consulting, 2025) | 3 km north of the current Application Area | Fauna:<br>Apr 2024 | Basic fauna and targeted significant fauna survey | • Northern Quoll (*Dasyurus hallucatus*) – Endangered (BC Act); Endangered (EPBC Act)<br>• Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4 (DBCA) | Six (excluding Disturbed) fauna habitats were identified:<br>• Clay Plain<br>• Minor Drainage<br>• Low Hills and Slopes<br>• Gorge/Gully<br>• Rocky Hill<br>• Stony Plain |

# Appendix C Flora Desktop Assessment Results and Likelihood of Occurrence

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**Assessment of the Likelihood of Occurrence of Threatened and Priority Flora as per Desktop Assessment Database Searches surrounding the Survey Area**

Distance to Nearest Record from the Survey Area is based on a distance analysis undertaken against 2024 DBCA database and client supplied data. High = Suitable habitat present and records less than 5 km from the Survey Area, Medium = Suitable habitat present and records between 5 km and 15 km from the Survey Area, and Low = No suitable habitat present and/or records greater than 15 km from the Survey Area, Unknown = Insufficient information available to classify . CR= Listed as Critically Endangered under the EPBC Act, EN = Listed as Endangered under the EBPC Act, VU = listed as Vulnerable under the EBPC Act. T = Threatened under the BC Act, P = Priority Listed, Ranked and Listed by the DBCA. Likelihoods for desktop assessment are based on knowledge of the Survey Area, nearest known records, and known flowering period of flora taxa. 1: Department of the Environment (2025). SPRAT EPBC Threatened Flora in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. 2: Department of Biodiversity, Conservation and Attractions (2025). FloraBase - The Western Australian Flora. https://florabase.dpaw.wa.gov.au/

| Species | Conservation Status | | Source | | | | | Distance to Nearest Record (km) | Flowering Period | Prefered Habitat | Habitat occurs within the Survey Area | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DBCA | EPBC | Nature Map | PMST | DBCA | RTIO | Literature | | | | | |
| *Isotropis forrestii* | P1 | - | ✓ | - | | ✓ | - | 18.41 | May - Jul or Sep | Stony clay loam, sandy alluvium. Along drainage lines. | Yes | Low |
| *Sida* sp. Turee Creek (P.-L.de Kock PLDK1116) | P1 | - | ✓ | - | ✓ | ✓ | ✓ | 0.0017 | Mar | Clay loam Mulga plains with ironstone gravel, pebbles and cobbles.[2] | Yes | High |
| *Eremophila pusilliflora* | P2 | - | ✓ | - | ✓ | ✓ | ✓ | 1.97 | Apr | Red brown loam over ironstone.[2] | Yes | High |
| *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) | P2 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Unknown | Drainage lines, gullies.[2] | Yes | Previously recorded |
| *Neptunia longipila* | P2 | - | ✓ | - | ✓ | - | - | 7.47 | Jun | Plain. Stony sandy-clay.[2] | Yes | Medium |
| *Tetratheca fordiana* | P2 | - | ✓ | - | ✓ | ✓ | ✓ | 0.08 | Unknown | Cliff wall, breakaway.[2] | No | Low |
| *Acacia daweana* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 6.28 | Apr - Jul or Aug | Stony red loamy soils. Low rocky rises, along drainage lines.[2] | Yes | Medium |
| *Acacia effusa* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 2.09 | Aug | Stony red loam. Scree slopes of low ranges.[2] | Yes | High |
| *Acacia subtiliformis* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Apr - Sep or Dec | On rocky calcrete plateau.[2] | Yes | Previously recorded |
| *Aristida jerichoensis* var. *subspinulifera* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Aug | Hardpan plains.[2] | Yes | Previously recorded |
| *Aristida lazaridis* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | July | Sand or loam.[2] | Yes | Previously recorded |
| *Dampiera metallorum* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 1.31 | Sep | Skeletal red-brown gravelly soil over banded ironstone. Steep slopes, summits of hills.[2] | No | Low |
| *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 2.70 | Aug - Sep | Brown sandy clay, or medium clay. Claypans, drainage lines, cracking clays, crabhole plains.[2] | Yes | Medium |
| *Eremophila magnifica* subsp. *velutina* | P3 | - | - | - | - | ✓ | ✓ | 0.73 | May, Aug | Skeletal soils over ironstone. Summits.[2] | Yes | High |
| *Eremophila naaykensii* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Apr -Jun or Aug - Oct | Red clay loam on rocky hill slopes, hill crests and upper hill slopes. Ironstone gorges.[2] | Yes | Previously recorded |
| *Eremophila* sp. West Angelas (S. van Leeuwen 4068) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Sept | Steep rock slopes and scree, skeletal brown-red soils.[2] | Yes | Previously recorded |
| *Euphorbia clementii* | P3 | - | - | - | - | ✓ | - | 8.26 | May | Gravelly hillsides, stony grounds.[2] | Yes | Low |

[1] Department of Agriculture, Water and Environment (2025) [2]Western Australian Herbarium (2025)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Euphorbia inappendiculata* var. *inappendiculata* | P3 | - | ✓ | - | - | ✓ | - | 8.13 | Jul - Sep | Red, brown clay or loam. Plains.[2] | Yes | Medium |
| *Euphorbia stevenii* | P3 | - | ✓ | - | ✓ | - | - | 8.57 | May or Sep | Clay, sandy soils.[2] | Yes | Medium |
| *Geijera salicifolia* | P3 | - | - | - | - | ✓ | - | 1.15 | Unknown | Skeletal soils, stony soils. Massive rock scree, gorges.[2] | Yes | High |
| *Goodenia lyrata* | P3 | - | ✓ | - | ✓ | - | - | 15.51 | Jul - Sep | Red sandy loam. Near claypan.[2] | Yes | Low |
| *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727) | P3 | - | - | - | - | ✓ | ✓ | 2.70 | May - Aug | Red-brown clay soil, calcrete pebbles. Low undulating plain, swampy plains.[2] | No | Low |
| *Grevillea saxicola* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 6.01 | Jun | Gullies, large creeks, cliffs, low rocky hills.[2] | Yes | Medium |
| *Indigofera gilesii* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Apr | Pebbly loam. Amongst boulders and outcrops, hills.[2] | Yes | Previously recorded |
| *Ipomoea racemigera* | P3 | - | ✓ | - | | ✓ | ✓ | 3.08 | Apr or Jun - Oct | On sandy soils along watercourses.[2] | Yes | High |
| *Isotropis parviflora* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 0.04 | Aug - Sep | Valley slope of ironstone plateau.[2] | Yes | High |
| *Olearia mucronata* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 2.32 | Unknown | Schistose hills, along drainage channels.[2] | Yes | High |
| *Oxalis* sp. Pilbara (M.E. Trudgen 12725) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | | Gorges with sandy loam soil, creeklines.[2] | Yes | Previously recorded |
| *Pentalepis trichodesmoides* subsp. *hispida* | P3 | - | | - | | ✓ | ✓ | 11.21 | Sep | Undulating hills and crests. Red brown clay loam with pebbles, cobbles and boulders over basalt.[2] | Yes | Low |
| *Pilbara trudgenii* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Aug | Skeletal, red stony soil over ironstone. Hill summits, steep slopes, screes, cliff faces.[2] | Yes | Previously recorded |
| *Rostellularia adscendens* var. *latifolia* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | Mar | Ironstone soils. Near creeks, rocky hills.[2] | Yes | Previously recorded |
| *Sida* sp. Hamersley Range (K. Newbey 10692) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 1.09 | May or Aug | Steep hill slopes, gorges, ironstone cliff faces, gullies, breakaways.[2] | Yes | High |
| *Solanum kentrocaule* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | | Exposed outcrops, cliff faces, valleys. Seasonal creeks, bedrock, stony steep slopes, skeletal soil.[2] | Yes | Previously recorded |
| *Streptoglossa* sp. Cracking clays (S. van Leeuwen et al. PBS 7353) | P3 | - | ✓ | - | ✓ | | - | 7.77 | Aug - Dec or Jan | Cracking clays, colluvial and alluvial gravels in floodplain.[2] | Yes | Medium |
| *Swainsona thompsoniana* | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 4.34 | Sep | Cracking clay floodplain. Dark reddish brown craacking clays.[2] | No | Low |
| *Themeda* sp. Hamersley Station (M.E. Trudgen 11431) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | 3.81 | Apr - May | Red clay. Clay pan, grass plain.[2] | No | Low |
| *Triodia* sp. Mt Ella (M.E. Trudgen 12739) | P3 | - | ✓ | - | ✓ | - | ✓ | Within Application area | Aug - Oct | Light orange-brown, pebbly loam. Amongst rocks and outcrops, gully slopes.[2] | Yes | Previously recorded |

[1] Department of Agriculture, Water and Environment (2025) [2]Western Australian Herbarium (2025)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) | P3 | - | ✓ | - | ✓ | ✓ | ✓ | Within Application area | May - Jul | Flat plain. Red, brown sandy clay-loam.[2] | Yes | Previously recorded |
| *Acacia bromilowiana* | P4 | - | ✓ | - | ✓ | ✓ | ✓ | 0.68 | Apr - Dec | Red skeletal stony loam, orange-brown pebbly,gravel loam, laterite, banded ironstone, basalt. Rocky hills, breakaways, scree slopes, gorges, creek beds.[2] | Yes | High |
| *Eremophila magnifica* subsp. *magnifica* | P4 | - | ✓ | - | ✓ | ✓ | ✓ | 0.02 | Aug - Sep | Skeletal soils over ironstone. Rocky screes.[2] | Yes | High |
| *Lepidium catapycnon* | P4 | - | ✓ | - | ✓ | ✓ | - | 1.05 | Aug - Sep | Prime habitat includes stony hill slopes such as the uplands of the Hamersley Range plateau, open woodland in usually hilly areas, more frequently on south facing slopes, hill | Yes | High |
| *Ptilotus mollis* | P4 | - | - | - | - | ✓ | ✓ | 11.04 | July | Stony hills and screes.[2] | Yes | Low |
| *Sida* sp. Barlee Range (S. van Leeuwen 1642) | P4 | - | ✓ | - | ✓ | ✓ | ✓ | 4.98 | Jan - Dec | Skeletal red soils pockets. Steep slope.[2] | Yes | High |

[1] Department of Agriculture, Water and Environment (2025) [2]Western Australian Herbarium (2025)

# Appendix D Flora Recorded in NVCP3 AA

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Acanthaceae | *Dipteracanthus australasicus* subsp. *australasicus* | |
| | *Harnieria kempeana* subsp. *muelleri* | |
| Acanthaceae | *Rostellularia adscendens* var. *latifolia* | P3 |
| Amaranthaceae | *Alternanthera nana* | |
| | *Amaranthus cuspidifolius* | |
| | *Gomphrena affinis* subsp. *pilbarensis* | |
| | *Gomphrena cunninghamii* | |
| | *Ptilotus astrolasius* | |
| | *Ptilotus auriculifolius* | |
| | *Ptilotus calostachyus* | |
| | *Ptilotus clementii* | |
| | *Ptilotus exaltatus* | |
| | *Ptilotus fusiformis* | |
| | *Ptilotus gaudichaudii* | |
| | *Ptilotus helipteroides* | |
| | *Ptilotus obovatus* | |
| | *Ptilotus obovatus* var. *obovatus* | |
| | *Ptilotus polystachyus* | |
| | *Ptilotus rotundifolius* | |
| Apocynaceae | *Cynanchum floribundum* | |
| | *Leichhardtia australis* | |
| | *Vincetoxicum lineare* | |
| Araliaceae | *Astrotricha hamptonii* | |
| | *Trachymene oleracea* subsp. *oleracea* | |
| Asteraceae | *Calotis hispidula* | |
| | *Centipeda minima* subsp. *macrocephala* | |
| | *Chrysocephalum gilesii* | |
| | *Leiocarpa semicalva* subsp. *semicalva* | |
| | *Olearia fluvialis* | |
| | *Olearia stuartii* | |
| | *Olearia xerophila* | |
| | *Pentalepis trichodesmoides* subsp. *trichodesmoides* | |
| | *Peripleura arida* | |
| | *Peripleura obovata* | |
| | *Peripleura virgata* | |
| | *Pilbara trudgenii* | P3 |
| | *Pluchea dentex* | |
| | *Pterocaulon serrulatum* var. *velutinum* | |
| | *Pterocaulon sphacelatum* | |
| | *Rhodanthe margarethae* | |
| | *Rhodanthe polakii* | |
| | *Roebuckiella similis* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Asteraceae | *Streptoglossa bubakii* | |
| | *Streptoglossa decurrens* | |
| | *Streptoglossa liatroides* | |
| | *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684) | P3 |
| | **Bidens bipinnata* | Weed |
| | **Flaveria trinervia* | Weed |
| | **Sigesbeckia orientalis* | Weed |
| Boraginaceae | *Euploca cunninghamii* | |
| | *Euploca inexplicita* | |
| | *Halgania gustafsenii* var. *gustafsenii* | |
| | *Halgania gustafsenii* var. Mid West (G. Perry 370) | |
| | *Trichodesma zeylanicum* var. *zeylanicum* | |
| Brassicaceae | *Lepidium oxytrichum* | |
| Campanulaceae | *Wahlenbergia tumidifructa* | |
| Capparaceae | *Capparis lasiantha* | |
| | *Capparis mitchellii* | |
| Caryophyllaceae | *Polycarpaea corymbosa* var. *corymbosa* | |
| | *Polycarpaea holtzei* | |
| | *Polycarpaea longiflora* | |
| Celastraceae | *Stackhousia intermedia* | |
| | *Stackhousia* sp. swollen gynophore (W.R. Barker 2041) | |
| Chenopodiaceae | *Dysphania kalpari* | |
| | *Dysphania melanocarpa* forma *melanocarpa* | |
| | *Dysphania rhadinostachya* | |
| | *Dysphania rhadinostachya* subsp. *rhadinostachya* | |
| | *Enchylaena tomentosa* var. *tomentosa* | |
| | *Maireana planifolia* | |
| | *Maireana villosa* | |
| | *Rhagodia eremaea* | |
| | *Rhagodia* sp. Hamersley (M. Trudgen 17794) | |
| | *Salsola australis* | |
| Cleomaceae | *Arivela viscosa* | |
| Convolvulaceae | *Convolvulus remotus* | |
| | *Duperreya commixta* | |
| | *Evolvulus alsinoides* var. *decumbens* | |
| | *Evolvulus alsinoides* var. *villosicalyx* | |
| Cucurbitaceae | *Cucumis variabilis* | |
| Cupressaceae | *Callitris columellaris* | |
| Cyperaceae | *Bulbostylis barbata* | |
| | *Fimbristylis dichotoma* | |
| | *Fimbristylis microcarya* | |
| Dilleniaceae | *Hibbertia glaberrima* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Euphorbiaceae | *Euphorbia australis* var. *hispidula* | |
| | *Euphorbia biconvexa* | |
| | *Euphorbia boophthona* | |
| | *Euphorbia drummondii* | |
| | *Euphorbia tannensis* subsp. *eremophila* | |
| | *Euphorbia trigonosperma* | |
| Fabaceae | *Acacia adoxa* var. *adoxa* | |
| | *Acacia adsurgens* | |
| | *Acacia aneura* | |
| | *Acacia aptaneura* | |
| | *Acacia atkinsiana* | |
| | *Acacia ayersiana* | |
| | *Acacia bivenosa* | |
| | *Acacia catenulata* subsp. *occidentalis* | |
| | *Acacia colei* var. *colei* | |
| | *Acacia cowleana* | |
| | *Acacia dictyophleba* | |
| | *Acacia hamersleyensis* | |
| | *Acacia incurvaneura* | |
| | *Acacia kempeana* | |
| | *Acacia maitlandii* | |
| | *Acacia marramamba* | |
| | *Acacia monticola* | |
| | *Acacia pachyacra* | |
| | *Acacia pruinocarpa* | |
| | *Acacia pteraneura* | |
| | Acacia pyrifolia var. pyrifolia | |
| | *Acacia rhodophloia* | |
| | *Acacia sibirica* | |
| | *Acacia steedmanii* subsp. *borealis* | |
| | *Acacia subtiliformis* | P3 |
| | *Acacia tenuissima* | |
| | *Acacia tetragonophylla* | |
| | *Acacia trudgeniana* | |
| | *Acacia tumida* var. *pilbarensis* | |
| | *Crotalaria medicaginea* var. *neglecta* | |
| | *Cullen pogonocarpum* | |
| | *Gastrolobium grandiflorum* | |
| | *Glycine canescens* | |
| | *Gompholobium oreophilum* | |
| | *Indigofera fractiflexa* subsp. *fractiflexa* | |
| | *Indigofera georgei* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Fabaceae | *Indigofera gilesii* | P3 |
| | *Indigofera linifolia* | |
| | *Indigofera monophylla* | |
| | *Isotropis atropurpurea* | |
| | *Isotropis iophyta* | |
| | *Petalostylis labicheoides* | |
| | *Rhynchosia minima* | |
| | *Senna artemisioides* subsp. *filifolia* | |
| | *Senna artemisioides* subsp. *helmsii* | |
| | *Senna artemisioides* subsp. *oligophylla* | |
| | *Senna artemisioides* subsp. x *artemisioides* | |
| | *Senna artemisioides* subsp. x *sturtii* | |
| | *Senna ferraria* | |
| | *Senna glaucifolia* | |
| | *Senna glutinosa* subsp. *glutinosa* | |
| | *Senna glutinosa* subsp. *pruinosa* | |
| | *Senna glutinosa* subsp. x *luerssenii* | |
| | *Senna notabilis* | |
| | *Senna pleurocarpa* var. *angustifolia* | |
| | *Swainsona canescens* | |
| | *Swainsona kingii* | |
| | *Tephrosia densa* | |
| | *Tephrosia oxalidea* | |
| | *Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186) | |
| | *Tephrosia* sp. Newman (A.A. Mitchell PRP 29) | |
| Goodeniaceae | *Brunonia* sp. Long hairs (D.E. Symon 2440) | |
| | *Dampiera candicans* | |
| | *Goodenia connata* | |
| | *Goodenia cusackiana* | |
| | *Goodenia forrestii* | |
| | *Goodenia lamprosperma* | |
| | *Goodenia microptera* | |
| | *Goodenia muelleriana* | |
| | *Goodenia stellata* | |
| | *Goodenia stobbsiana* | |
| | *Goodenia triodiophila* | |
| | *Scaevola amblyanthera* var. *centralis* | |
| | *Scaevola parvifolia* | |
| | *Scaevola parvifolia* subsp. *pilbarae* | |
| | *Scaevola* sp. Mt Bruce (M.E. Trudgen 1333) | |
| | *Scaevola spinescens* | |
| Gyrostemonaceae | *Codonocarpus cotinifolius* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Lamiaceae | *Clerodendrum floribundum* var. *angustifolium* | |
| | *Newcastelia clavipetala* | |
| | *Prostanthera albiflora* | |
| Lamiaceae | *Teucrium disjunctum* | |
| | *Teucrium teucriiflorum* | |
| Lauraceae | *Cassytha capillaris* | |
| Loranthaceae | *Amyema sanguinea* var. *pulchra* | |
| Malvaceae | *Abutilon cryptopetalum* | |
| | *Abutilon cunninghamii* | |
| | Abutilon fraseri subsp. fraseri | |
| | *Abutilon lepidum* | |
| | *Abutilon macrum* | |
| | *Abutilon otocarpum* | |
| | *Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618) | |
| | *Abutilon* sp. Pilbara (W.R. Barker 2025) | |
| | *Androcalva luteiflora* | |
| | *Brachychiton acuminatus* | |
| | *Brachychiton gregorii* | |
| | *Corchorus crozophorifolius* | |
| | *Corchorus lasiocarpus* | |
| | *Corchorus lasiocarpus* subsp. *lasiocarpus* | |
| | *Corchorus lasiocarpus* subsp. *parvus* | |
| | *Corchorus tridens* | |
| | *Gossypium robinsonii* | |
| | *Hibiscus burtonii* | |
| | *Hibiscus coatesii* | |
| | *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708) | P2 |
| | *Hibiscus sturtii* var. *campylochlamys* | |
| | *Hibiscus sturtii* var. *platychlamys* | |
| | *Hibiscus sturtii* var. *truncatus* | |
| | *Melhania oblongifolia* | |
| | *Seringia exastia* | |
| | *Seringia nephrosperma* | |
| | *Sida cardiophylla* | |
| | *Sida echinocarpa* | |
| | *Sida ectogama* | |
| | *Sida fibulifera* | |
| | *Sida* sp. dark green fruits (S. van Leeuwen 2260) | |
| | *Sida* sp. Excedentifolia (J.L. Egan 1925) | |
| | *Sida* sp. Golden calyces glabrous (H.N. Foote 32) | |
| | *Sida* sp. L (A.M. Ashby 4202) | |
| | *Sida* sp. Pilbara (A.A. Mitchell PRP 1543) | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Malvaceae | *Sida* sp. Shovelanna Hill (S. van Leeuwen 3842) | |
| | *Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90) | |
| | *Triumfetta maconochieana* | |
| | *Waltheria indica* | |
| | **Malvastrum americanum* | Weed |
| Myrtaceae | *Corymbia deserticola* subsp. *deserticola* | |
| | *Corymbia ferriticola* | |
| | *Corymbia hamersleyana* | |
| | *Eucalyptus* ? *trivalva* | |
| | *Eucalyptus gamophylla* | |
| | *Eucalyptus kingsmillii* | |
| | *Eucalyptus leucophloia* subsp. *leucophloia* | |
| | *Eucalyptus pilbarensis* | |
| | *Eucalyptus socialis* | |
| | *Eucalyptus victrix* | |
| | *Eucalyptus xerothermica* | |
| Nyctaginaceae | *Boerhavia coccinea* | |
| | *Boerhavia repleta* | |
| Oleaceae | *Jasminum didymum* subsp. *lineare* | |
| Oxalidaceae | *Oxalis* sp. Pilbara (M.E. Trudgen 12725) | P3 |
| Phyllanthaceae | *Dendrophyllanthus erwinii* | |
| | *Nellica maderaspatensis* | |
| | *Notoleptopus decaisnei* | |
| Plantaginaceae | *Stemodia grossa* | |
| Poaceae | *Acrachne racemosa* | |
| | *Amphipogon sericeus* | |
| | *Aristida burbidgeae* | |
| | *Aristida contorta* | |
| | *Aristida holathera* var. *holathera* | |
| | *Aristida inaequiglumis* | |
| | *Aristida jerichoensis* var. *subspinulifera* | P3 |
| | *Aristida lazaridis* | P3 |
| | *Aristida obscura* | |
| | *Aristida pruinosa* | |
| | *Bothriochloa ewartiana* | |
| | *Chrysopogon fallax* | |
| | *Cymbopogon ambiguus* | |
| | *Cymbopogon obtectus* | |
| | *Dactyloctenium radulans* | |
| | *Digitaria ammophila* | |
| | *Digitaria brownii* | |
| | *Digitaria ctenantha* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Poaceae | *Enneapogon caerulescens* | |
| | *Enneapogon lindleyanus* | |
| | *Enneapogon polyphyllus* | |
| | *Enneapogon robustissimus* | |
| | *Enteropogon ramosus* | |
| | *Eragrostis cumingii* | |
| | *Eragrostis desertorum* | |
| | *Eragrostis eriopoda* | |
| | *Eragrostis pergracilis* | |
| | *Eragrostis tenellula* | |
| | *Eriachne lanata* | |
| | *Eriachne mucronata* | |
| | *Eriachne pulchella* | |
| | *Eriachne pulchella* subsp. *pulchella* | |
| | *Eriachne tenuiculmis* | |
| | *Eulalia aurea* | |
| | *Iseilema macratherum* | |
| | *Iseilema membranaceum* | |
| | *Panicum australiense* var. *australiense* | |
| | *Panicum decompositum* | |
| | *Panicum effusum* | |
| | *Paraneurachne muelleri* | |
| | *Paspalidium clementii* | |
| | *Perotis rara* | |
| | *Schizachyrium fragile* | |
| | *Setaria dielsii* | |
| | *Setaria surgens* | |
| | *Sporobolus australasicus* | |
| | *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) | |
| | *Themeda triandra* | |
| | *Tragus australianus* | |
| | *Triodia angusta* | |
| | *Triodia melvillei* | |
| | *Triodia pungens* | |
| | *Triodia* sp. Mt Ella (M.E. Trudgen 12739) | P3 |
| | *Triodia vanleeuwenii* | |
| | *Triodia wiseana* | |
| | *Urochloa subquadripara* | |
| | **Cenchrus ciliaris* | Weed |
| | **Chloris virgata* | Weed |
| | *Setaria verticillata* | Weed |
| Polygalaceae | *Polygala glaucifolia* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Polygalaceae | *Polygala isingii* | |
| Portulacaceae | *Calandrinia ptychosperma* | |
| | *Portulaca oleracea* | |
| Proteaceae | *Grevillea berryana* | |
| | *Hakea chordophylla* | |
| | *Hakea lorea* subsp. *lorea* | |
| Pteridaceae | *Cheilanthes brownii* | |
| | *Cheilanthes sieberi* subsp. *sieberi* | |
| | *Pellaea reynoldsii* | |
| Rhamnaceae | *Cryptandra monticola* | |
| | *Ventilago viminalis* | |
| Rubiaceae | *Dolichocarpa crouchiana* | |
| | *Psydrax latifolia* | |
| | *Psydrax suaveolens* | |
| | *Spermacoce brachystema* | |
| Santalaceae | *Anthobolus leptomerioides* | |
| | *Exocarpos sparteus* | |
| | *Santalum lanceolatum* | |
| Sapindaceae | *Dodonaea coriacea* | |
| | *Dodonaea lanceolata* var. *lanceolata* | |
| | *Dodonaea pachyneura* | |
| | *Dodonaea viscosa* subsp. *mucronata* | |
| Scrophulariaceae | *Eremophila clarkei* | |
| | *Eremophila forrestii* subsp. *forrestii* | |
| | *Eremophila fraseri* subsp. *fraseri* | |
| | *Eremophila jucunda* subsp. *pulcherrima* | |
| | *Eremophila lanceolata* | |
| | *Eremophila latrobei* subsp. *filiformis* | |
| | *Eremophila latrobei* subsp. *latrobei* | |
| | *Eremophila longifolia* | |
| | *Eremophila naaykensii* | P3 |
| | *Eremophila* sp. West Angelas (S. van Leeuwen 4068) | P3 |
| Solanaceae | *Nicotiana benthamiana* | |
| | *Nicotiana ingulba* | |
| | *Nicotiana occidentalis* | |
| | *Nicotiana rosulata* | |
| | *Solanum centrale* | |
| | *Solanum ferocissimum* | |
| | *Solanum horridum* | |
| | *Solanum kentrocaule* | P3 |
| | *Solanum lasiophyllum* | |
| | *Solanum phlomoides* | |

**Appendix D: Flora Recorded in the NVCP3 Application Area**

| Family | Confirmed name | Status |
|---|---|---|
| Surianaceae | *Stylobasium spathulatum* | |
| Urticaceae | *Parietaria cardiostegia* | |
| Violaceae | *Afrohybanthus aurantiacus* | |
| Zygophyllaceae | *Tribulus astrocarpus* | |
| | *Tribulus suberosus* | |

# Appendix E Omitted Flora Entities

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**Appendix E: Entities omitted from total flora inventory**

| Taxon | Name change | Not on Pilbara species list | Misapplied name | IDd to Genus | IDd to Family | Tentatively IDd to species | May represent duplicate of confirmed taxa | Unrecognised hybrid |
|---|---|---|---|---|---|---|---|---|
| *Acacia* ? *aneura* | | | | | | | ✓ | |
| *Acacia* ? *aptaneura* | | | | | | | ✓ | |
| *Acacia* ? *kempeana* | | | | | | | ✓ | |
| *Acacia* ? *pteraneura* | | | | | | | ✓ | |
| *Acacia ayersiana* (narrow phyllode variant) | | ✓ | | | | | | ✓ |
| *Acacia bivenosa* hybrid | | ✓ | | | | | | ✓ |
| *Amaranthus* aff. *undulatus* (round leaves, short tepals) | | ✓ | | | | | | ✓ |
| *Amaranthus* sp. | | | | ✓ | | | | |
| *Aristida* ? *pruinosa* | | | | | | | ✓ | |
| *Aristida ?jerichoensis var. subspinulifera* | | | | | | | ✓ | |
| **Bidens bipinnata* | | | | | | | | |
| *Boerhavia* sp. | | | | ✓ | | | | |
| **Cenchrus ciliaris* | | | | | | | | |
| **Chloris virgata* | | | | | | | | |
| *Cucumis maderaspatanus* | | | ✓ | | | | | |
| *Cyperus* sp. | | | | ✓ | | | | |
| *Eucalyptus* sp. | | | | ✓ | | | | |
| *Euphorbia* sp. *(biconvexa/coghlanii/trigonosperma* ; sterile*)* | | | | ✓ | | | | |
| **Flaveria trinervia* | | | | | | | | |
| *Haloragis* ? *trigonocarpa* | | | | | | ✓ | | |
| *Hibiscus* sp. | | | | ✓ | | | | |
| *Maireana planifolia x villosa* | | ✓ | | | | | | ✓ |
| **Malvastrum americanum* | | | | | | | | |
| *Olearia* ? *stuartii* | | | | | | | ✓ | |
| *Pandorea pandorana* | | ✓ | | | | | | ✓ |
| *Portulaca oleracea/intraterranea* | | | | ✓ | | | | |
| *Ptilotus* ? *fusiformis* | | | | | | | ✓ | |
| *Ptilotus nobilis* | | ✓ | | | | | | ✓ |
| *Ptilotus* sp. | | | | ✓ | | | | |
| *Senna* ? *stricta* | | | | | | ✓ | | |
| *Senna artemisioides* subsp. *oligophylla* (thinly sericeous form MET 15,035) | | ✓ | | | | | | ✓ |
| *Senna artemisioides* subsp. *oligophylla* x subsp*. helmsii* | | ✓ | | | | | | ✓ |
| *Senna ferraria* x | | ✓ | | | | | | ✓ |
| *Senna glaucifolia* x | | ✓ | | | | | | ✓ |
| *Senna glaucifolia* x *S. artemisioides* subsp. *helmsii* | | ✓ | | | | | | ✓ |
| *Senna glutinosa* subsp. *glutinosa* x *S. stricta* | | ✓ | | | | | | ✓ |

**Appendix E: Entities omitted from total flora inventory**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Seringia elliptica* | ✓ | | | | | | | |
| **Setaria verticillata* | | | | | | | | |
| *Sida ? fibulifera* | | | | | | | ✓ | |
| *Sida* sp. | | | | ✓ | | | ✓ | |
| **Sigesbeckia orientalis* | | | | | | | | |
| *Solanum ? cleistogamum* | | | | | | ✓ | | |
| *Tephrosia ? clementii* | | | | | | ✓ | | |

# Appendix F Fauna Desktop Assessment Results

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

Conservation Status: State - Listed under Biodiversity Conservation Act 2016 or Department of Biodiversity, Conservation and Attractions Conservation, Commonwealth - Listed under Environmental Protection and Biodiversity Conservation Act 1999. CR - Critically Endangered, EN - Endangered, VU - Vulnerable, MI - Migratory, CD - Conservation Dependent fauna, OS - Other Specially Protected fauna, MA - Marine, P - Listed as Priority by DBCA.

Database: NM - NatureMap, PMST - EPBC Protected Matters Search Tool, DBCA - DBCA Threatened and Priority Fauna database search, RTIO - Rio Tinto Internal Database.

Literature: A - Angelo Project Detailed Vertebrate Fauna Survey (Biologic Environmental Survey, 2025)

Literature: B - Mount Ella East and Deposit J Targeted Flora and Vertebrate Fauna Survey Memorandum (Biologic Environmental Survey, 2022)

Literature: C - Angelo River Vertebrate Fauna Baseline Survey (ENV Australia, 2012)

Literature: D - West Angelas NVCP 2 Flora, Vegetation, and Fauna Survey (SLR Consulting, 2025)

| Family | Scientific Name | Common Name | Conservation Statu | | Database | | | | Literature | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | State | Federal | NM | PMST | DBCA | RTIO | A | B | C | D |
| **Amphibia** | | | | | | | | | | | | |
| Limnodynastidae | *Neobatrachus aquilonius* | Northern Burrowing Frog | - | - | 1 | | | | | | | |
| | *Neobatrachus sutor* | Shoemaker Frog | - | - | 2 | | | | x | | | |
| Myobatrachidae | *Pseudophryne douglasi* | Gorge Toadlet | - | - | 2 | | | | x | | | |
| Pelodryadidae | *Cyclorana maini* | Sheep Frog | - | - | 22 | | | 8 | x | | | |
| | *Cyclorana occidentalis* | Western Water-holding Frog | - | - | | | | | x | | | |
| | *Litoria ridibunda* | Western Laughing Tree Frog | - | - | 4 | | | 7 | x | | | x |
| **Aves** | | | | | | | | | | | | |
| Acanthizidae | *Acanthiza apicalis* | Inland Thornbill, Broad-tailed Thornbill | - | - | 34 | | | 37 | x | | x | |
| | *Acanthiza chrysorrhoa* | Yellow-rumped Thornbill | - | - | | | | | x | | | |
| | *Acanthiza robustirostris* | Slaty-backed Thornbill | - | - | 8 | | | 4 | x | | | |
| | *Acanthiza uropygialis* | Chestnut-rumped Thornbill | - | - | 9 | | | 15 | x | | | |
| | *Aphelocephala leucopsis* | Southern Whiteface | P4 | VU | | x | | | | | | |
| | *Gerygone fusca* | Western Gerygone | - | - | 32 | | | 47 | x | | x | |
| | *Pyrrholaemus brunneus* | Redthroat | - | - | 5 | | | | x | | | |
| | *Smicrornis brevirostris* | Weebill | - | - | 111 | | | 176 | x | | x | x |
| Accipitridae | *Aquila audax* | Wedge-tailed Eagle | - | - | 4 | | | 7 | x | | | x |
| | *Circus assimilis* | Spotted Harrier | - | - | 14 | | | 24 | | | | |
| | *Elanus axillaris* | Black-shouldered Kite | - | - | 6 | | | 7 | | | | |
| | *Elanus scriptus* | Letter-winged Kite | P4 | - | 1 | | 1 | 2 | | | | |
| | *Erythrotriorchis radiatus* | Red Goshawk | VU | EN | | x | | | | | | |
| | *Haliastur sphenurus* | Whistling Kite | - | - | 7 | | | 4 | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Hieraaetus morphnoides* | Little Eagle | - | - | 1 | | | 1 | x | | | |
| | *Milvus migrans* | Black Kite | - | - | | | | | | | | x |
| | *Tachyspiza cirrocephala* | Collared Sparrowhawk | - | - | 3 | | | 3 | x | | | x |
| | *Tachyspiza fasciata* | Brown Goshawk | - | - | 2 | | | 4 | x | | | |
| Aegothelidae | *Aegotheles cristatus* | Australian Owlet-nightjar | - | - | 8 | | | 42 | x | | | |
| Alaudidae | *Mirafra javanica* | Horsfield's Bush Lark | - | - | 2 | | | 2 | | | x | |
| Alcedinidae | *Todiramphus pyrrhopygius* | Red-backed Kingfisher | - | - | 17 | | | 20 | x | | | |
| | *Todiramphus sanctus* | Sacred Kingfisher | - | - | 1 | | | 4 | x | | | |
| Anatidae | *Anas gracilis* | Grey Teal | - | - | | | | | | | | x |
| | *Malacorhynchus membranaceus* | Pink-eared Duck | - | - | | | | 1 | | | | |
| Apodidae | *Apus pacificus* | Pacific Swift, Fork-tailed Swift | MI | MI | 6 | x | 6 | 8 | | | | |
| Artamidae | *Artamus cinereus* | Black-faced Woodswallow | - | - | 52 | | | 75 | x | x | x | x |
| | *Artamus minor* | Little Woodswallow | - | - | 15 | | | 22 | x | x | | |
| | *Artamus personatus* | Masked Woodswallow | - | - | 1 | | | 5 | x | x | | |
| | *Cracticus nigrogularis* | Pied Butcherbird | - | - | 37 | | | 100 | x | | x | x |
| | *Cracticus torquatus* | Grey Butcherbird | - | - | 38 | | | 79 | x | | x | |
| | *Gymnorhina tibicen* | Australian Magpie | - | - | 15 | | | 28 | x | | | x |
| Burhinidae | *Burhinus grallarius* | Bush Stone-curlew, Bush Thick-knee | - | - | 1 | | | 4 | | | | |
| Cacatuidae | *Cacatua sanguinea* | Little Corella | - | - | 4 | | | 5 | | | | |
| | *Eolophus roseicapilla* | Galah | - | - | 15 | | | 36 | x | | x | x |
| | *Nymphicus hollandicus* | Cockatiel | - | - | 13 | | | 13 | x | x | x | |
| Campephagidae | *Coracina maxima* | Ground Cuckooshrike | - | - | | | | 3 | x | | | |
| | *Coracina novaehollandiae* | Black-faced Cuckooshrike | - | - | 30 | | | 38 | x | | x | x |
| | *Lalage tricolor* | White-winged Triller | - | - | 20 | | | 25 | x | | x | |
| Caprimulgidae | *Eurostopodus argus* | Spotted Nightjar | - | - | 7 | | | 11 | x | | | |
| Charadriidae | *Anarhynchus veredus* | Oriental Plover | MI | MI | | x | | | | | | |
| | *Charadrius melanops* | Black-fronted Dotterel | - | - | 1 | | | | | | | |
| Columbidae | *Geopelia cuneata* | Diamond Dove | - | - | 23 | | | 31 | x | x | x | x |
| | *Geophaps plumifera* | Spinifex Pigeon | - | - | 5 | | | 14 | x | | x | x |
| | *Ocyphaps lophotes* | Crested Pigeon | - | - | 35 | | | 55 | x | x | x | x |
| | *Phaps chalcoptera* | Common Bronzewing | - | - | 12 | | | 30 | x | | x | x |
| Corvidae | *Corvus bennetti* | Little Crow | - | - | 3 | | | 3 | x | x | | |
| | *Corvus orru* | Torresian Crow | - | - | 36 | | | 112 | x | | x | x |
| Cuculidae | *Centropus phasianinus* | Pheasant Coucal | - | - | | | | 2 | | x | | |
| | *Chalcites basalis* | Horsfield's Bronze Cuckoo | - | - | | | | 46 | x | | | x |
| | *Chalcites osculans* | Black-eared Cuckoo | - | - | | | | 5 | x | | | |
| | *Heteroscenes pallidus* | Pallid Cuckoo | - | - | 10 | | | 23 | x | | x | |
| Dicaeidae | *Dicaeum hirundinaceum* | Mistletoebird | - | - | 6 | | | 8 | x | | x | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Estrildidae | *Emblema pictum* | Painted Finch | - | - | 21 | | | 33 | x | x | x | |
| | *Taeniopygia castanotis* | Australian Zebra Finch | - | - | 80 | | | 119 | x | x | x | x |
| Falconidae | *Falco berigora* | Brown Falcon | - | - | 25 | | | 32 | x | | x | x |
| | *Falco cenchroides* | Nankeen Kestral | - | - | 8 | | | 5 | x | | x | x |
| | *Falco hypoleucos* | Grey Falcon | VU | VU | 1 | x | 1 | | | | | |
| | *Falco longipennis* | Australian Hobby | - | - | 4 | | | 4 | x | | | |
| | *Falco peregrinus* | Peregrine Falcon | OS | - | 1 | | 1 | | | | | |
| Hirundinidae | *Hirundo rustica* | Barn Swallow | MI | MI | | x | | | | | | |
| | *Petrochelidon ariel* | Fairy Martin | - | - | 2 | | | 4 | | | | |
| | *Petrochelidon nigricans* | Tree Martin | - | - | | | | | | | | x |
| Locustellidae | *Cincloramphus cruralis* | Brown Songlark | - | - | 1 | | | 1 | x | | | |
| | *Cincloramphus mathewsi* | Rufous Songlark | - | - | 22 | | | 32 | x | | x | |
| | *Poodytes carteri* | Spinifexbird | - | - | 37 | | | 76 | x | | x | x |
| Maluridae | *Amytornis whitei whitei* | Pilbara Grasswren | - | - | 4 | | | | x | | | |
| | *Malurus assimilis* | Purple-backed Fairywren | - | - | 41 | | | 67 | x | | | x |
| | *Malurus leucopterus* | White-winged Fairywren | - | - | 17 | | | 26 | x | | x | x |
| | *Malurus splendens* | Splendid Fairywren | - | - | 5 | | | 7 | x | | | |
| | *Stipiturus ruficeps* | Rufous-crowned Emu-wren | - | - | 11 | | | 10 | | | | |
| Meliphagidae | *Acanthagenys rufogularis* | Spiny-cheeked Honeyeater | - | - | 46 | | | 96 | x | | x | |
| | *Anthochaera lunulata* | Western Little Wattlebird, Western Wattlebird | - | - | | | | | | | | x |
| | *Certhionyx variegatus* | Pied Honeyeater | - | - | 1 | | | | | | | |
| | *Epthianura tricolor* | Crimson Chat | - | - | 19 | | | 20 | x | | x | x |
| | *Gavicalis virescens* | Singing Honeyeater | - | - | 95 | | | 181 | x | x | x | |
| | *Lacustroica whitei* | Grey Honeyeater | - | - | 2 | | | 4 | | | | |
| | *Lichmera indistincta* | Brown Honeyeater | - | - | 16 | | | 23 | x | | x | |
| | *Manorina flavigula* | Yellow-throated Miner | - | - | 49 | | | 75 | x | x | x | x |
| | *Melithreptus gularis* | Black-chinned Honeyeater | - | - | 4 | | | 2 | x | | | |
| | *Ptilotula keartlandi* | Grey-headed Honeyeater | - | - | 29 | | | 73 | x | | x | |
| | *Ptilotula penicillata* | White-plumed Honeyeater | - | - | 4 | | | 13 | x | | | x |
| | *Ptilotula plumula* | Grey-fronted Honeyeater | - | - | 7 | | | 5 | | | | |
| | *Purnella albifrons* | White-fronted Honeyeater | - | - | 2 | | | 2 | x | | | |
| | *Sugomel nigrum* | Black Honeyeater | - | - | 2 | | | | | | | |
| Meropidae | *Merops ornatus* | Rainbow Bee-eater | - | - | | | | 11 | x | | | |
| Monarchidae | *Grallina cyanoleuca* | Magpie-lark | - | - | 2 | | | 4 | x | | x | x |
| Motacillidae | *Anthus australis* | Australian Pipit | - | - | 3 | | | 4 | x | | x | |
| | *Motacilla cinerea* | Grey Wagtail | MI | MI | | x | | | | | | |
| | *Motacilla tschutschensis* | Eastern Yellow Wagtail | MI | MI | | x | | | | | | |
| Neosittidae | *Daphoenositta chrysoptera* | Varied Sittella | - | - | 1 | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oreoicidae | *Oreoica gutturalis* | Crested Bellbird | - | - | 51 | | | 79 | x | | x | |
| Otididae | *Ardeotis australis* | Australian Bustard | - | - | 2 | | | 10 | x | | x | x |
| Pachycephalidae | *Colluricincla harmonica* | Grey Shrikethrush | - | - | 54 | | | 113 | x | | x | x |
| | *Pachycephala rufiventris* | Rufous Whistler | - | - | 68 | | | 84 | x | | x | x |
| Pardalotidae | *Pardalotus rubricatus* | Red-browed Pardalote | - | - | 10 | | | 16 | x | | x | |
| | *Pardalotus striatus* | Striated Pardalote | - | - | 13 | | | 10 | x | | | |
| Petroicidae | *Melanodryas cucullata* | Hooded Robin | - | - | 32 | | | 24 | x | x | x | x |
| | *Petroica goodenovii* | Red-capped Robin | - | - | 15 | | | 14 | x | | | |
| Phalacrocoracidae | *Phalacrocorax sulcirostris* | Little Black Cormorant | - | - | | | | | x | | | |
| Phasianidae | *Synoicus ypsilophorus* | Brown Quail | - | - | 3 | | | 5 | x | | | |
| Podargidae | *Podargus strigoides* | Tawny Frogmouth | - | - | 3 | | | 7 | x | | x | |
| Podicipedidae | *Poliocephalus poliocephalus* | Hoary-headed Grebe | - | - | | | | | | | | x |
| Pomatostomidae | *Pomatostomus superciliosus* | White-browed Babbler | - | - | 7 | | | 10 | x | | | |
| | *Pomatostomus temporalis* | Grey-crowned Babbler | - | - | 46 | | | 88 | x | | x | x |
| Psittaculidae | *Barnardius zonarius* | Australian Ringneck | - | - | 31 | | | 59 | x | x | x | x |
| | *Melopsittacus undulatus* | Budgerigar | - | - | 42 | | | 62 | x | x | x | x |
| | *Neophema elegans* | Elegant Parrot | - | - | | | | | x | | | |
| | *Pezoporus occidentalis* | Night Parrot | CR | EN | | x | | | | | | |
| | *Polytelis alexandrae* | Princess Parrot | P4 | VU | | x | | | | | | |
| | *Psephotellus varius* | Mulga Parrot | - | - | 2 | | | 5 | x | | | |
| Psophodidae | *Psophodes occidentalis* | Western Wedgebill, Chiming Wedgebill | - | - | | | | | | | | x |
| Ptilonorhynchidae | *Chlamydera guttata* | Western Bowerbird | - | - | | | | 7 | x | | | x |
| | *Chlamydera maculata* | Spotted Bowerbird | - | - | 10 | | | 28 | | x | x | |
| Rhipiduridae | *Rhipidura albiscapa* | Grey Fantail | - | - | 13 | | | 18 | x | | x | |
| | *Rhipidura leucophrys* | Willie Wagtail | - | - | 69 | | | 149 | x | x | x | x |
| Rostratulidae | *Rostratula australis* | Australian Painted Snipe | EN | EN, - | | x | | | | | | |
| Scolopacidae | *Actitis hypoleucos* | Common Sandpiper | MI | MI | | x | | | | | | |
| | *Calidris acuminata* | Sharp-tailed Sandpiper | MI | VU, MI | | x | | | | | | |
| | *Calidris ferruginea* | Curlew Sandpiper | CR | CR, MI | | x | | | | | | |
| | *Calidris melanotos* | Pectoral Sandpiper | MI | MI | | x | | | | | | |
| | *Tringa nebularia* | Common Greenshank | MI | EN, MI | 1 | | | 1 | | | | |
| Strigidae | *Ninox boobook* | Boobook Owl | - | - | 1 | | | 3 | x | | | |
| Threskiornithidae | *Threskiornis spinicollis* | Straw-necked Ibis | - | - | | | | 1 | | | | |
| Turnicidae | *Turnix velox* | Little Buttonquail | - | - | 27 | | | 44 | x | | x | |
| Tytonidae | *Tyto javanica* | Eastern Barn Owl | - | - | 1 | | | 9 | | | | x |
| **Mammalia** | | | | | | | | | | | | |
| Bovidae | *Bos primigenius taurus* | European Cattle | - | - | 4 | | | 7 | x | | x | x |
| Camelidae | *Camelus dromedarius* | Dromedary Camel | - | - | 4 | | | 7 | x | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Canidae | *Canis familiaris* | Dingo / Dog | - | - | 12 | | | 29 | x | x | x | x |
| Dasyuridae | *Dasycercus blythi* | Brush-tailed Mulgara, Ampurta | P4 | - | 1 | | 1 | 1 | x | | | |
| | *Dasykaluta rosamondae* | Kaluta | - | - | 39 | | | 57 | x | | x | |
| | *Dasyurus hallucatus* | Northern Quoll | EN | EN | 12 | x | 1 | 14 | | | | x |
| | *Ningaui timealeyi* | Pilbara Ningaui | - | - | 39 | | | 40 | x | | x | |
| | *Planigale kendricki* | Orange-headed Pilbara Planigale | - | - | 2 | | | 7 | x | | | |
| | *Planigale tealei* | Cracking-clay Pilbara Planigale | - | - | | | | 1 | | | | |
| | *Pseudantechinus woolleyae* | Woolley's Pseudantechinus | - | - | 2 | | | 32 | x | | | x |
| | *Sminthopsis macroura* | Stripe-faced Dunnart | - | - | 36 | | | 49 | x | | x | |
| | *Sminthopsis ooldea* | Ooldea Dunnart | - | - | 14 | | | 24 | x | | x | |
| | *Sminthopsis youngsoni* | Lesser Hairy-footed Dunnart | - | - | 2 | | | 2 | x | | x | |
| Emballonuridae | *Saccolaimus flaviventris* | Yellow-bellied Sheath-tailed Bat | - | - | 9 | | | 19 | x | | x | |
| | *Taphozous georgianus* | Common Sheath-tailed Bat | - | - | 31 | | | 102 | x | x | x | |
| | *Taphozous hilli* | Hill's Sheath-tailed Bat | - | - | 33 | | | 57 | x | x | | x |
| Equidae | *Equus africanus asinus* | Donkey | - | - | 1 | | | | | | | x |
| | *Equus ferus caballus* | Horse | - | - | 2 | | | | x | | | |
| Felidae | *Felis catus* | Cat | - | - | 2 | | | 35 | x | | | x |
| Leporidae | *Oryctolagus cuniculus* | Rabbit | - | - | 10 | | | 12 | | | | x |
| Macropodidae | *Osphranter robustus* | Common Wallaroo | - | - | 15 | | | 45 | x | x | x | |
| | *Osphranter rufus* | Red Kangaroo, Marlu | - | - | 4 | | | 10 | x | x | | x |
| | *Petrogale rothschildi* | Rothschild's Rock-wallaby | - | - | 11 | | | 205 | x | x | | x |
| Megadermatidae | *Macroderma gigas* | Ghost Bat | VU | VU | 146 | x | 68 | 64 | | | | |
| Molossidae | *Austronomus australis* | White-striped Free-tailed Bat | - | - | 2 | | | 18 | x | x | x | |
| | *Chaerephon jobensis colonicus* | Greater Northern Free-tailed Bat | - | - | 7 | | | 59 | x | x | x | x |
| | *Ozimops lumsdenae* | Northern Free-tailed Bat | - | - | 16 | | | 23 | x | | x | x |
| Muridae | *Leggadina lakedownensis* | Short-tailed Mouse | P4 | - | 3 | | 3 | | | | | |
| | *Mus musculus* | House Mouse | - | - | 37 | | | 51 | x | | | |
| | *Notomys alexis alexis* | Spinifex Hopping-mouse | - | - | 3 | | | | | | | |
| | *Pseudomys chapmani* | Western Pebble-mound Mouse | P4 | - | 442 | | 133 | 801 | x | x | x | x |
| | *Pseudomys desertor* | Desert Mouse | - | - | 24 | | | 40 | x | | | |
| | *Pseudomys hermannsburgensis* | Sandy Inland Mouse | - | - | 64 | | | 106 | x | | x | |
| | *Pseudomys pilbarensis* | Western Delicate Mouse | - | - | 4 | | | 6 | | | | |
| | *Zyzomys argurus* | Common Rock-rat | - | - | 64 | | | 308 | x | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rhinonycteridae | *Rhinonicteris aurantia* Pilbara form | Pilbara Leaf-nosed Bat | VU | VU | 19 | x | 7 | 24 | x | | x | |
| Thylacomyidae | *Macrotis lagotis* | Bilby, Dalgyte | VU | VU | | x | | | | | | |
| Vespertilionidae | *Chalinolobus gouldii* | Gould's Wattled Bat | - | - | 38 | | | 91 | x | x | x | x |
| | *Nyctophilus geoffroyi geoffroyi* | Lesser Long-eared Bat | - | - | 5 | | | 7 | x | | x | x |
| | *Scotorepens greyii* | Little Broad-nosed Bat | - | - | 30 | | | 76 | x | x | x | x |
| | *Vespadelus finlaysoni* | Finlayson's Cave Bat | - | - | 42 | | | 133 | x | x | x | x |
| **Reptilia** | | | | | | | | | | | | |
| Agamidae | *Ctenophorus caudicinctus* | Western Ring-tailed Dragon | - | - | 98 | | | 136 | x | x | x | x |
| | *Ctenophorus isolepis* | Central Military Dragon | - | - | 5 | | | 3 | | | | |
| | *Ctenophorus isolepis isolepis* | Central Military Dragon | - | - | | | | | x | | | |
| | *Ctenophorus reticulatus* | Western Netted Dragon | - | - | 5 | | | | | | | |
| | *Diporiphora amphiboluroides* | Mulga Dragon | - | - | 3 | | | 2 | x | | | |
| | *Diporiphora valens* | Southern Pilbara Tree Dragon | - | - | 7 | | | 2 | x | | | |
| | *Gowidon longirostris* | Long-nosed Dragon | - | - | 29 | | | 34 | x | | x | x |
| | *Pogona minor* | Dwarf Bearded Dragon | - | - | 22 | | | 24 | x | | | |
| | *Tympanocryptis cephalus* | Coastal Pebble-mimic Dragons | - | - | 3 | | | 2 | | | | |
| Carphodactylidae | *Nephrurus cinctus* | Northern Banded Knob-tailed Gecko | - | - | | | | | x | | | |
| | *Nephrurus wheeleri* | Southern Banded Knob-tailed Gecko | - | - | 3 | | | 5 | | | | |
| | *Underwoodisaurus seorsus* | Pilbara Barking Gecko | P2 | - | 4 | | 3 | 3 | x | | | |
| Diplodactylidae | *Diplodactylus conspicillatus* | Variable Fat-tailed Gecko | - | - | 2 | | | | | | | |
| | *Diplodactylus granariensis* | 0 | - | - | | | | | x | | | |
| | *Diplodactylus pulcher* | 0 | - | - | 16 | | | 19 | x | | | |
| | *Diplodactylus savagei* | Southern Pilbara Beak-faced Gecko | - | - | 5 | | | 12 | x | | | |
| | *Lucasium stenodactylus (check L. woodwardi for pilbara/gascoyne)* | Sand-plain Gecko | - | - | 18 | | | 49 | | | | |
| | *Lucasium wombeyi* | | - | - | 9 | | | 22 | x | | x | |
| | *Lucasium woodwardi* | Pilbara Ground Gecko | - | - | | | | | x | | | |
| | *Oedura fimbria* | Western Marbled Velvet Gecko | - | - | 19 | | | 39 | x | | x | x |
| | *Rhynchoedura ornata* | Western Beaked Gecko | - | - | 5 | | | 27 | x | | | |
| | *Strophurus elderi* | Jewelled Gecko | - | - | 10 | | | 3 | x | | | |
| | *Strophurus wellingtonae* | Western-shield Spiny-tailed Gecko | - | - | 35 | | | 28 | x | | x | |
| Elapidae | *Acanthophis wellsi* | Pilbara Death Adder | - | - | 4 | | | 2 | x | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Brachyurophis approximans* | North-western Shovel-nosed Snake | - | - | 5 | | | 10 | x | | | |
| | *Demansia reticulata* | Reticulated Whipsnake | - | - | 8 | | | 9 | x | | x | |
| | *Demansia rufescens* | Rufous Whipsnake | - | - | 7 | | | 6 | x | | x | |
| | *Furina ornata* | Moon Snake | - | - | 9 | | | 13 | x | | x | |
| | *Pseudechis australis* | Mulga Snake | - | - | 6 | | | 14 | x | | | |
| | *Pseudonaja mengdeni* | Western Brown Snake | - | - | 4 | | | 9 | x | | | |
| | *Pseudonaja modesta* | Ringed Brown Snake | - | - | 9 | | | 3 | x | | | |
| | *Simoselaps anomalus* | Desert Banded Snake | - | - | | | | | x | | | |
| | *Suta fasciata* | Rosen's Snake | - | - | 3 | | | 3 | x | | | |
| | *Suta gaikhorstorum* | Pilbara Hooded Snake | - | - | | | | 3 | x | | | |
| | *Suta monachus* | Inland Hooded Snake | - | - | 11 | | | | | | | |
| | *Vermicella snelli* | Pilbara Bandy Bandy | - | - | 1 | | | 1 | | | | |
| Gekkonidae | *Gehyra micra* | Small Pilbara Spotted Rock Gehyra | - | - | | | | | x | | | |
| | *Gehyra pilbara* | Pilbara Dtella | - | - | | | | 2 | | | | |
| | *Gehyra punctata* | Spotted Pilbara Rock Dtella | - | - | 49 | | | 21 | x | | x | |
| | *Gehyra variegata* | Variegated Gehyra | - | - | 53 | | | 72 | x | | x | x |
| | *Heteronotia binoei* | Bynoe's Gecko | - | - | 77 | | | 87 | x | | | |
| | *Heteronotia spelea* | Pilbara Cave Gecko | - | - | 11 | | | 14 | x | | x | |
| Pygopodidae | *Delma butleri* | Spinifex Delma | - | - | 4 | | | | x | | | |
| | *Delma elegans* | Pilbara Delma | - | - | 5 | | | 3 | x | | | |
| | *Delma nasuta* | Sharp-snouted Delma | - | - | 12 | | | 10 | x | | | |
| | *Delma pax* | Peaceful Delma | - | - | 5 | | | 3 | x | | x | |
| | *Delma tincta* | Excitable Delma | - | - | 8 | | | 6 | x | | x | |
| | *Lialis burtonis* | Burton's Snake-lizard | - | - | 15 | | | 14 | x | | | |
| | *Pygopus nigriceps* | Western Hooded Scaly-foot | - | - | 12 | | | 11 | x | | | |
| Pythonidae | *Antaresia perthensis* | Pygmy Python | - | - | 9 | | | 7 | x | | x | |
| | *Aspidites melanocephalus* | Black-headed Python | - | - | 1 | | | 2 | | | | |
| | *Liasis olivaceus barroni* | Pilbara Olive Python | VU | VU | 2 | x | 1 | 2 | | | | |
| Scincidae | *Carlia munda* | Shaded-litter Rainbow-skink | - | - | 70 | | | 135 | x | x | x | |
| | *Carlia triacantha* | Desert Rainbow Skink | - | - | 2 | | | 1 | x | | | |
| | *Cryptoblepharus buchananii* | Buchanan's Snake-eyed Skink | - | - | 4 | | | 1 | x | | x | x |
| | *Cryptoblepharus plagiocephalus* | Péron's Snake-eyed Skink | - | - | 1 | | | | | | | |
| | *Cryptoblepharus ustulatus* | Russet Snake-eyed Skink | - | - | 13 | | | 13 | x | x | x | |
| | *Ctenotus ariadnae* | Ariadna's Ctenotus | - | - | 1 | | | | | | | |
| | *Ctenotus duricola* | Eastern Pilbara Lined Ctenotus | - | - | 42 | | | 27 | x | | x | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Ctenotus grandis* | Grand Ctenotus | - | - | 1 | | | 2 | | | | |
| | *Ctenotus hanloni* | Nimble Ctenotus | - | - | | | | 2 | | | | |
| | *Ctenotus helenae* | Clay-soil Ctenotus | - | - | 69 | | | 68 | | | | |
| | *Ctenotus inornatus* | 0 | - | - | | | | 84 | x | x | | |
| | *Ctenotus leonhardii* | Common Desert Ctenotus | - | - | | | | | x | | | |
| | *Ctenotus pallasotus* | Western Pilbara Lined Ctenotus | - | - | | | | | x | | | |
| | *Ctenotus pantherinus* | Leopard Ctenotus | - | - | 115 | | | 177 | x | | x | |
| | *Ctenotus robustus* | Robust Striped Ctenotus | - | - | 4 | | | 4 | | | | |
| | *Ctenotus rubicundus* | Ruddy Ctenotus | - | - | 1 | | | | x | | | |
| | *Ctenotus rutilans* | Rusty-shouldered Ctenotus | - | - | 16 | | | 17 | x | | x | |
| | *Ctenotus saxatilis* | Rock Ctenotus | - | - | 86 | | | 97 | | | x | |
| | *Ctenotus schomburgkii* | Barred Wedge-snouted Ctenotus | - | - | 47 | | | 36 | x | | x | |
| | *Ctenotus superciliaris* | Sharp-browed Ctenotus | - | - | | | | 2 | | | | |
| | *Ctenotus uber johnstonei* | Western Spotted Ctenotus | P2 | - | | | | | x | | | |
| | *Ctenotus uber uber* | Western Spotted Ctenotus | - | - | 6 | | | 14 | x | | x | |
| | *Cyclodomorphus melanops* | Spinifex Slender Blue-tongue | - | - | 10 | | | 8 | x | | | |
| | *Egernia cygnitos* | Western Pilbara Spiny-tailed Skink | - | - | 1 | | | 2 | x | | | |
| | *Egernia depressa* | Southern Pygmy Spiny-tailed Skink | - | - | 1 | | | | | | | |
| | *Egernia formosa* | Goldfields Crevice-skink | - | - | 4 | | | 13 | x | | x | x |
| | *Eremiascincus richardsonii* | Broad-banded Sand Swimmer | - | - | | | | | x | | | |
| | *Lerista chalybura* | 0 | - | - | 8 | | | 10 | | | | |
| | *Lerista flammicauda* | Pilbara flame-tailed slider | - | - | 1 | | | | x | | | |
| | *Lerista jacksoni* | Jackson's Three-toed Slider | - | - | 2 | | | 2 | | | x | |
| | *Lerista muelleri* | Wood Mulch-slider | - | - | 24 | | | 27 | x | | x | |
| | *Lerista neander* | | - | - | 12 | | | 10 | x | | x | |
| | *Lerista timida* | Timid Slider | - | - | 4 | | | 4 | | | | |
| | *Lerista verhmens* | Powerful Three-toed Slider | - | - | 1 | | | 1 | | | | |
| | *Liopholis kintorei* | Great Desert Skink | VU | VU | | x | | | | | | |
| | *Menetia greyii* | Common Dwarf Skink | - | - | 10 | | | 12 | x | | x | |
| | *Menetia surda* | Western Dwarf Skink | - | - | 2 | | | | x | | | |
| | *Morethia ruficauda* | Lined Fire-tailed Skink | - | - | 18 | | | 28 | x | | x | |
| | *Tiliqua multifasciata* | Central Blue-tongue | - | - | 10 | | | 22 | x | | | |
| Typhlopidae | *Anilios ammodytes* | Pilbara Blind Snake | - | - | 1 | | | | x | | | |
| | *Anilios ganei* | Gane's Blind Snake | P1 | - | 4 | | 1 | 5 | x | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Anilios grypus* | Long-beaked Blind Snake | - | - | 2 | | | 14 | x | | | |
| | *Anilios hamatus* | 0 | - | - | 4 | | | 5 | | | | |
| Varanidae | *Varanus acanthurus* | Spiny-tailed Goanna | - | - | 35 | | | 41 | x | | x | |
| | *Varanus brevicauda* | Short-tailed Pygmy Goanna | - | - | 17 | | | 16 | x | | | |
| | *Varanus bushi* | Pilbara Mulga Goanna | - | - | 11 | | | 9 | x | | | x |
| | *Varanus caudolineatus* | 0 | - | - | 4 | | | 4 | | | x | |
| | *Varanus giganteus* | Perentie | - | - | 3 | | | 11 | | | | |
| | *Varanus gilleni* | Pygmy Mulga Goanna | - | - | | | | 1 | | | | |
| | *Varanus gouldii* | Bungarra Or Sand Goanna | - | - | | | | 3 | x | | | x |
| | *Varanus hamersleyensis* | Southern Pilbara Rock Goanna | - | - | | | | 5 | | | | x |
| | *Varanus panoptes* | 0 | - | - | 6 | | | 12 | x | | | x |
| | *Varanus pilbarensis* | Northern Pilbara Rock Goanna | - | - | 1 | | | | | | | |
| | *Varanus tristis* | Racehorse Goanna | - | - | 14 | | | 17 | x | | x | |

# Appendix G Significant Fauna Record Locations

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

| RTIO ID | Easting | Northing | Date | Common Name | Scientific Name | Status | Evidence Type | Report IMS No. |
|---|---|---|---|---|---|---|---|---|
| *Fa-2023-165000* | *685318* | 7428619 | 24-02-2022 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Trapping | RTIO-0999604 |
| *Fa-2011-16896* | *680769* | 7425876 | 24-06-2011 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Trapping | RTIO-HSE-0142972 |
| *Fa-2022-139655* | *680762* | 7428580 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139656* | *680826* | 7428730 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139658* | *680854* | 7428300 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139662* | *680678* | 7428290 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139663* | *680796* | 7428260 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139668* | *680948* | 7428640 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139669* | *680799* | 7428700 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139671* | *680750* | 7428340 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139672* | *680780* | 7428380 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2022-139702* | *680750* | 7428840 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0982660 |
| *Fa-2023-167566* | *676023* | 7428129 | 06-04-2022 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0999604 |
| *Fa-2023-162964* | *682873* | 7427768 | 23-10-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-0999604 |
| *Fa-2013-22117* | *683681* | 7427343 | 07-08-2013 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-HSE-0204192 |
| *Fa-2013-22116* | *683068* | 7427316 | 07-08-2013 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (recently inactive) | RTIO-HSE-0204192 |
| *Fa-2022-139654* | *680716* | 7428610 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139657* | *680985* | 7428520 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139666* | *680922* | 7428520 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139670* | *680769* | 7428760 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139673* | *680814* | 7428480 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139674* | *680811* | 7428630 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2022-139703* | *680743* | 7428360 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0982660 |
| *Fa-2023-162989* | *676522* | 7428927 | 27-10-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0999604 |
| *Fa-2023-162979* | *677776* | 7428747 | 24-10-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-0999604 |
| *Fa-2013-22118* | *683702* | 7427107 | 07-08-2013 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-HSE-0204192 |
| *Fa-2013-22119* | *683675* | 7426544 | 07-08-2013 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-HSE-0204192 |
| *Fa-2013-22120* | *683702* | 7426400 | 07-08-2013 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (inactive) | RTIO-HSE-0204192 |
| *Fa-2022-139660* | *680661* | 7428470 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-0982660 |
| *Fa-2022-139665* | *680847* | 7428450 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-0982660 |
| *Fa-2022-139667* | *680963* | 7428590 | 02-08-2021 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-0982660 |
| *Fa-2023-167565* | *675986* | 7428149 | 06-04-2022 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-0999604 |
| *Fa-2013-22481* | *679616* | 7428733 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |
| *Fa-2013-22482* | *678015* | 7428484 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |
| *Fa-2013-22483* | *678007* | 7428171 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |
| *Fa-2013-22487* | *677202* | 7428494 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |
| *Fa-2013-22488* | *677205* | 7428289 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |
| *Fa-2013-22489* | *677216* | 7428185 | 08-05-2014 | Western Pebble-mound Mouse | *Pseudomys chapmani* | P4 | Mound (active) | RTIO-HSE-0212032 |

# Appendix H Significant Fauna Likelihood of Occurrence

## West Angelas NVCP 3

### Flora, Vegetation, and Fauna Desktop Assessment

**Rio Tinto**

SLR Project No.: 675.072156.00003

23 September 2025

**Conservation Status:** State - Listed under Biodiversity Conservation Act 2016 or Department of Biodiversity, Conservation and Attractions Conservation, Commonwealth - Listed under Environmental Protection and Biodiversity Conservation Act 1999. CR/CE - Critically Endangered, EN - Endangered, VU - Vulnerable, MI - Migratory, CD - Conservation Dependent fauna, OS - Other Specially Protected fauna, MA - Marine, P - Listed as Priority by DBCA. **Source:** NM - NatureMap, PMST - EPBC Protected Matters Search Tool, DBCA - DBCA Threatened and Priority Fauna database search, Field - Recorded during the current field survey.

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| **Birds** | | | | | | | |
| **Acanthizidae** | *Aphelocephala leucopsis*<br>Southern Whiteface | VU | VU | Open forest and woodland, inland scrubs such as mallee, mulga, cypress pine; saltbush, dead trees, stumps (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be a resident inhabiting the Mulga Woodland habitat. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Accipitridae** | *Elanus scriptus*<br>Letter-winged Kite | P4 | - | Grasslands, with trees; tree-lined watercourses (Pizzey and Knight, 2012). | One record 18.5 km northeast of the Application Area in 2018 was identified from both the DBCA and RTIO internal database. | If occurring within AA, the species would be a resident, utilising Claypan and Stony Plain habitats for hunting, and Major Drainage habitat for nesting. | **Medium**<br>Taxon has not been recently recorded more than once. |
| | *Erythrotriorchis radiatus*<br>Red Goshawk | EN | EN | Tropical and subtropical open-forests and woodlands dominated by eucalypts and paperbarks along streams and near wetlands (Menkhorst et al., 2017). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be a resident, utilising Claypan and Stony Plain habitats for hunting, and Major Drainage habitat for nesting. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Apodidae** | *Apus pacificus*<br>Pacific Swift, Fork-tailed Swift | MI | MI | Low to very high airspace over varied habitat (Pizzey and Knight, 2012). | Two unique records returned from the RTIO internal database including 16 km northwest of the Application Area in 2019 and 12 km north of the Application Area in 2013. Six additional records were identified from both the DBCA and RTIO internal database, including two records 4 km north of the Application Area in 2013. | If occurring within AA, the species would be transient, utilising the airspace above all habitat types. | **High**<br>Nearby, recent records. |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| **Charadriidae** | *Anarhynchus veredus*<br>Oriental Plover | MI | MI | Open plains; bare, rolling country, often far from water; ploughed land; muddy or sandy wastes near inland swamps or tidal flats; bare claypans; margins of coastal marshes; grassy airfields, sports fields, lawns (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Claypan habitat for foraging when inundated. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Falconidae** | *Falco hypoleucos*<br>Grey Falcon | VU | VU | Open plains with treed watercourses in arid inland (Menkhorst et al., 2017). | One unique historic record 14 km north of the Application Area in 1997 was identified from the DBCA database. | If occurring within AA, the species would be a resident, utilising Claypan and Stony Plain habitats for hunting, and Major Drainage habitat for nesting. | **Low**<br>No recent record identified from the database searches or literature. |
| | *Falco peregrinus*<br>Peregrine Falcon | OS | - | Most environments with suitable nest sites: cliff faces preferred, including man-made ones, commonly uses stick nests built by other species (Menkhorst et al., 2017). | One unique record 18.5 km southwest of the Application Area in 2014 was identified from the DBCA database. | If occurring within AA, the species would be a resident, utilising Claypan and Stony Plain habitats for hunting, and Major Drainage and Gorge/Gully habitats for nesting. | **Medium**<br>Taxon has not been recently recorded more than once. |
| **Hirundinidae** | *Hirundo rustica*<br>Barn Swallow | MI | MI | Open country; agricultural land, especially near water; railyards, towns, overhead wires (Pizzey and Knight). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the airspace above all habitat types. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Motacillidae** | *Motacilla cinerea*<br>Grey Wagtail | MI | MI | Running water near disused quarries; sandy, rocky streams in escarpments; sewage ponds, ploughed fields, airfields (Pizzey and Knight 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Minor and major Drainage habitats. | **Low**<br>No nearby records identified from the database searches or literature. |
| | *Motacilla tschutschensis*<br>Eastern Yellow Wagtail | MI | MI | Short grass and bare ground; swamp margins, sewage ponds, saltmarshes, ploughed | Taxon returned via PMST search. No nearby records identified from the | If occurring within AA, the species would be transient, utilising Stony Plain | **Low**<br>No nearby records identified from the |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | fields, airfields, lawns (Pizzey and Knight, 2012). | database searches or literature. | habitat, and margins of the Alluvial Plain and Claypan habitats when inundated. | database searches or literature. |
| **Psittaculidae** | *Pezoporus occidentalis*<br>Night Parrot | CR | EN | Seeding spinifex on stony rises, breakaway country, sandy lowlands; shrubby glasswort, chenopods; succulents on flats around salt lakes; flooded claypans, saltbush, bluebush, bassia associations (Pizzey and Knight, 2012). | Three NatureMap records were identified. | If occurring within AA, the species would be a resident, inhabiting the Stony Plain habitat, and the Claypan habitat. | **Low**<br>NatureMap records were confirmed to be erroneous by DBCA. The records actually occurred near Willijabu Track, around Lake Disappointment (Jennifer Ross pers. comm., 2025). |
| | *Polytelis alexandrae*<br>Princess Parrot | P4 | VU | Spinifex with Eucalyptus, Acacia, desert-oaks, desert poplars, Hakeas, mistletoes; parakeelia, other succulents around salt lakes; often far from fresh water (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be a resident, inhabiting the Stony Plain and Mulga Woodland habitats. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Rostratulidae** | *Rostratula australis*<br>Australian Painted Snipe | EN | EN | Well-vegetated shallows and margins of wetlands, dams, sewage ponds; wet pastures, marshy areas, irrigation systems, lignum, tea-tree scrub, open timber (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Alluvial Plain and Claypan habitats when inundated. | **Low**<br>No nearby records identified from the database searches or literature. |
| **Scolopacidae** | *Actitis hypoleucos*<br>Common Sandpiper | MI | MI | Shallow, pebbly, muddy or sandy sedges of rivers and streams, coastal to far inland; dams, lakes, sewage ponds; margins of tidal rivers; waterways in mangroves or saltmarsh; mudflats; rocky or sandy beaches; causeways, riverside lawns, drains, street gutters (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Claypan habitat for foraging when inundated. | **Low**<br>No nearby records identified from the database searches or literature. |
| | *Calidris acuminata*<br>Sharp-tailed Sandpiper | MI | VU, MI | Tidal mudflats, saltmarshes, mangroves; shallow fresh, brackish or saline inland wetlands; muddy edges of lagoons, | Taxon returned via PMST search. No nearby records identified from the | If occurring within AA, the species would be transient, utilising the Claypan | **Low**<br>No nearby records identified from the database searches or literature. |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | swamps, lakes, floodwaters, dams, irrigated pastures and crops; sewage ponds, salt fields (Morcombe, 2003; Pizzey and Knight, 2012). | database searches or literature. | habitat for foraging when inundated. | |
| | *Calidris ferruginea*<br>Curlew Sandpiper | CR | CR, MI | Inter-tidal mudflats of estuaries, lagoons, mangrove channel; saltmarsh, salt fields; fresh, brackish or saline wetlands; flooded saltbush surrounds of inland lakes; dams, floodwaters, sewage ponds (Morcombe, 2003; Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Claypan habitat for foraging when inundated. | **Low**<br>No nearby records identified from the database searches or literature. |
| | *Calidris melanotos*<br>Pectoral Sandpiper | MI | MI | Shallow fresh waters, often with low grass or other herbage; swamp margins, flooded pastures, sewage ponds; occasionally tidal areas, saltmarshes (Pizzey and Knight, 2012). | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be transient, utilising the Claypan habitat for foraging when inundated. | **Low**<br>No nearby records identified from the database searches or literature. |
| | *Tringa nebularia*<br>Common Greenshank | MI | EN, MI | Mudflats, estuaries, saltmarshes, swamps, margins of lakes, muddy shallows of lagoons; permanent and temporary wetlands, claypans; commercial salt field, irrigated crops, sewage ponds (Morcombe, 2003; Pizzey and Knight, 2012). | One unique record 7 km south of the Application Area in 2021 was identified from the RTIO internal database. | If occurring within AA, the species would be transient, utilising the Claypan habitat for foraging when inundated. | **Medium**<br>Taxon has not been recently recorded more than once. |
| **Mammal** | | | | | | | |
| **Dasyuridae** | *Dasycercus blythi*<br>Brush-tailed Mulgara, Ampurta | P4 | - | Hummock grasslands (e.g. *Triodia* spp.) and shrublands on sandy soils (Menkhorst and Knight, 2010). | One record 14 km south of the Application Area in 2022 was identified form both the DBCA and RTIO internal database. | If occurring within AA, the species would be a resident, inhabiting parts of the Stony Plain habitat where softer substrate is available. | **Medium**<br>Taxon has not been recently recorded more than once. |
| | *Dasyurus hallucatus*<br>Northern Quoll | EN | EN | Dissected rocky escarpments; eucalypt forest and woodland; human settlements; | Thirteen unique records returned from the RTIO internal database including two records | If occurring within AA, the species would be a resident, utilising the | **High**<br>Nearby, recent records. |

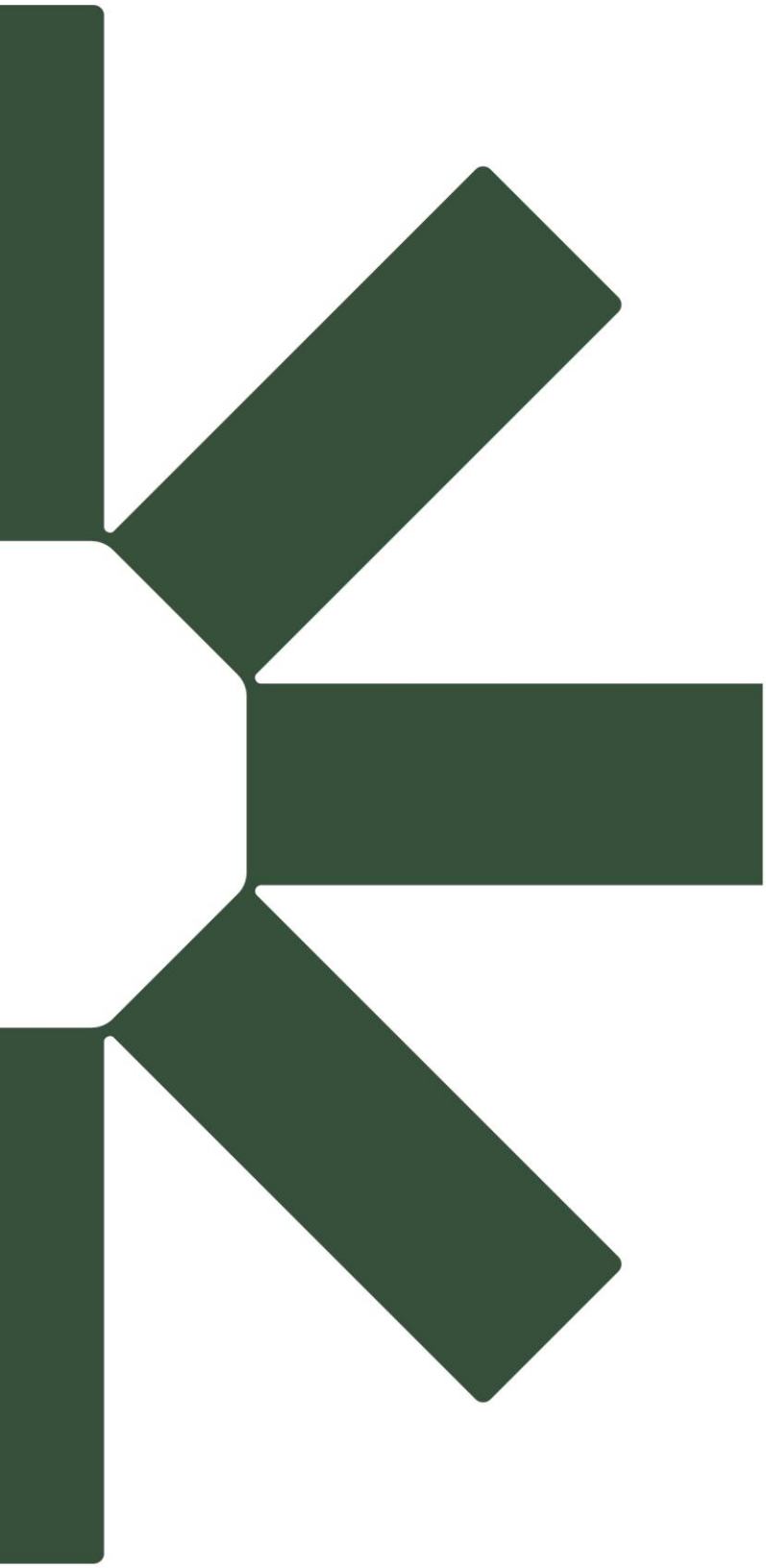
| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | occasionally in rainforest patches or on beaches (Van Dyck, Gynther and Baker, 2013). | 6.5 km south of the Application Area in 2021. One additional record 19 km south of the Application Area was identified from both the DBCA and RTIO internal database. A further three unique records 6 km northwest, and two unique records 14 km northwest of the Application Area in 2024 were identified from literature (SLR, 2025). | Gorge/Gully habitat for denning, sheltering and foraging, and the Major Drainage habitat for dispersal. | |
| **Megadermatidae** | *Macroderma gigas*<br>Ghost Bat | VU | VU | Deep caves and mines, and occasionally rock fissures and boulder piles occurring within a widespread but patchy distribution across northern Australia from the arid Pilbara to the lush rainforests of north Queensland (Baker and Gynther, 2023). | Forty-nine unique records were identified from the DBCA database, including 36 records 5.4 km north of the Application Area in 2022. Fifty-six unique records were identified from the RTIO internal database, including one record 5 km northeast of the Application Area in 2022 and one record 2 km north of the Application Area in 2019. Four additional records were identified from both the DBCA and RTIO internal database, including two records 20 km northeast of the Application Area in 2018. | If occurring within AA, the species would utilise the Minor Drainage, Major Drainage, Mulga Woodland and Stony Plain habitats for hunting. No suitable roosting caves were identified. | **High**<br>Nearby, recent records. |
| **Muridae** | *Leggadina lakedownensis*<br>Short-tailed Mouse | P4 | - | Monsoon tropical coast to semiarid areas in spinifex and tussock grasslands, samphire, sedgelands, Acacia shrublands, tropical eucalypt and Melaleuca woodlands and stony ranges (Van Dyck, Gynther | Three unique historic records 6.5 km north of the Application Area in 1997 were identified from the DBCA database. | If occurring within AA, the species would be a resident, inhabiting the Stony Plain and Mulga Woodland habitats. | **Low**<br>No recent record identified from the database searches or literature. |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | and Baker, 2013). | | | |
| | *Pseudomys chapmani*<br><br>Western Pebble-mound Mouse | P4 | - | Gentler slopes of rocky ranges covered by stony mulch and hard spinifex, often with a sparse overstorey of eucalypts and scattered shrubs (Van Dyck, Gynther and Baker, 2013). | The Western Pebble-mound Mouse has been recorded abundantly within the Desktop Study Area, including 38 records within the Application Area. | The species is a resident within the AA and has been frequently recorded in the Stony Plain habitat. Two records also occur in the Gorges/Gully and Rocky Hill habitats, however, Gorges/ Gully are not preferred habitat for the species. | **Previously Recorded**<br><br>Taxon has been recorded during previous surveys. |
| **Rhinonycteridae** | *Rhinonicteris aurantia Pilbara form*<br><br>Pilbara Leaf-nosed Bat | VU | VU | Most easily observed foraging in gorges and gullies, often over pools, also spinifex hummock grasslands. Roosts in relatively deep, warm and humid caves and mine adits (Van Dyck, Gynther, and Baker, 2013). | Three unique records were identified from the DBCA database, including one record 12.5 km northwest of the Application Area in 2022. Nine unique records were identified from the RTIO internal database, including two records 4 and 5 km southwest of the Application Area in 2022. Four additional records were identified from both the DBCA and RTIO internal database, including one record 20 km northeast of the Application Area in 2018, and one record 7 km northeast of the Application Area in 2013. | If occurring within AA, the species would utilise the Minor Drainage, Major Drainage, Mulga Woodland and Stony Plain habitats for hunting. No suitable roosting caves were identified. | **High**<br><br>Nearby, recent records. |
| **Thylacomyidae** | *Macrotis lagotis*<br><br>Bilby, Dalgyte | VU | VU | Mitchell grass and stony downs country of cracking clays, desert sandplains and dune fields sometimes containing laterite, hummock grassland and massive red earths with | Taxon returned via PMST search. No nearby records identified from the database searches or literature. | If occurring within AA, the species would be a resident, inhabiting parts of the Stony Plain habitat where softer | **Low**<br><br>No nearby records identified from the database searches or literature. |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | Acacia shrubland (Van Dyck, Gynther and Baker, 2013). | | substrate is available. | |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| **Reptile** | | | | | | | |
| **Carphodactylidae** | *Underwoodisaurus seorsus*<br>Pilbara Barking Gecko | P2 | - | Rocky areas with spinifex and low tree cover, within the Hamersley Range, from north of Tom Price southeast to near Newman (Wilson and Swan, 2021). | One unique historic record 6 km north of the Application Area in 1997 was identified from DBCA database. One unique record 1.7 km north of the Application Area in 2021 was identified from the RTIO internal database. Two additional records, one 13 km north northeast of the Application Area in 2013, and one 2 km north of the Application Area in 2022 were identified from both the DBCA and RTIO internal database. | If occurring within AA, the species would be a resident, inhabiting the Stony Plain and Rocky Hill habitats. | **High**<br>Nearby, recent records. |
| **Pythonidae** | *Liasis olivaceus barroni*<br>Pilbara Olive Python | VU | VU | Associated with open water, watercourses, and rock pools especially those close to rocky areas. Often found in rocky hills, escarpments, and plains dominated by dense grassy vegetation such as *Triodia* (Wilson and Swan, 2021). | One unique historic record 16 km north of the Application Area in 1900 was identified from the DBCA database. Two unique records in 2018 were identified from the RTIO internal database, including one record 16 km northwest of the Application Area,and one record 13 km north northwest of the Application Area. | If occurring within AA, the species would inhabit the Gorge/ Gully habitat and would be transient as no permanent waterholes have been identified. | **High**<br>Nearby, recent records. |
| **Scincidae** | *Ctenotus uber johnstonei*<br>Western Spotted Ctenotus | P2 | - | *C. u. johnstonei* is known from an area of chenopod shrubland at the base of a sandstone hill near Balgo, northeast interior of WA and possibly extends further west (Wilson and Swan, 2021). | One unique record was identified through literature review, this record was 6 km southwest of the Application Area in 2021 (Biologic Environmental Survey, 2025). | If occurring within AA, the species is would be a resident, inhabiting the Claypan habitat. | **Low**<br>The presence of this significant subspecies in the Pilbara region is uncertain, pending taxonomic verification. |
| | *Liopholis kintorei*<br>Great Desert Skink | VU | VU | Found in arid sandflats and clay-based/loamy soils with spinifex (Wilson and Swan, 2021). | Taxon returned via PMST search. No nearby records identified from the | If occurring within AA, the species is would be a resident, inhabiting parts of | **Low**<br>No nearby records identified from the |

| Family | Scientific Name | Conservation Status | | Habitat | Previous Records | Habitat Utilization within AA | Likelihood of Occurrence |
|---|---|---|---|---|---|---|---|
| | | State | Common-wealth | | | | |
| | | | | | database searches or literature. | the Stony Plain habitat where softer substrate is available. | database searches or literature. |
| **Typhlopidae** | *Anilios ganei*<br>Gane's Blind Snake | P1 | - | Associated with moist gorges and valleys (Wilson and Swan, 2021). | Four unique records were identified from the RTIO internal database, including one record 300 meters north of the Application Area in 2018, and one record 3 km south of the Application Area in 2021. One record, 12 km south southwest of the Application Area in 2022, was identified from both the DBCA and RTIO internal database. | If occurring within AA, the species would be a resident, inhabiting the Gorge/Gully habitat, as well as parts of the Stony Plain habitat, with sandier substrate, adjacent to Gorge/Gully habitat. | **High**<br>Nearby, recent records. |



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