

**Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK  
Biological Assessment  
October 2018**

Prepared for  
Main Roads Western Australia



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# Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

*Prepared for*  
Main Roads Western Australia



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## Abbreviations

| Abbreviation    | Definition   |
|-----------------|--|
| <b>BIF</b>      | Banded ironstone formation   |
| <b>BOM</b>      | Bureau of Meteorology  |
| <b>EPA</b>      | Environmental Protection Authority                                   |
| <b>EPBC Act</b> | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| <b>GDA</b>      | Geocentric Data of Australia   |
| <b>GIS</b>      | Geographical Information System                                      |
| <b>GNH</b>      | Great Northern Highway   |
| <b>IBRA</b>     | Interim Biogeographic Regionalisation for Australia                  |
| <b>MGA</b>      | Map Grid of Australia  |
| <b>MNES</b>     | Matters of National Environmental Significance                       |
| <b>MRWA</b>     | Main Roads Western Australia   |
| <b>P</b>        | Priority   |
| <b>PEC</b>      | Priority ecological community  |
| <b>SLK</b>      | Straight line kilometres   |
| <b>T</b>        | Threatened   |
| <b>TEC</b>      | Threatened ecological community                                      |
| <b>WoNS</b>     | Weeds of National Significance                                       |

## Executive Summary

Astron Environmental Services was engaged to undertake a biological assessment of six new strategic material pits located in the vicinity of Cue and Meekatharra. The survey area is comprised of five sites along Great Northern Highway: 770, 764, 660, 593, 523 straight line kilometres and one site along Cue Wondinong Road: 7.1 straight line kilometres. The six sites combined have a total size of 876.4 hectares.

Twenty three vegetation types and one mosaic vegetation unit were recorded across the survey area and account for 874.7 hectares of the survey area. A further 1.7 hectares was mapped as 'cleared' where vegetation has been removed for existing infrastructure including roads or borrow pits. No threatened ecological communities were recorded in the survey area. The buffer of two priority ecological communities intersect the survey area: *Trillbar Land System* and *Lake Austin vegetation complexes banded ironstone formation (BIF)*. Vegetation condition ranged between 'Very Good' to 'Poor' with the majority (85.1%) of the survey area recorded as 'Very Good'.

No State or Commonwealth listed threatened flora were recorded within the survey area. One priority species, *Drummondita miniata* P3 was located within the P2 vegetation type. Sixty-eight individuals of *D. miniata* P3 were identified at six locations. Three priority flora species were considered to have the potential to occur; *Angianthus microcephalus* P2, *Goodenia berringbinensis* P4 and *Goodenia neogoodenia* P4.

Weed diversity was low with six introduced species recorded within the survey area: *\*Citrullus colocynthis*, *\*Cuscuta epithymum*, *\*Lysimachia arvensis*, *\*Sisymbrium ?irio*, *\*Spergula pentandra* and *\*Sonchus sp.* Two individuals of *\*Spergula pentandra* were recorded; all other weed species were represented by a single plant. None are listed as a Weed of National Significance or as declared pest plants in Western Australia.

Eight broad fauna habitats were recorded in the survey area. Fauna habitat condition ranged from 'very good' to 'highly degraded'. Historic vegetation clearing for tracks and occasionally historical burrow pits is evident across most survey areas. Other impacts include weeds and grazing from introduced mammals across the survey area.

Habitats within the survey area were not restricted within a local or regional level. Breakaway and BIF Rock Piles habitat is an uncommon geological unit but does not support any conservation significant fauna species. No conservation significant fauna species were recorded or were considered to have a high likelihood of occurring within the survey area. Thirteen conservation significant fauna species were rated as having a 'moderate' likelihood of occurring in the survey area; Meekatharra slider (*Lerista eupoda*), malleefowl (*Leipoa ocellata*), bar-tailed godwit (*Limosa lapponica*), marsh sandpiper (*Tringa stagnatilis*), common greenshank (*Tringa nebularia*), wood sandpiper (*Tringa glareola*), common sandpiper (*Tringa hypoleucos*), red-necked stint (*Calidris ruficollis*), pectoral sandpiper (*Calidris melanotos*), sharp-tailed sandpiper (*Calidris acuminata*), curlew sandpiper (*Calidris ferruginea*), peregrine falcon (*Falco peregrinus*) and long-tailed dunnart (*Sminthopsis longicaudata*).

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# 1 Introduction

## 1.1 Project Background

Astron Environmental Services (Astron) was engaged by Main Roads Western Australia (Main Roads) to undertake a biological survey for six new strategic material pits, located in the vicinity of Cue and Meekatharra. The six proposed sites are located adjacent to, or within 10 km of the Great Northern Highway (GNH), spaced between 28 km north of Meekatharra to 24 km south of Mount Magnet (Figure 1). From north to south, the proposed material pit sites are referred to as:

- GNH 770 straight line kilometres (SLK)
- GNH 764 SLK
- GNH 660 SLK
- Cue Wondinong 7.1 SLK (located along Cue Wondinong Road)
- GNH 593 SLK
- GNH 523 SLK.

The six sites combined are herein referred to as the 'survey area' with a total size of 876.4 ha.

## 1.2 Scope and Objectives

The objective of the survey was to provide an assessment of the flora, vegetation and fauna values within the survey area. The outcome of the survey and information supplied in the biological survey report will be used to inform the environmental assessment and approvals process. The results of the biological survey may also assist in the preparation of a Clearing Impact Assessment and Vegetation Management Plan and may be used in State or Commonwealth referral documentation.

The scope of works included the following:

- undertake a desktop assessment for the survey area using database searches and relevant environmental reports within the assessment buffer provided with the MRWA Biological Survey Consultant Brief (dated 16 August 2018) to:
  - identify significant flora, vegetation/ecological communities, fauna, soil/land system, groundwater and surface water values and potential sensitivity to impact
  - identify broad vegetation types using State datasets
  - identify conservation significant species likely to be present, including an assessment of the likelihood of occurrence for potential conservation significant species
- conduct a flora and vegetation assessment of survey area in accordance with the requirements of a 'detailed survey' (Environmental Protection Authority 2016b) including:
  - verification of the desktop assessment
  - establishment and sampling of quadrats, where appropriate, to ensure adequate replication within vegetation types
  - vegetation type and condition mapping, with supporting photographs of each vegetation type
  - identification and mapping of any conservation significant ecological communities (TECs/PECs) within the survey area



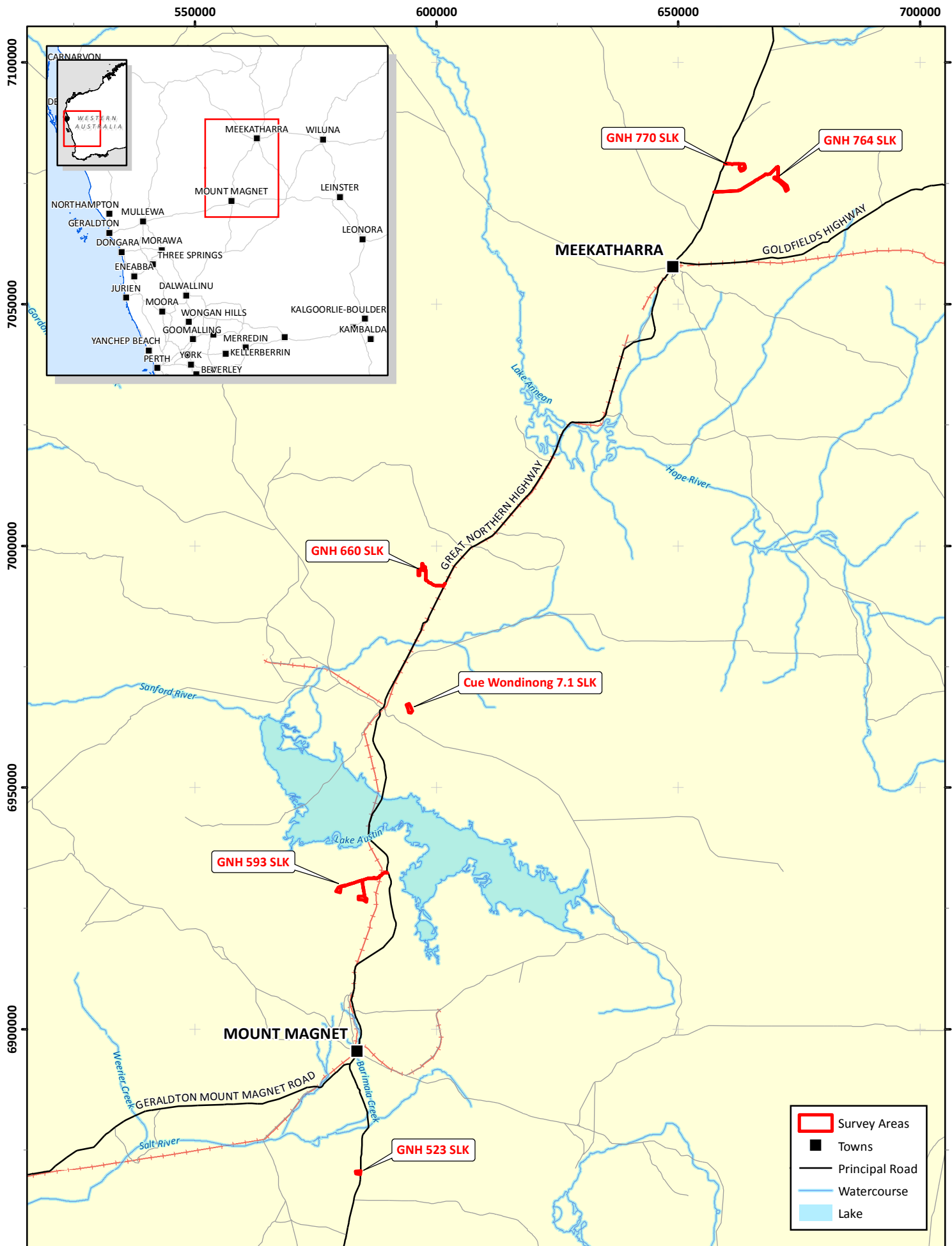
- targeted searches for threatened (T) and priority (P) flora
- targeted search for weeds with locations and counts recorded for any Weeds of National Significance (WoNS) and declared pest plants
- generation of a vascular flora species list
- conduct a Level 1 fauna assessment of the survey area, including:
  - compilation of a species list based on opportunistic recordings, and their conservation significance or pest status
  - fauna habitat mapping
- prepare a technical report based on the outcomes of the above.

### 1.3 Land Use and Tenure

The survey area is located on unallocated Crown land within the Shires of Meekatharra, Cue and Mount Magnet. Material pit GNH 593 SLK is located within both the Shires of Cue and Mount Magnet. The proposed material pits are located across five pastoral leases (Table 1).

**Table 1: Local government authority and pastoral leases within the survey area.**

| Material pit          | Local government      | Area (ha) | Pastoral lease          |
|-----------------------|-----------------------|-----------|-------------------------|
| GNH 593 SLK           | Shire of Mount Magnet | 256.67    | Wanarie                 |
| GNH 523 SLK           |                       | 63.28     | Yoweragabbie            |
| GNH 764 SLK           | Shire of Meekatharra  | 216.28    | Sherwood and Yoothapina |
| GNH 770 SLK           |                       | 63.86     | Sherwood                |
| Cue Wondinong 7.1 SLK | Shire of Cue          | 135.45    | Yarraquin               |
| GNH 660 SLK           |                       | 132.95    | Karbar                  |
| GNH 593 SLK           |                       | 7.95      | Wanarie                 |



Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment  
**Figure 1: Survey area location**



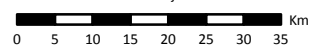
Author: J. Johnston

Date: 28-05-2019

Drawn: L. Robinson

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Locn\_Fig1

Datum: GDA 1994 - Projection: MGA Zone 50



## 2 Environmental Context

### 2.1 Physical Environment

#### 2.1.1 Geology, Landforms and Soils

The geology of the region is described as Archaean granite with infolded volcanics and meta-sediments (greenstones) of like-age, forming the Yilgarn block (Beard 1976). Topography is undulating with occasional ranges of low hills separated by very flat plains derived from colluvium and alluvium (Curry et al. 1994). The principal soil type is shallow earthy loam overlying red-brown hardpan, shallow stony loams on hills and red earthy sands on sandplains (Beard 1976).

The surface geology of the survey area is comprised of ten units (Table 2).

**Table 2: Geological units of the survey area (Stewart et al. 2008).**

| Geological unit name                          | Label | Area (ha) |
|---|-------|-----------|
| Ferruginous duricrust 38498                   | Czl   | 320.8     |
| Colluvium 38491                               | Qrc   | 255.3     |
| Felsic intrusives 74292                       | Ag    | 166.2     |
| Sand plain 38499                              | Czs   | 48.4      |
| Mafic extrusive rocks 74255                   | Aby   | 41.1      |
| Ultramafic rocks 74480                        | Auy   | 33.5      |
| hi-Ca granite 74296                           | Agh   | 4.0       |
| Alluvium 38485                                | Qa    | 2.5       |
| Pelitic and psammitic sedimentary rocks 74240 | Asy   | 2.5       |
| Amphibolite 74334                             | Aty   | 2.1       |

#### 2.1.2 Surface Water and Hydrology

The survey area does not contain, or is not in close proximity to any wetlands listed as Ramsar sites (Department of the Environment and Energy 2017a) or as Directory of Important Wetlands sites (Department of the Environment and Energy 2017b). There are no major watercourses located within the survey area.

The majority of the survey area occurs within the Murchison River catchment with water draining to the west toward the Murchison River and subsequently to the Indian Ocean. The exception is the southern-most material pit, GNH 523 SLK, which occurs within the Yarra Monger catchment. Water in this catchment drains toward inland salt lake systems. A number of minor drainage lines are located within the survey area. All drainage in the region is ephemeral. The Murchison River flows intermittently and may flow for long periods after heavy rainfall (Curry et al. 1994). At its nearest point, the Murchison River is located approximately 65 km north of the survey area. The Yalgar River and Hope River are tributaries of the Murchison River and are located approximately 10 km north and 20 km east of the survey area respectively.

Lake Austin (salt lake), located approximately 15 km south of Cue, is located 2.7 km to the north of the survey area boundary. Lake Austin has a total surface area of approximately 773 square kilometres (km<sup>2</sup>). Surrounding surface run off drains into Lake Austin from three main creeklines (Berring, Jungar and Nallan Creeks) that drain from the Weld Ranges to the north (Bureau of Meteorology 2015) (Figure A.1; Appendix A).

## 2.2 Biological Environment

### 2.2.1 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic Regionalisation for Australia (IBRA version 7) divides the Australian continent into 89 bioregions and 419 subregions (Department of the Environment and Energy 2017c). The IBRA regions represent a landscape-based approach to classifying the land surface, including attributes of climate, geomorphology, landform, lithology, and characteristic flora and fauna. The survey area occurs in the Murchison Bioregion, of which 6.75% is represented in the national reserve system (Department of the Environment and Energy 2016b).

The biodiversity of the 53 subregions recognised in Western Australia was documented as part of a national audit to provide priorities for conservation action (Department of Conservation and Land Management 2002). The survey area intersects with two IBRA subregions: Eastern Murchison (MUR01) and Western Murchison (MUR02). These two subregions were described in the audit as:

- Eastern Murchison (MUR01): Characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. Salt lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sandplains. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Halosarcia* shrublands (Cowan 2001).
- Western Murchison (MUR02): Mulga low woodlands, often rich in ephemerals (usually with bunch grasses), on outcrop and fine-textured Quaternary alluvial and eluvial surfaces (extensive hardpan washplains that dominate and characterise the subregion) mantling granitic and greenstone strata of the northern part of the Yilgarn Craton. Surfaces associated with the occluded drainage occur throughout with hummock grasslands on Quaternary sandplains, saltbush shrublands on calcareous soils and *Halosarcia* low shrublands on saline alluvia. Contains the headwaters of the Murchison and Wooramel Rivers, which drain the subregion westwards to the coast (Desmond, Cowan, and Chant 2001).

### 2.2.2 Land Systems

The Western Australian rangelands have been surveyed by the Department of Primary Industries and Regional Development (previously named Department of Agriculture and Food Western Australia) with subsequent reports identifying the condition of soils, landforms, vegetation, habitat and the presence of declared plants and animals. Land systems across the surveyed areas were classified according to predominant biophysical features.

The survey area occurs within 12 land systems. Descriptions of these land systems and the total area of each land system within the survey area, and within the Murchison bioregion, is presented in Table 3.

Table 3: Description and distribution of land systems within the survey area and Murchison bioregion (Curry et al. 1994; Department of Agriculture and Food Western Australia 2013b).

| Land system | Description   | Total area within survey area (ha) | Total area within bioregion (ha) | Proportion within survey area (%) |
|-------------|---|------------------------------------|----------------------------------|-----------------------------------|
| Violet      | Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands.                     | 298.5                              | 5,222.5                          | 5.7                               |
| Bullimore   | Gently undulating sandplain with occasional linear dunes and stripped surfaces supporting spinifex grasslands with mallees and acacia shrubs.   | 181.1                              | 35,348.6                         | 0.5                               |
| Jundee      | Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands.  | 163.8                              | 5,871.8                          | 2.8                               |
| Trillbar    | Gently sloping stony plains with low rises of metamorphic rocks and gilgaied drainage foci; supporting shrublands of snakewood, mulga, bluebush and samphire with patches of tussock grassland.                               | 79.7                               | 141.4                            | 56.4                              |
| Kalli       | Elevated gently undulating red sandplains edged by stripped surfaces on laterite and granite, supporting acacia tall shrublands with wanderrie grass understoreys.  | 50.5                               | 8,543.2                          | 0.6                               |
| Sherwood    | Breakaways, kaolinised footslopes and extensive gently sloping plains on granite supporting mulga shrublands and minor halophytic shrublands.   | 44.8                               | 14,982.6                         | 0.3                               |
| Wiluna      | Low greenstone hills with occasional lateritic breakaways and broad stony slopes, lower saline stony plains and broad drainage tracts; supporting sparse mulga and other acacia shrublands with patches of halophytic shrubs. | 34.7                               | 2,539.1                          | 1.4                               |
| Gransal     | Stony plains and low rises based on granite supporting mainly halophytic low shrublands.  | 8.7                                | 3,566.9                          | 0.2                               |
| Belele      | Hardpan wash plains with acacia tall shrublands, and low sandy banks supporting shrublands with wanderrie grasses.  | 5.5                                | 5,708.9                          | 0.1                               |
| Yandil      | Flat hardpan wash plains with mantles of small pebbles and gravels; supporting groved mulga shrublands and occasional wanderrie grasses.  | 5.3                                | 4,676.1                          | 0.1                               |
| Gabanintha  | Greenstone ridges, hills and footslopes supporting sparse acacia and other mainly non-halophytic shrublands.  | 3.2                                | 1,650.8                          | 0.2                               |
| Challenge   | Gently undulating gritty and sandy surfaced plains, occasional granite hills, tors and low breakaways, supporting acacia shrublands and occasional halophytic shrublands.   | 0.7                                | 7,372.0                          | <0.1                              |

### 2.2.3 Pre-European Vegetation

The pre-European vegetation mapping of Western Australia dataset maps original natural vegetation presumed to have existed prior to European settlement. It is based predominantly on the published and unpublished mapping of J.S. Beard. Beard (1976) completed broad-scale mapping at an association level across the Murchison region at a scale of 1:1,000,000. The survey area is situated within the Austin Botanical District, and eight pre-European vegetation systems (which combine elements of vegetation distribution and landscape types) are present within the survey area:

- Upper Murchison\_18: Low woodland, open low woodland or sparse woodland (mulga *Acacia aneura* and associated species).
- Barlee\_18: Low woodland, open low woodland or sparse woodland (mulga *Acacia aneura* and associated species).
- Wiluna\_18: Low woodland, open low woodland or sparse woodland (mulga *Acacia aneura* and associated species).
- Upper Murchison\_29: Low woodland, open low woodland or sparse woodland (mulga *Acacia aneura* and associated species).
- Barlee\_40: Scrub, open scrub or sparse scrub (wattle, teatree and other species *Acacia* spp., *Melaleuca* spp.).
- Wiluna\_107: Shrub-steppe (hummock grassland with scattered shrubs or mallee *Triodia* spp., *Acacia* spp., *Grevillea* spp., *Eucalyptus* spp.).
- Upper Murchison\_313: Saltbush and bluebush with scrub or open scrub (mulga, other wattle, *Atriplex* spp., *Maireana* spp. with *Acacia aneura* and other *Acacia* spp.).
- Wiluna\_313: Saltbush and bluebush with scrub or open scrub (mulga, other wattle, *Atriplex* spp., *Maireana* spp. with *Acacia aneura* and other *Acacia* spp.)

Table 4 summarises the current and pre-European extent of these vegetation units in the survey area and Murchison bioregion.

**Table 4: Extent of pre-European vegetation in the survey area and Murchison bioregion (Government of Western Australia 2018).**

| System association  | Vegetation association | Total area within survey area (ha) | Current extent in the Murchison bioregion (ha) | Pre-European extent (ha) | Proportion of pre-European extent remaining (%) |
|---------------------|------------------------|------------------------------------|--|--------------------------|---|
| Wiluna 18           | 18                     | 212.0                              | 4,290,204.5                                    | 4,307,945.8              | 99.59   |
| Upper Murchison 18  | 18                     | 165.6                              | 1,896,343.8                                    | 1,900,878.8              | 99.76   |
| Wiluna 107          | 107                    | 139.6                              | 2,726,959.9                                    | 2,728,351.3              | 99.95   |
| Wiluna 313          | 313                    | 112.7                              | 27,493.2                                       | 30,320.7                 | 90.67   |
| Upper Murchison 313 | 313                    | 99.2                               | 33,493.3                                       | 34,247.9                 | 97.80   |
| Upper Murchison 29  | 29                     | 84.0                               | 1,822,612.9                                    | 1,823,089.8              | 99.97   |
| Barlee 40           | 40                     | 41.6                               | 39,736.8                                       | 39,736.8                 | 100.00  |
| Barlee 18           | 18                     | 21.7                               | 3,196,467.6                                    | 3,198,859.5              | 99.93   |

#### 2.2.4 Conservation Reserves

The survey area does not occur within or adjacent to any conservation reserves. A number of former pastoral leases in the Murchison region are currently in the process of being gazetted for addition to the National Reserve System. Within 20 km of the survey area, this includes one lease: 'Lakeside', located approximately 12 km from the survey area (Figure A, Appendix A) (Department of the Environment and Energy 2016a).

### 2.3 State and Commonwealth Conservation Categories and Management

Commonwealth and State regulatory authorities maintain databases of the locations and conservation status of significant flora, fauna and ecological communities in Western Australia.

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage Matters of National Environmental Significance (MNES) including listed flora, fauna and ecological communities. These listed flora, fauna and ecological communities are allocated a conservation category, which are outlined in Tables B.1 and B.2 (Appendix B).

Ecological communities may be subject to processes that threaten to destroy or significantly modify it across much of its range. These communities are identified as threatened ecological communities (TECs) and are listed at both Commonwealth level under the EPBC Act and State level by the Western Australian Minister for Environment (Table B.3; Appendix B). The Department of Biodiversity, Conservation and Attractions maintains a list of priority ecological communities (PECs), which may also be under threat and are assigned one of four priority rankings according to the criteria outlined in Table B.4 (Appendix B).

Under Western Australian legislation, all native flora is protected and it is an offence to ‘take’ protected flora. The *Biodiversity Conservation Act 2016* (BC Act)<sup>1</sup> also provides for native flora to be gazetted as threatened or extinct. Under the BC Act threatened species may be listed as one of three categories: critically endangered, endangered or vulnerable (Table B.5, Appendix B). In addition, due to the diversity of Western Australia’s flora, many species are known from only a few collections or locations, but have not been adequately surveyed. Such flora may be threatened, but cannot be considered for declaration as threatened flora until adequate surveys have been undertaken. These flora species are included on a supplementary conservation list managed by DBCA called the *Priority Flora List* (Table B.6, Appendix B).

Under Western Australian legislation, all native fauna is protected and it is an offence to ‘take’ protected fauna. The BC Act also provides for native fauna species to be specially protected when they are considered rare, threatened with extinction, or have a high conservation value (Table B.5; Appendix B). In addition, due to the diversity of Western Australia’s fauna, many species are known from only a few collections or locations but have not been adequately surveyed. Such fauna may be rare or threatened but cannot be considered for declaration as threatened fauna until adequate surveys have been undertaken. These fauna species are included on a supplementary conservation list managed by DBCA called the *Priority Fauna List*. Priority fauna are categorised according to level of threat and other information and the conservation categories are described in Table B.6 (Appendix B).

## 2.4 Introduced Flora Categories and Management

Significant weed species are identified at both the Commonwealth and State levels. The Australian Weeds Strategy (Australian Weeds Committee 2012) identifies WoNS which have the potential to impact primary industry and/or environmental and social values. The management of weeds in Western Australia is primarily regulated through the *Biosecurity and Agriculture Management Act 2007* (BAM Act). Species listed under this act are allocated one of three declared pest categories which define the required level of management (Department of Agriculture and Food Western Australia 2016). Declared pest categories are presented in Table B.7 (Appendix B).

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<sup>1</sup> From 1 January 2019, the *Wildlife Conservation Act 1950* has been replaced by the *Biodiversity Conservation Act 2016* (BC Act) and its regulations. This study was completed in 2018, prior to the BC Act being enacted.



### 3 Methods

#### 3.1 Desktop Assessment

##### 3.1.1 Database Searches

State and Commonwealth database searches were conducted to identify listed conservation significant flora, fauna and ecological communities within, or in close proximity to, the survey areas. Search results are presented in Appendix C and search details are summarised in Table 5. Conservation categories for ecological communities, flora and fauna are presented in Appendix B. Introduced flora species were compared to the Department of Primary Industries and Regional Development list, to determine if any have been listed as declared pests (Department of Primary Industries and Regional Development 2018), and the WoNS list (Australian Weeds Committee 2012). Introduced pest fauna were checked against the three categories as Gazetted under the *Biosecurity and Agriculture Management Regulations 2013* (Department of Agriculture and Food Western Australia 2013a) and detailed as appropriate. Introduced flora and pest fauna categories are presented in Appendix B.

Table 5: Database searches undertaken.

| Database  | Date search results received | Search focus  | Search result  |
|---|------------------------------|---|--|
| Department of Environment and Energy Protected Matters Search Tool (Department of the Environment and Energy 2018e)       | 05/10/2018                   | MNES – flora and fauna                                | 20 km buffer around a centre point of individual survey areas. |
| <i>NatureMap</i> (Department of Biodiversity, Conservation, and Attractions 2018a)  | 09/10/2018                   | Flora of conservation significance                    | 20 km buffer around a centre point of individual survey areas. |
|   |                              | Fauna of conservation significance                    |  |
| Threatened and Priority Ecological Communities Database (Department of Biodiversity, Conservation, and Attractions 2018b) | 03/10/2018                   | Listed threatened and priority ecological communities | 20 km radius around survey area shapefiles provided by MRWA    |
| Threatened and Priority Flora Database (TPFL) (Department of Biodiversity, Conservation, and Attractions 2018d)           | 03/10/2018                   | Listed threatened and priority flora                  | 20 km radius around survey area shapefiles provided by MRWA    |
| Western Australian Herbarium Flora (WAHerb) Database (Department of Biodiversity, Conservation, and Attractions 2018e)    |                              |   |  |
| Threatened and Priority Fauna Database (Department of Biodiversity, Conservation, and Attractions 2018c)                  | 03/10/2018                   | Listed threatened and priority fauna                  | 20 km radius around survey area shapefiles provided by MRWA    |

| Database   | Date search results received | Search focus                           | Search result                                |
|--|------------------------------|--|--|
| Western Australian government datasets (Department of the Environment and Energy 2018c, 2018d; Department of the Environment and Energy 2018a) and the Register of the National Estate dataset (Department of the Environment and Energy 2008) | 09/10/2018                   | Environmentally Sensitive Areas (ESAs) | 100 km radius from the survey area boundary. |

### 3.1.2 Likelihood of Occurrence Assessment

Prior to conducting the field survey, aerial imagery was interpreted to identify potential habitat types. The conservation significant flora and fauna species returned from the database searches were then categorised according to the criteria in Table 6 for potential occurrence within the survey areas. Prior to the survey, a booklet of conservation significant species was prepared for use during the survey. For each species the following information was compiled:

- species description including height, flowering colour and other distinguishing features
- conservation code
- habitat including preferred soil type
- photograph of the species.

Table 6: Pre-survey criteria to assess the likely presence of conservation significant flora in the survey area.

| Likelihood of occurrence | Criteria  |
|--------------------------|---|
| Likely                   | Species previously recorded within the survey area (older records from database searches) or within 10 km of the project area and suitable habitat appears to be present in the survey area |
| Potential                | Species previously recorded within 10 km to 20 km of the survey area and/or suitable habitat appears to be present in the survey area   |
| Unlikely                 | No suitable habitat appears to be present in the survey area  |
| Unknown                  | No information available to assess likelihood.  |

Following the survey, the conservation significant flora species identified during the desktop assessment as having the highest potential to occur within the survey area, but which were not recorded during the current survey, were again assessed to determine their likelihood of occurrence. Post-field survey likelihood was primarily based on validating the presence (and thorough inspection) of suitable habitats within the survey area, combined with life form, habitat and flowering information for each flora species.

Conservation listed vertebrate fauna returned from the database searches were also categorised for likelihood of occurrence within the survey area following the survey according to the criteria listed in Table 7.

Table 7: Criteria used to define likelihood of occurrence of conservation significant fauna species following the survey.

| Likelihood of occurrence | Criteria  |
|--------------------------|---|
| Recorded                 | Species or evidence of species recorded during survey.  |
| High                     | Core or preferred habitats present in the survey area which are abundant and/or high quality condition<br>OR<br>Species is known to be cryptic and may not have been detected despite adequate survey effort and suitable habitat present within the survey area<br>OR<br>Species or evidence of species recorded within the survey area however doubt remains over the taxonomic identification, validity of record. |
| Moderate                 | Core or highly suitable habitats present in the survey area, however, non-cryptic species that was not detected despite adequate survey effort<br>OR<br>Core or preferred habitats present in the survey area are mainly in poor or modified condition.   |
| Low                      | Species has not been recorded in the survey area despite adequate survey effort<br>OR<br>Species dependent on specific habitats that do not occur in the survey area<br>OR<br>Species considered locally extinct.   |

## 3.2 Field Survey

The survey was conducted by Astron Environmental Scientists Lucy Dadour (Flora Permit SL012252) and Gabriela Martinez (Flora Permit SL012340) between 10 and 17 October 2018. The survey was undertaken in accordance with the requirements outlined in the Main Roads Biological Survey Consultant Brief, dated 16 August 2018.

### 3.2.1 Flora and Vegetation Survey

The methods adopted for the flora and vegetation survey were formulated in context with EPA Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment (Environmental Protection Authority 2016b). Information acquired during the desktop assessment assisted in the design of the field survey. Pre-survey planning involved the examination of 1:10,000 scale aerial photography to identify potentially different landforms, habitat and vegetation types.

Sampling was undertaken using quadrats of dimensions 20 m by 20 m, as per regulatory expectations for Murchison bioregion floristic quadrats (Environmental Protection Authority 2016b).

The following information was collected for each of the 33 quadrats sampled:

- Location – coordinates measured using a handheld Global Position Systems (GPS) (MGA50, GDA94). One set of coordinates was taken from the north-west corner of each quadrat.
- Recorder and date – personnel involved in sampling that location and the survey date.
- Species – vascular plant species present, including weed species. Species that were not confidently identified during the field survey were collected for later identification in the Astron herbarium, or at the Western Australian Herbarium (WA Herb).

- Foliar cover – the estimated percentage cover for each flora species.
- Vegetation description – vegetation was described according to level 5 of the National Vegetation Information System (Department of the Environment and Energy 2018b). At this level, vegetation is described to ‘association’ where up to three dominant genera for each of the upper, mid and ground strata are categorised based on dominant growth form, cover and height.
- Vegetation condition – assessed according to the vegetation condition classification adapted from Trudgen (1988) in EPA Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (Environmental Protection Authority 2016b) (Table D.2; Appendix D).
- Habitat – a broad description of the surrounding landscape based on landform, topography and soil.
- Disturbance – records of any obvious disturbances such as fire, tracks, weed infestation, or grazing.
- Photographs – a photograph was taken of each quadrat.

Four relevés were sampled to describe the vegetation in areas where condition was Poor or below. The same information was collected from relevés as from quadrats, however an area of 400 m<sup>2</sup> was visually estimated. Quadrat and relevé locations are illustrated on the vegetation type map (Figure E; Appendix E). Due to the linear and disjunct nature of the survey area, which consisted of multiple sites with a large geographical spread, it was not possible to achieve replication of three survey sites for all vegetation types recorded. Floristic data for vegetation types was complimented by opportunistic records of flora species not otherwise captured in representative quadrats and relevés.

Vegetation units were described and mapped using data collected from quadrats and relevés. Vegetation condition was mapped using vegetation unit boundaries throughout the survey area, a combination of quadrat data, opportunistic observations and the mean condition rating for each vegetation unit.

Based on the outcomes of the pre-survey likelihood of occurrence assessment, habitats and vegetation types in the survey areas considered to have the potential to support conservation significant flora (based on previously recorded conservation significant flora records and associated habitat preference information) were targeted in the field to record the presence or absence of conservation significant flora. Aerial imagery assisted in identifying potential locations of possible habitats prior to the field survey; these were the ground-truthed during the survey. Due to the open, disturbed and generally homogenous nature of the vegetation types, traverses were done through a representative portion of each potential habitat type at each site.

### 3.2.2 Terrestrial Vertebrate Fauna Survey

The Level 1 fauna survey was undertaken concurrently with the flora and vegetation component, in accordance with the requirements of EPA Technical Guidance – Terrestrial Fauna Surveys (Environmental Protection Authority 2016c) and EPA Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna (Environmental Protection Authority 2016c).

Sixteen fauna habitat assessments were conducted across the survey area, with at least one assessment per habitat type present.

The following information was collected at each site:

- Location – coordinates measured using a handheld GPS (GDA94).
- Recorder and date – personnel involved in undertaking the fauna habitat assessment and the survey date.
- Habitat/landform – position in the landscape. Major fauna habitat types were described based on the landform and vegetation.
- Vegetation unit – a broad description of the vegetation unit and structure.
- Soils – a brief description of soil type.
- Microhabitat – presence of specific microhabitat features, e.g. leaf litter, logs, burrows, rocky outcrops, rock crevices, hollows, permanent or semi-permanent water.
- Condition – habitat condition was assessed based on the presence of anthropogenic (human-induced) disturbances, and using the condition ratings suggested by Thompson and Thompson (2010) (Table C.3, Appendix D).
- Disturbance – any disturbance such as clearing, fire, weeds, flooding, vehicular, machinery, tracks or grazing.
- Photographs – a representative photograph was taken at each habitat assessment site.

The information derived from the fauna habitat assessments and vegetation mapping was used to delineate fauna habitats throughout the survey area, which were then mapped accordingly and are presented in Figure F (Appendix F).

### 3.2.3 Taxonomy and Nomenclature

Plant specimens that were not identified in the field were identified and verified at the WA Herb. The assigned nomenclature is consistent with the current listing of scientific names recognised by the WA Herb and was used for the species list and associated species information collected.

Nomenclature and sequence for amphibians, reptiles, birds and mammals within this report is as per the Western Australian Museum checklist for vertebrate fauna species (Western Australian Museum 2018). Field guides and accepted scientific peer review references were also used for fauna identification.

### 3.3 Limitations

Following completion of the desktop assessment and field surveys, a review of any limitations that may have affected a complete assessment of the data collected was conducted. The limitations listed in Table 8 are based on those suggested as considerations in EPA's Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (Environmental Protection Authority 2016b) and Technical Guidance – Terrestrial Fauna Surveys (Environmental Protection Authority 2016c)

Table 8: Statement of limitations.

| Potential limitation   | Statement regarding potential limitations  |
|--|--|
| <b>(i) Sources of information and availability of contextual information</b><br>Is the region well documented?   | Broad-scale information is available from Beard (1979), Curry et al (1994), Cowan (2001) and Desmond, Cowan and Chant (2001). Contextual information is therefore not a limiting factor for this survey.   |
| <b>(ii) Scope</b><br>The level of survey and detail required to undertake the survey. Was there adequate time to complete the survey to the desired standard?  | There was adequate time to complete the flora, vegetation and fauna surveys, complete vegetation and fauna habitat mapping and conduct targeted searches for threatened and priority flora and fauna. Time was not considered a limiting factor.   |
| <b>(iii) Proportion of flora and fauna identified, recorded and/or collected</b><br>Was the survey sampling, timing and intensity considered adequate? Was the survey conducted at what was considered an appropriate time of the year for plant identification? Were any taxonomic groups considered to be under-represented? | <p>The survey area is located within the Eremaean Botanical Province. The recommended timing for vegetation surveys within this province is six to eight weeks post wet season (March to June) with supplementary survey (dry season survey) recommended after winter rainfall if available (Environmental Protection Authority 2016a). The survey was conducted from 10 to 17 October after winter rainfall that was approximately 38 mm below the long-term average for the June to August period. The timing of the survey was therefore not considered optimal for species diversity or specimen identification.</p> <p>The fauna recorded are biased towards species that are readily identifiable and conspicuous such as birds. The fauna survey was a low intensity, Level 1 survey and was focused on conservation significant fauna habitat and potential habitat, rather than a census of the suite of fauna present.</p> |
| <b>(iv) Completeness</b><br>Is there further work which may be required i.e. was the relevant area fully surveyed?   | The survey area was considered adequately surveyed to compile a representative list of species, (including priority and introduced flora and fauna species), as well as describe and map vegetation at a level appropriate for management decisions.   |
| <b>(v) Mapping reliability</b><br>Were the aerial photographs, satellite images and site maps available considered adequate to fully understand the area surveyed? Was the mapping generated considered to have a high degree of reliability?  | Colour aerial photography at a scale of 1:4,000 was used to locate the survey area and to assist in navigation and delineation of vegetation boundaries. The aerial photography was of good resolution and, in general, accurately represented ground conditions.  |

| Potential limitation  | Statement regarding potential limitations  |
|---|--|
| <b>(vi) Timing</b><br>When was the survey conducted in terms of season, rainfall, severe weather events, etc. Was the survey conducted at an appropriate time for access, observation of the optimal suite of species and for identification of flowering and fruiting species? | <p>The survey was conducted outside the recommended season for flora and vegetation assessments in the Eremaean Botanical Province (Environmental Protection Authority 2016b). Below average winter rainfall preceded the October 2018 survey.</p> <p>Some annual, ephemeral or cryptic flora considered to potentially occur in the area was not detected. Furthermore, good quality specimens were unable to be collected for a number of samples owing to seasonal timing. The perennial taxonomic groups of flora were considered well represented. The 42 specimens that were unable to be identified to species level were not considered to be potential conservation significant taxa; the families/ genera of the unidentifiable specimens did not correspond with priority species with potential to occur in those habitats. A level 1 fauna survey was conducted focusing on fauna habitats present and as such is independent from survey timing.</p> |
| <b>(vii) Disturbance</b><br>Had the survey area been impacted by any disturbance which may have limited the survey, i.e. fire, flood, accidental human intervention etc.?   | <p>Some areas had been subject to historical clearing and there was evidence of heavy goat/cattle grazing in others, however these disturbances did not limit the outcome of the survey.</p>   |
| <b>(viii) Intensity</b><br>In retrospect, was the intensity considered to be adequate?  | <p>The intensity of the survey was considered adequate to compile representative species lists, map vegetation to association level, conduct targeted surveys for threatened and priority flora in potential habitat and map fauna habitat.</p>  |
| <b>(ix) Resources</b><br>Were the appropriate tools and materials available to complete the task effectively?   | <p>Resources were adequate to complete the survey and all appropriate tools and materials required to complete the task were available.</p>  |
| <b>(x) Access</b><br>Were there any factors limiting access to the survey area?   | <p>The survey area was able to be accessed by vehicle and traversed by foot.</p>   |
| <b>(xi) Experience</b><br>Were personnel undertaking the field survey and plant identification trained and/or experienced in undertaking the required tasks?  | <p>The scientists responsible for undertaking the field survey have considerable experience in conducting vegetation and flora surveys, and fauna assessments. The team was led by Gabriela Martinez, who has over 18 years' experience in conducting biological surveys. Supporting the team leader was Lucy Dadour, who has over 6 years' experience conducting biological surveys. The identification of specimens brought back from the field was conducted by Alexandra Sleep, who has nine years of experience identifying the flora of the region.</p> <p>Personnel experience was not considered a limiting factor.</p>  |



## 4 Results

### 4.1 Weather

Daily weather observations recorded from Meekatharra Airport weather station (Bureau of Meteorology station number 007045) were used to describe local rainfall and temperatures (Figure 2). A total of 213 mm of rain was recorded in the 12 months prior to survey (October 2017 to September 2018), 23.2 mm below the long-term mean of 238.2 mm (data sourced from 1944 to 2018). Summer rainfall (December to February) was 66.5 mm above average however rainfall received in the winter months (June to August 2018) preceding the spring survey was 38.4 mm below average. Mean maximum monthly temperatures were above average for the majority of the 12 months preceding survey (Figure 2) (Bureau of Meteorology 2018)

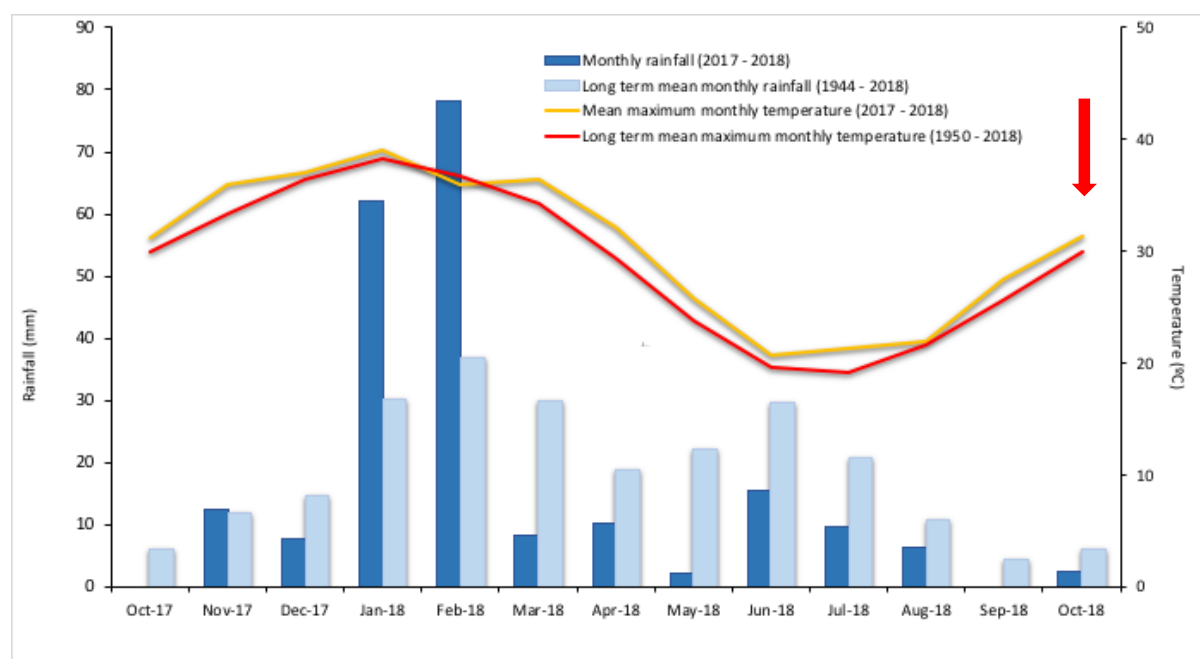


Figure 2: Climate data relevant to the survey area sourced from Meekatharra Airport weather station (007045). Long-term mean monthly rainfall data sourced from data recorded between 1944 – 2018 and long-term mean maximum monthly temperature from 1950 – 2018. Red arrow indicates survey timing.

### 4.2 Desktop Assessment

#### 4.2.1 Environmentally Sensitive Areas

The nearest ESA to the survey area is Dalgarranga Crater Reserve located approximately 52 km west of GNH 593 SLK. Dalgarranga Crater is listed on the Register of the National Estate (Department of the Environment and Energy 2008) and is a small meteorite impact crater located on Dalgarranga pastoral lease (as listed in Section 2.2.4), approximately 75 km west of Mount Magnet (Figure A.1; Appendix A).

#### 4.2.2 Flora and Vegetation

A review of DBCA's TEC and PEC database and the EPBC Protected Matters Search Tool identified the presence of four listed communities in proximity to the survey area (Table 10).



Table 9: Threatened and Priority Ecological Communities previously recorded within 20 km of the survey area.

| Ecological community description                                      | State conservation status | Distance from survey area (km)               |
|---|---------------------------|--|
| Lake Austin vegetation complexes banded ironstone formation (BIF) PEC | Priority 1                | Buffer intersects survey area at GNH 593 SLK |
| Trillbar Land System PEC  | Priority 3                | Buffer intersects survey area at GNH 660 SLK |
| Austin Land System PEC  | Priority 3                | 4  |
| Mount Magnet vegetation complexes (banded ironstone formation)        | Priority 1                | 14   |

No State or Commonwealth listed TECs are known to occur within the vicinity of the survey area. The buffer of two PECs intersect the survey area (Figure A.1, Appendix A) (Department of Biodiversity, Conservation, and Attractions 2018b):

- **Priority 1 Lake Austin vegetation complexes banded ironstone formation (BIF) PEC:** intersects the survey area near GNH 593 SLK. No description of vegetation available.
- **Priority 3 Trillbar Land System PEC:** described as gently sloping stony plains with low rises of metamorphic rocks and gilgaied drainage foci; supports more or less saline shrublands of snakewood, mulga, bluebush and samphire with patches of tussock grassland (Department of Biodiversity, Conservation, and Attractions 2017). The buffer of this PEC intersects the survey area near GNH 660 SLK.

Database searches listed 34 conservation significant flora species found to occur within a 20 km radius of the survey area. The locations of these records are listed in the database search results (Appendix C) and likelihood of occurrence assessments are provided in Table G.1 (Appendix G). Of these 35 species, four are listed as MNES under the EPBC Act (three of which are also listed as threatened under State legislation). Nine priority 1 (P1) species (one of which is listed as a MNES species), two P2 species, 15 P3 species and five P4 species were listed in the DBCA database search results.

Based on pre-survey assessment of previous location and preferred habitat information, one threatened species, two P1, three P3 and two P4 flora species were considered likely to occur within the survey area. A further 29 priority flora were considered to have the potential to occur (Table G.1, Appendix G).

#### 4.2.3 Terrestrial Vertebrate Fauna

The database search results indicate that 274 vertebrate fauna have been previously recorded within 20 km of the survey area, including five amphibian species, 53 reptile species, 196 bird species (including two introduced bird species) and 20 mammal species (including six introduced mammal species) (Tables H.1 to H.4, Appendix H). This list includes 30 species of conservation significance, including three reptile species, 24 bird species and three mammal species. Of these, no species were considered to have a 'high' likelihood (inclusive of those previously recorded within or adjacent to the survey area), 13 species were considered to have a 'moderate' likelihood and 17 species were considered to have a 'low' post-survey likelihood of occurrence (Table G.2, Appendix G). This is based on their respective ecology, habitats considered likely to be present and any previous records from historic survey and database records. Likelihood criteria were determined after the field survey was conducted with habitats recorded during the survey considered for each species.



Species with known restricted distributions or clearly erroneous records which have been misidentified were omitted from the desktop assessment. Invertebrate fauna species were excluded from the desktop review assessment as this group of species, inclusive of short-range endemic species, were not part of the scope.



## **4.3 Flora and Vegetation Survey**

### **4.3.1 Vegetation**


Twenty three vegetation types and one mosaic were recorded across the survey area and account for 874.7 ha (99.8%) of the survey area. A further 1.7 ha (0.2%) was mapped as 'cleared' where vegetation has been removed for existing infrastructure including roads or borrow pits. Each vegetation type is detailed below in Table 10 and mapped in Figure E (Appendix E).



Table 10: Vegetation types recorded in the survey area.



| Vegetation type code and description   | Sites(s)             | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|--|----------------------|----------------------|---|--|
| <b>Plains</b>  |                      |                      |   |  |
| <p><b>P1:</b> Occasional <i>Eucalyptus kingsmillii</i> scattered low trees over <i>Acacia ?caesaneura</i> (narrow phyllode variant) and <i>A. ramulosa</i> var. <i>ramulosa</i> and/or <i>A. pteraneura</i> tall shrubland over occasional <i>Eremophila glutinosa</i>, <i>Senna glaucifolia</i> and <i>E. ?forrestii</i> open shrubland over <i>Eriachne helmsii</i> and <i>Eragrostis</i> sp. very open tussock grassland.</p> <p><b>Associated species:</b> <i>Acacia ?sibilans</i>, <i>A. mulganeura</i>, <i>Aristida contorta</i>, <i>Dodonaea ?pinifolia</i>, <i>D. petiolaris</i>, <i>Psydrax latifolia</i>, <i>P. rigidula</i>, <i>Seringia elliptica</i>, <i>Sida</i> sp. dark green fruits (S. van Leeuwen 2260) and <i>Solanum lasiophyllum</i></p> | MW01, MW02 and MWR01 | Very Good - Good     | 58.5 (6.7)                                      |  <p>Plate 1: P1 Vegetation type.</p>  |
| <p><b>P2:</b> <i>Acacia incurvaneura</i> and <i>A. quadrimarginea</i> tall open shrubland over <i>Calytrix uncinata</i> and <i>Micromyrtus sulphurea</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Aristida contorta</i>, <i>Drummondita miniata</i> P3, <i>Eragrostis eriopoda</i>, <i>Eremophila glutinosa</i>, <i>Eriachne helmsii</i>, <i>E. pulchella</i> subsp. <i>pulchella</i>, <i>Maireana tomentosa</i>, <i>Marsdenia australis</i>, <i>Mirbelia rhagodioides</i> and <i>Solanum lasiophyllum</i></p>   | MW04, MW32           | Very Good            | 44.6 (5.1)                                      |  <p>Plate 2: P2 Vegetation type.</p> |

| Vegetation type code and description  | Sites(s)       | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|---|----------------|----------------------|---|--|
| <p><b>P3:</b> <i>Acacia pteraneura</i> and <i>Acacia grasbyi</i> scattered tall shrubs to tall open shrubland over <i>Scaevola spinescens</i> and/or <i>Eremophila ?phyllopoda</i> and <i>E. spathulata</i> open shrubland sometimes over <i>Maireana georgei</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Acacia craspedocarpa</i> (hybrid), <i>Aristida contorta</i>, <i>Eremophila ?forrestii</i>, <i>E. linearis</i>, <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i>, <i>Maireana tomentosa</i>, <i>Maireana</i> sp., <i>Ptilotus obovatus</i>, <i>Sclerolaena densiflora</i>, <i>Senna artemisioides</i> subsp. <i>x artemisioides</i>, <i>Sida</i> sp. and <i>Solanum lasiophyllum</i></p> | MW06 and MWR02 | Very Good - Good     | 5.6 (0.6)                                       |  <p>Plate 3: P3 Vegetation type.</p>  |
| <p><b>P4:</b> <i>Ptilotus rotundifolius</i> scattered shrubs over <i>P. schwartzii</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Acacia tetragonophylla</i>, <i>Aristida contorta</i>, <i>Eragrostis</i> sp., <i>Eremophila ?forrestii</i>, <i>E. ?jucunda</i> subsp. <i>jucunda</i>, <i>Eriachne helmsii</i>, <i>Maireana</i> sp. and <i>Senna glaucifolia</i></p>  | MW05           | Very Good - Good     | 5.6 (0.6)                                       |  <p>Plate 4: P4 Vegetation type.</p> |





| Vegetation type code and description  | Sites(s)      | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs  |
|---|---------------|----------------------|---|---|
| <p><b>P5:</b> <i>Acacia pruinocarpa</i>, <i>A. pteraneura</i> and <i>Eremophila linearis</i> tall open shrubland.</p> <p><b>Associated species:</b> <i>Acacia tetragonophylla</i>, <i>Eragrostis kennedyae</i>, <i>E. tenellula</i>, <i>Eremophila galeata</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>Maireana planifolia</i>, <i>M. triptera</i>, <i>Ptilotus aervoides</i>, <i>P. obovatus</i>, <i>P. rotundifolius</i>, <i>Sclerolaena cuneata</i>, <i>S. densiflora</i>, <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) and <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260)</p> | MW07 and MW13 | Very Good - Good     | 89.0 (10.2)                                     |  <p>Plate 5: P5 Vegetation type.</p> |
| <p><b>P5/P6 mosaic:</b> <i>Acacia pruinocarpa</i>, <i>A. aptaneura</i> and <i>A. pteraneura</i> tall open shrubland over <i>Eremophila ?forrestii</i> scattered shrubs.</p>   | N/A           | Poor                 | 1.9 (0.2)                                       | N/A   |



| Vegetation type code and description  | Sites(s)      | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|---|---------------|----------------------|---|--|
| <p><b>P6:</b> <i>Acacia pruinocarpa</i>, <i>A. aptaneura</i> and <i>A. incurvaneura</i> tall open shrubland.</p> <p><b>Associated species:</b> <i>Acacia tetragonophylla</i>, <i>Eragrostis</i> sp., <i>Eremophila galeata</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>Euphorbia tannensis</i> subsp. <i>eremophila</i>, <i>Maireana georgei</i>, <i>Ptilotus obovatus</i>, <i>P. rotundifolius</i>, <i>P. schwartzii</i>, <i>Senna glaucifolia</i>, <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) and <i>Thryptomene decussata</i></p> | MW09 and MW17 | Very good - Poor     | 34.3 (3.9)                                      |  <p>Plate 6: P6 Vegetation type.</p>  |
| <p><b>P7:</b> <i>Acacia incurvaneura</i> and <i>A. pruinocarpa</i> open shrubland over <i>Ptilotus obovatus</i> low open shrubland.</p> <p><b>Associated species:</b> <i>Ptilotus divaricatus</i>, <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32) and <i>Solanum lasiophyllum</i></p>  | MWR04         | Poor                 | 5.8 (0.7)                                       |  <p>Plate 7: P7 Vegetation type.</p> |



| Vegetation type code and description  | Sites(s)                     | Vegetation condition | Total area (ha)<br>(proportion of survey area (%)) | Representative photographs   |
|---|------------------------------|----------------------|--|--|
| <p><b>P8:</b> <i>Acacia masliniana</i>, <i>A. synchronicia</i> and <i>A. pteraneura</i> tall open shrubland over <i>Maireana triptera</i>, <i>Ptilotus obovatus</i> and <i>Sclerolaena eriantha</i> low open shrubland.</p> <p><b>Associated species:</b> <i>Aristida contorta</i>, <i>Cephalopterum drummondii</i>, <i>Enchylaena tomentosa</i>, <i>Maireana appressa</i>, <i>?Maireana</i> sp. <i>Scaevola spinescens</i>, <i>Solanum lasiophyllum</i> and <i>Stenopetalum</i> sp.</p>  | MW16                         | Very Good            | 2.1 (0.2)  |  <p>Plate 8: P8 Vegetation type.</p>  |
| <p><b>P9:</b> Occasional <i>Acacia pruinocarpa</i> low open woodland over <i>A. incurvaneura</i>, <i>A. ramulosa</i> var. <i>linophylla</i> and sometimes <i>A. ?incurvaneura</i> x <i>mulganeura</i> tall shrubland over occasional <i>Eremophila galeata</i> scattered shrubs over <i>Ptilotus schwartzii</i> var. <i>schwartzii</i> scattered herbs.</p> <p><b>Associated species:</b> <i>Acacia ?caesaneura</i> x <i>incurvaneura</i>, <i>A. craspedocarpa</i> (hybrid: narrow phyllodes), <i>Aristida contorta</i>, <i>Eremophila ?forrestii</i>, <i>E. georgei</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>E. linearis</i>, <i>Poaceae</i> sp., <i>Ptilotus obovatus</i>, <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) and <i>Sida</i> sp.</p> | MW12,<br>MW18<br>and<br>MW23 | Very Good<br>- Poor  | 271.0 (30.9)                                       |  <p>Plate 9: P9 Vegetation type.</p> |





| Vegetation type code and description   | Sites(s) | Vegetation condition | Total area (ha)<br>(proportion of survey area (%)) | Representative photographs   |
|--|----------|----------------------|--|--|
| <p><b>P10:</b> <i>Acacia pruinocarpa</i> low open woodland over <i>A. ?fuscanera</i> and <i>A. grasbyi</i> tall shrubs over <i>A. tetragonophylla</i> scattered shrubs over <i>Maireana tomentosa</i> and <i>Ptilotus obovatus</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Acacia ramulosa</i> var. <i>linophylla</i>, <i>Enchylaena tomentosa</i>, <i>Eremophila galeata</i>, <i>Maireana triptera</i>, <i>Ptilotus schwartzii</i> and <i>Senna</i> sp. Meekatharra (E. Bailey 1-26)</p> | MW21     | Very Good            | 23.3 (2.7)   |  <p>Plate 10: P10 Vegetation type.</p>  |
| <p><b>P11:</b> <i>Salsola australis</i> and <i>Sclerolaena patentiuspis</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Acacia synchronicia</i>, <i>Aristida contorta</i>, <i>Maireana tomentosa</i>, <i>Omphalolappula concava</i>, <i>Plantago</i> sp. Mt Magnet (A.S. George 6793), <i>Ptilotus obovatus</i>, <i>Roepera eichleri</i>, <i>Sclerolaena densiflora</i>, <i>Solanum lasiophyllum</i> and <i>Vittadinia eremaea</i></p>  | MW20     | Very Good            | 0.3 (<0.1)   |  <p>Plate 11: P11 Vegetation type.</p> |







| Vegetation type code and description   | Sites(s)      | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|--|---------------|----------------------|---|--|
| <p><b>P12:</b> <i>Acacia pteraneura</i> and <i>Acacia craspedocarpa</i> scattered tall shrubs to tall open shrubland sometimes over <i>Eremophila galeata</i> open shrubland over <i>Ptilotus schwartzii</i> scattered herbs</p> <p><b>Associated species:</b> <i>Acacia grasbyi</i>, <i>A. tetragonophylla</i>, <i>Actinobole uliginosum</i>, <i>Calandrinia translucens</i>, <i>Calocephalus multiflorus</i>, <i>Calotis multicaulis</i>, <i>Cynanchum viminale</i> subsp. <i>australe</i>, <i>Eremophila georgei</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>E. punicea</i>, <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i>, <i>Gnephosis brevifolia</i>, <i>Gnephosis tenuissima</i>, <i>Goodenia occidentalis</i>, <i>Menkea australis</i>, <i>Pogonolepis muelleriana</i>, <i>Ptilotus obovatus</i>, <i>Senna</i> sp. Meekatharra (E. Bailey 1-26), <i>Solanum lasiophyllum</i> and <i>Velleia rosea</i></p> | MW25 and MW31 | Very Good            | 16.3 (1.9)                                      |  <p>Plate 12: P12 Vegetation type.</p>  |
| <p><b>P13:</b> <i>Acacia xiphophylla</i> and <i>A. grasbyi</i> tall shrubland over <i>A. tetragonophylla</i> scattered shrubs over <i>Eremophila latrobei</i> subsp. <i>latrobei</i>, <i>Scaevola spinescens</i> and <i>Sclerolaena</i> spp. scattered low shrubs.</p> <p><b>Associated species:</b> <i>Cynanchum viminale</i> subsp. <i>australe</i>, <i>Eremophila platycalyx</i>, <i>Eremophila galeata</i>, <i>Maireana carnososa</i>, <i>M. planifolia</i>, <i>M. thesioides</i>, <i>M. triptera</i>, <i>Marsdenia australis</i>, <i>Pogonolepis muelleriana</i>, <i>Ptilotus obovatus</i>, <i>Ptilotus schwartzii</i> var. <i>schwartzii</i>, <i>Senna artemisioides</i> subsp. <i>x sturtii</i>, <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) and <i>Solanum lasiophyllum</i></p>  | MW24          | Good                 | 1.7 (0.2)                                       |  <p>Plate 13: P13 Vegetation type.</p> |

| Vegetation type code and description  | Sites(s) | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|---|----------|----------------------|---|--|
| <p><b>P14:</b> <i>Hakea preissii</i> and <i>Acacia tetragonophylla</i> scattered tall shrubs over <i>Ptilotus obovatus</i>, <i>Eremophila galeata</i> and <i>Maireana triptera</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Calandrinia Ptychosperma</i>, <i>C. translucens</i>, <i>Crassula colorata</i> var. <i>acuminata</i>, <i>Enchylaena tomentosa</i>, <i>Hakea preissii</i>, <i>Lemooria burkittii</i>, <i>Lepidium oxytrichum</i>, <i>Maireana tomentosa</i>, <i>Pogonolepis muelleriana</i>, <i>Ptilotus aervoides</i>, <i>Rhagodia eremaea</i>, <i>Scaevola spinescens</i>, <i>Sclerolaena cuneata</i>, <i>S. densiflora</i>, <i>Sida fibulifera</i>, <i>Solanum lasiophyllum</i> and <i>*Spergula pentandra</i></p> | MW27     | Very Good<br>- Poor  | 1.4 (0.2)                                       |  <p>Plate 14: P14 Vegetation type.</p>  |
| <p><b>P15:</b> <i>Acacia xiphophylla</i> tall open shrubland over <i>Ptilotus obovatus</i> and <i>Maireana triptera</i> scattered low shrubs.</p> <p><b>Associated species:</b> <i>Acacia tetragonophylla</i>, <i>Calandrinia Ptychosperma</i>, <i>Cephalopterum drummondii</i>, <i>Cymbopogon</i> sp., <i>Eremophila ?macmillaniana</i>, <i>E. exilifolia</i>, <i>E. galeata</i>, <i>Hakea preissii</i>, <i>Maireana pyramidata</i>, <i>Ptilotus aervoides</i>, <i>Roepera eichleri</i>, <i>Sclerolaena cuneata</i>, <i>S. densiflora</i>, <i>Senna</i> sp. <i>Meekatharra</i> (E. Bailey 1-26), <i>Solanum lasiophyllum</i> and <i>Velleia rosea</i></p>  | MW26     | Very Good<br>- Good  | 2.9 (0.3)                                       |  <p>Plate 15: P15 Vegetation type.</p> |



| Vegetation type code and description   | Sites(s)            | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|--|---------------------|----------------------|---|--|
| <p><b>P16:</b> <i>Acacia mulganeura</i> with <i>A. aneura</i> and/or <i>A. ayersiana</i> (hybrid) tall open shrubland over <i>Eremophila forrestii</i> subsp. <i>forrestii</i> and <i>A. ramulosa</i> var. <i>ramulosa</i> or <i>E. spuria</i> scattered shrubs over <i>Eriachne helmsii</i> scattered tussock grasses.</p> <p><b>Associated species:</b> <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i>, <i>Acacia fuscaneura</i>, <i>Aristida contorta</i>, <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>, <i>Gilberta tenuifolia</i>, <i>Goodenia occidentalis</i>, <i>Grevillea stenobotrya</i>, <i>Lobelia simulans</i>, <i>Ptilotus obovatus</i>, <i>Ptilotus schwartzii</i>, <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32), <i>Velleia</i> ?<i>rosea</i>, and <i>Waitzia acuminata</i> var. <i>acuminata</i></p> | MW03, MW29 and MW33 | Very Good - Good     | 197.8 (22.6)                                    |  <p>Plate 16: P16 Vegetation type.</p>  |
| <p><b>P17:</b> <i>Acacia fuscaneura</i> and <i>A. synchronicia</i> tall shrubland over <i>Eremophila spathulata</i>, <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) and <i>A. tetragonophylla</i> open shrubland over <i>Aristida contorta</i> scattered grasses.</p> <p><b>Associated species:</b> <i>Enchylaena tomentosa</i>, <i>Eremophila</i> ?<i>platycalyx</i>, <i>Eremophila galeata</i>, <i>E. spathulata</i>, <i>Exocarpos</i> sp., <i>Marsdenia australis</i>, <i>Ptilotus obovatus</i>, <i>Rhagodia eremaea</i>, <i>Senna</i> sp. Meekatharra (E. Bailey 1-26), and <i>Solanum lasiophyllum</i></p>   | MW10                | Good                 | 22.3 (2.5)                                      |  <p>Plate 17: P17 Vegetation type.</p> |
| Clay Plains  |                     |                      |   |  |



| Vegetation type code and description   | Sites(s) | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|--|----------|----------------------|---|--|
| <p><b>CC:</b> <i>Acacia macraneura</i> and <i>A. ?fuscanaura</i> tall open shrubland over <i>Eragrostis xerophila</i> (<i>Eriachne flaccida</i>) tussock grassland on clay plain.</p> <p><b>Associated species:</b> <i>Asteraceae</i> sp., <i>Eremophila galeata</i>, <i>Eremophila linearis</i>, <i>Hakea preissii</i>, <i>Marsilea</i> sp., <i>Ptilotus aervoides</i>, <i>Rhagodia eremaea</i>, <i>Sclerolaena cuneata</i>, <i>S. densiflora</i>, <i>Sclerolaena fusiformis</i>, <i>Sida fibulifera</i>, <i>Sida</i> sp. and <i>Solanum lasiophyllum</i></p> | MW30     | Good                 | 2.1 (0.2)                                       |  <p>Plate 18: CC Vegetation type.</p>   |
| <p><b>CC1:</b> <i>Hakea preissii</i> and <i>Pittosporum angustifolium</i> tall open shrubland over <i>Sclerolaena cuneata</i> low open shrubland over <i>Eragrostis australasica</i> open tussock grassland with <i>Eleocharis acuta</i> very open sedgeland on clay plain.</p> <p><b>Associated species:</b> <i>Atriplex codonocarpa</i>, <i>Dissocarpus paradoxus</i>, <i>Exocarpos aphyllus</i>, <i>Marsilea</i> sp., <i>Minuria integerrima</i> and <i>Streptoglossa liatroides</i></p>  | MW15     | Poor                 | 0.7 (0.1)                                       |  <p>Plate 19: CC1 Vegetation type.</p> |

| Vegetation type code and description   | Sites(s) | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs  |
|--|----------|----------------------|---|---|
| <p><b>CC2:</b> <i>Eragrostis eriopoda</i> scattered tussock grasses on clay plain</p> <p><b>Associated species:</b> Brassicaceae sp., <i>Convolvulus clementii</i>, <i>Goodenia havilandii</i>, <i>Plantago</i> sp. Mt Magnet (A.S. George 6793) and <i>Sclerolaena cuneata</i></p>  | MWR06    | Poor                 | 0.5 (0.1)                                       |  <p>Plate 20: CC2 Vegetation type.</p> |
| <b>Drainage</b>  |          |                      |   |   |
| <p><b>D1:</b> <i>Acacia pteraneura</i>, <i>Acacia tetragonophylla</i> and <i>Acacia synchronicia</i> (<i>Hakea preissii</i> and <i>Acacia ayersiana</i> (narrow phyllode variant)) tall shrubland over <i>Eremophila</i> ?<i>phyllopoda</i> scattered shrubs over <i>Ptilotus obovatus</i> and <i>Eremophila galeata</i> low open shrubland over <i>Aristida contorta</i> scattered tussock grasses.</p> <p><b>Associated species:</b> <i>Alectryon oleifolius</i>, <i>Boerhavia</i> sp., <i>Dactyloctenium radulans</i>, <i>Enchylaena tomentosa</i>, <i>Enteropogon ramosus</i>, <i>Eragrostis dielsii</i>, <i>Eragrostis tenellula</i>, <i>Eremophila flabellata</i>, <i>Rhagodia eremaea</i>, <i>Senna artemisioides</i> subsp. x <i>sturtii</i> and <i>Solanum lasiophyllum</i></p> | MW08     | Good                 | 1.0 (0.1)                                       |  <p>Plate 21: D1 Vegetation type.</p> |



| Vegetation type code and description   | Sites(s)                  | Vegetation condition | Total area (ha) (proportion of survey area (%)) | Representative photographs   |
|--|---------------------------|----------------------|---|--|
| <p><b>D3:</b> <i>Acacia craspedocarpa</i>, <i>Acacia tetragonophylla</i> and/or <i>Acacia ?incurvaneura</i> x <i>mulganeura</i> tall shrubland to tall open scrub over <i>Eremophila galeata</i> or <i>Eremophila ?forrestii</i> scattered shrubs over occasional <i>Ptilotus obovatus</i> low open shrubland.</p> <p><b>Associated species:</b> <i>Abutilon cryptopetalum</i>, <i>Aristida contorta</i>, <i>Duperreya commixta</i>, <i>Psyrax suaveolens</i>, <i>Rhagodia eremaea</i>, <i>Sida fibulifera</i> and <i>Solanum lasiophyllum</i></p>   | MW11, MW14, MW19 and MW22 | Very Good - Good     | 85.3 (9.7)                                      |  <p>Plate 22: D3 Vegetation type.</p>   |
| <p><b>DD1:</b> <i>Maireana pyramidata</i> and <i>M. glomerifolia</i> open shrubland.</p> <p><b>Associated species:</b> <i>Atriplex codonocarpa</i>, <i>Calandrinia Ptychosperma</i>, <i>Calotis plumulifera</i>, <i>Dissocarpus paradoxus</i>, <i>Gunniopsis septifraga</i>, <i>Lemooria burkittii</i>, <i>Lepidium oxytrichum</i>, <i>Maireana appressa</i>, <i>M. eriosphaera</i>, <i>M. triptera</i>, <i>Plantago</i> sp. Mt Magnet (A.S. George 6793), <i>Podolepis capillaris</i>, <i>Pogonolepis muelleriana</i>, <i>Ptilotus obovatus</i>, <i>Scaevola spinescens</i>, <i>Sclerolaena cuneata</i>, <i>Sclerolaena densiflora</i>, <i>Sclerolaena eriacantha</i>, <i>Senna artemisioides</i> subsp. <i>helmsii</i>, <i>Senna artemisioides</i> subsp. <i>petiolaris</i>, <i>Velleia rosea</i>, <i>Vittadinia eremaea</i></p> | MW28                      | Very Good - Good     | 0.7 (0.1)                                       |  <p>Plate 23: DD1 Vegetation type.</p> |
| Cleared  | N/A                       | N/A                  | 1.7 (0.2)                                       | N/A  |

#### 4.3.1.1 Conservation Significant Vegetation

No TECs were recorded in the survey area. The DBCA mapped buffer of the *Trillbar Land System* intersects the survey area at GNH 660 SLK. No evidence of snakewood and mulga dominated vegetation and gilgaied drainage were recorded within the PEC buffer. Vegetation type P15 (outside of the buffer area) was dominated by snakewood and mulga, but lacked a samphire and pronounced gilgaied drainage foci typical of the *Trillbar Land System* PEC. (Figure A.1; Appendix A).

The *Lake Austin vegetation complexes banded ironstone formation (BIF)* PEC is based on the underlying Banded Ironstone Formation geology of Lake Austin. There is little to no range manifestation associated with the formation (Department of Environment and Conservation 2007). Some small manifestations were noted in site GNH 593 SLK but the vegetation composition did not change significantly from surrounding areas. An additional species restricted to the BIF outcrops was recorded; *Micromyrtus sulphurea*. The Threatened Communities Branch of DBCA were contacted for advice; however, as this PEC has not been fully investigated by the DBCA they were unable to provide further information to assist in interpretation of vegetation in this area.

No other vegetation considered as 'significant' in the EPA Environmental Factor Guideline for Flora and Vegetation was identified in the survey area (Environmental Protection Authority 2016a). The remaining vegetation recorded in the survey area is considered widespread and representative of the vegetation expected on comparable landforms in the broader region (Cowan 2001) (Desmond, Cowan, and Chant 2001).

#### 4.3.1.2 Vegetation Condition

The survey area is approximately 876.4 ha of which 874.7 ha represents native vegetation and was assessed for condition. Vegetation condition ranged from 'Very Good' to 'Poor' with most of the vegetation being in 'Very Good' condition, comprising 744.6 ha (85.1%) of the survey area. Approximately 1.7 ha of the survey area has been mapped as 'highly disturbed' (cleared) and includes areas of cleared tracks and historical borrow pits (Figure I; Appendix I). As per Main Roads request, 'highly disturbed' areas have been excluded from vegetation condition area calculations presented in Table 11.

Table 11: Vegetation condition recorded in the survey area.

| Vegetation Condition | Area (ha) | Percentage of Total Native Vegetation in the Survey Area (%) |
|----------------------|-----------|--|
| Very Good            | 744.6     | 85.1   |
| Good                 | 117.3     | 13.4   |
| Poor                 | 12.8      | 1.5  |

#### 4.3.2 Flora

A total of 184 confirmed vascular flora species, representing 39 families and 97 genera, were identified within the survey area. The Fabaceae family had the highest species richness, with 28 species recorded. *Acacia* and *Eremophila* were the dominant genera (Table 12). None of the recorded flora are considered an extension beyond their currently documented range (Western Australian Herbarium 1998-2018). Forty one specimens were unable to be identified to species due to plant immaturity or an absence of diagnostic material.

A flora species list and a site by species matrix are provided in Appendix J and detailed site data, including photographs, are provided in Appendix K.

Table 12: Taxa most frequently recorded in the survey area.

| Family            | Number of species |
|-------------------|-------------------|
| Fabaceae          | 28                |
| Asteraceae        | 23                |
| Chenopodiaceae    | 21                |
| Genus             | Number of species |
| <i>Acacia</i>     | 20                |
| <i>Eremophila</i> | 14                |
| <i>Maireana</i>   | 10                |

#### 4.3.2.1 Conservation Significant Flora

No State or Commonwealth listed threatened flora were recorded within the survey area. One P3 species, *Drummondita miniata* was located within the P2 vegetation type within the GNH 764 SLK survey area. It was identified at six locations and 68 individuals were recorded (Table L.1 and L.2, Appendix L). Locations of *D. miniata* P3 are presented in Figure E (Appendix E).

No other species considered as ‘significant’ in the EPA Environmental Factor Guideline for Flora and Vegetation were identified in the survey area (Environmental Protection Authority 2016a).

Following the survey, and with greater understanding of the landforms, soils and habitats of the survey area, three priority flora species, were considered to have the potential to occur:

- *Angianthus microcephalus* P2 in sandy or clayey soils in association with salt swamps, gilgai and seasonally wet areas within the Cue Wondinong 7.1 SLK and GNH 593 SLK survey areas.
- *Goodenia berringbinensis* P4 in red sandy loam in association with watercourses within the GNH 660 SLK and Cue Wondinong 7.1 SLK survey areas
- *Goodenia neogoodenia* P4 in red loam or clay in association with plains, clay plains and drainage lines within the GNH 523 SLK survey area.
- The three potential species are all annuals or short-lived annual or perennial and are likely to have senesced due to the below average rainfall in the three months prior to the survey (Table G.1; Appendix G).

#### 4.3.2.2 Introduced Flora

Six introduced flora species were recorded within the survey area; *\*Citrullus colocynthis*, *\*Cuscuta epithymum* (Lesser Dodder), *\*Lysimachia arvensis* (Pimpernel), *\*Sisymbrium ?irio* (London Rocket), *\*Spergula pentandra* (Five Anther Spurry) and *\*Sonchus sp.* None are listed as a WoNS or as declared pest plants in Western Australia. A single individual of each weed species was recorded within the survey area with the exception of *\*Spergula pentandra* which was recorded twice within the survey area with an abundance of one individual at each point. The majority of weed species are associated with drainage areas within site GNH 593 SLK. Photographs, a description and the locations of all weeds within the survey areas are presented in Tables M.1 and M.2 (Appendix M) and mapped in Figure I (Appendix I). A map of survey effort, showing all traverses walked is presented in Figure N (Appendix N).





## 4.4 Terrestrial Vertebrate Fauna Survey



### 4.4.1 Fauna Habitat

A total of eight broad fauna habitats, based on the vegetation types and landforms present, were recorded in the survey areas. Each habitat type is detailed in Table 13 and mapped in Figure F (Appendix F).


Fauna habitat condition ranged from 'very good' to 'highly degraded' according to the condition rating scale of Thompson and Thompson (2010) (Table D.3, Appendix D). Historic vegetation clearing for tracks and occasional historic borrow pits is evident across all sites except site GNH 523 SLK. Other impacts include weeds and grazing from introduced mammals across the survey area.



Table 13: Broad fauna habitat types recorded in the survey area.

| Habitat type                   | Extent in survey area (proportion) | Habitat description   | Habitat condition              | Representative photos   |
|--------------------------------|------------------------------------|---|--------------------------------|---|
| Rocky Plains                   | 624 ha (71.2%)                     | Characterised by low shrubs to mid/tall <i>Acacia</i> spp. (occasionally Mulga complex) on rocky plain or stony mantle. This habitat contained moderate to low understory vegetation and leaf litter suitable as sheltering or foraging resources. The woodlands provide nesting and shelter habitats for birds and rocky substrate contained microhabitats such as crevices. The soils were generally stony and compact, reducing potential opportunities for burrowing species. | Very Good; grazing and tracks  |  <p>Plate 24: Rocky plains habitat.</p>                    |
| Mulga Woodland on Sandy Plains | 236 ha (26.9%)                     | Mulga spp. woodland over grasses and herbs. Microhabitat include sandy substrate providing burrowing potential for ground dwelling burrowing species and leaf litter suitable for sheltering and foraging purposes.   | Very Good; grazing and tracks. |  <p>Plate 25: Mulga Woodland on sandy plains habitat.</p> |

| Habitat type                            | Extent in survey area (proportion) | Habitat description   | Habitat condition   | Representative photos  |
|---|------------------------------------|---|---|--|
| Minor Drainage Line with Mulga          | 7 ha (0.8%)                        | Habitat is characterised by vegetation communities dominated by Mulga ( <i>Acacia aneura</i> complex) on sandy soil. The open to moderately dense woodlands consisted of an understory composed of sparse tussock grasses provide habitat for small birds, reptiles and mammals. Substrate of sandy soil with a stony mantle providing burrowing potential for ground dwelling burrowing species.   | Very Good; grazing, tracks and weeds                      |  <p>Plate 26: Minor Drainage Line with Mulga habitat.</p>           |
| Scattered Tall Shrubs on Cracking Clays | 3 ha (0.4%)                        | This habitat was generally considered to be of low habitat value for conservation significant species, as they generally do not support many of these species and these habitats were in a degraded condition. This low lying flat area would be regularly inundated during the wetter parts of the year after high periods of rainfall. During significant rainfall events the area would have the potential to provide opportunities for burrowing/cocooning frog species that aestivate underground and emerge after significant rainfall. | Disturbed-Good; impacts from cattle grazing and trampling |  <p>Plate 27: Scattered Tall shrubs on Cracking Clays habitat.</p> |



| Habitat type                 | Extent in survey area (proportion) | Habitat description  | Habitat condition                              | Representative photos   |
|------------------------------|------------------------------------|--|--|---|
| Breakaway and BIF Rock Piles | 4 ha (0.4%)                        | This habitat is characterized by small (approximately 4-5 m) breakaways and small BIF rock piles. Microhabitats such as crevices, overhangs and shallow caves that provide shelter opportunities for MNES species. | High Quality -Very Good; low levels of grazing |  <p>Plate 28: Breakaway and BIF Rock Piles habitat.</p> |

| Habitat type   | Extent in survey area (proportion) | Habitat description  | Habitat condition                | Representative photos  |
|----------------|------------------------------------|--|----------------------------------|--|
| Samphire Plain | 1 ha (0.1%)                        | Characterised by <i>Maireana</i> spp. providing foraging potential for some bird species. The micro-niche availability is low as there is minimal vegetation cover and the understory lacks any leaf litter. The sandy clay soils would potentially provide minimal opportunities for burrowing species. | Very Good; low levels of grazing |  <p>Plate 29: Samphire Plain habitat.</p> |
| Calcrete Flat  | 0.3 ha (<0.1%)                     | <i>Salsola australis</i> over scattered herbs on a calcreted flat. This habitat contained little vegetation and no leaf litter suitable as sheltering or foraging resources. Microhabitats include sandy substrate providing burrowing potential for ground dwelling burrowing species.                  | Very Good; low levels of grazing |  <p>Plate 30: Calcrete Flat habitat.</p> |

| Habitat type | Extent in survey area (proportion) | Habitat description   | Habitat condition | Representative photos |
|--------------|------------------------------------|---|-------------------|-----------------------|
| Cleared      | 1.7 ha (0.2%)                      | Areas of disturbed vegetation where the natural vegetation has been cleared, offering little in the way of fauna habitat. | Highly degraded.  | N/A                   |

#### 4.4.2 Fauna Species

Forty-one vertebrate species were opportunistically recorded in the survey area (Table 14). These comprised two species of reptile, 33 species of bird and six species of mammal (including four introduced species).

Table 14: Terrestrial fauna species recorded opportunistically during the survey.

| Common name               | Scientific name                   | Record type         |
|---------------------------|-----------------------------------|---------------------|
| <b>Reptiles</b>           |                                   |                     |
| Gould's monitor           | <i>Varanus gouldii</i>            | Individual          |
| Central military dragon   | <i>Ctenophorus isolepis</i>       | Individual/s        |
| <b>Birds</b>              |                                   |                     |
| Emu                       | <i>Dromaius novaehollandiae</i>   | Individual/s        |
| Wedge-tailed eagle        | <i>Aquila audax</i>               | Individual/s        |
| Whistling kite            | <i>Haliastur sphenurus</i>        | Individual/s        |
| Crested pigeon            | <i>Ocyphaps lophotes</i>          | Individual/s        |
| Australian kestrel        | <i>Falco cenchroides</i>          | Individual/s        |
| Galah                     | <i>Cacatua roseicapilla</i>       | Individual/s        |
| Mulga parrot              | <i>Platycercus varius</i>         | Individual/s        |
| White-winged fairy-wren   | <i>Malurus leucopterus</i>        | Individual/s, calls |
| Brown honeyeater          | <i>Lichmera indistincta</i>       | Individual/s, calls |
| Crimson chat              | <i>Epthianura tricolor</i>        | Individual/s, calls |
| Spiny-cheeked honeyeater  | <i>Acanthagenys rufogularis</i>   | Individual/s, calls |
| Yellow-throated miner     | <i>Manorina flavigula</i>         | Individual/s, calls |
| Singing honeyeater        | <i>Gavicalis virescens</i>        | Individual/s, calls |
| Yellow-plumed honeyeater  | <i>Ptilotula ornata</i>           | Individual/s, calls |
| Western thornbill         | <i>Acanthiza inornata</i>         | Individual/s, calls |
| Slaty-backed thornbill    | <i>Acanthiza robustirostris</i>   | Individual/s, calls |
| Chestnut-rumped thornbill | <i>Acanthiza uropygialis</i>      | Individual/s, calls |
| Southern whiteface        | <i>Aphelocephala leucopsis</i>    | Individual          |
| Grey-crowned babbler      | <i>Pomatostomus temporalis</i>    | Individual/s, calls |
| White-browed babbler      | <i>Pomatostomus superciliosus</i> | Individual/s, calls |
| Western quail-thrush      | <i>Cinclosoma marginatum</i>      | Individual/s, calls |
| Masked woodswallow        | <i>Artamus personatus</i>         | Individual/s        |
| Pied butcherbird          | <i>Cracticus nigrogularis</i>     | Individual          |
| Black-faced cuckoo-shrike | <i>Coracina novaehollandiae</i>   | Individual/s        |
| Crested bellbird          | <i>Oreoica gutturalis</i>         | Individual, calls   |
| Rufous whistler           | <i>Pachycephala rufiventris</i>   | Individual          |
| Grey shrike-thrush        | <i>Colluricincla harmonica</i>    | Individual          |
| Willie wagtail            | <i>Rhipidura leucophrys</i>       | Individual/s, calls |
| Torresian crow            | <i>Corvus orru</i>                | Individual/s, calls |
| Hooded robin              | <i>Melanodryas cucullata</i>      | Individual/s        |

| Common name         | Scientific name              | Record type         |
|---------------------|------------------------------|---------------------|
| Jacky winter        | <i>Microeca fascians</i>     | Individual/s        |
| Red-capped robin    | <i>Petroica goodenovii</i>   | Individual/s        |
| Zebra finch         | <i>Taeniopygia guttata</i>   | Individual/s, calls |
| <b>Mammals</b>      |                              |                     |
| Euro, biggada       | <i>Osphranter robustus</i>   | Individual/s        |
| Red kangaroo, marlu | <i>Osphranter rufus</i>      | Individual, scats   |
| Rabbit*             | <i>Oryctolagus cuniculus</i> | Scats, tracks       |
| Dog/dingo*          | <i>Canis familiaris</i>      | Scats               |
| Goat *              | <i>Capra hircus</i>          | Tracks              |
| European cattle*    | <i>Bos taurus</i>            | Individual/s        |

\*Naturalised exotic species

#### 4.4.2.1 Conservation Significant Fauna

No species of conservation significance were recorded within the survey area. No conservation significant fauna species were considered to have a high likelihood of occurrence within the survey area.

Thirteen conservation significant fauna species were considered to have a moderate likelihood of occurrence within the survey area:

##### Meekatharra slider (*Lerista eupoda*)

The Meekatharra slider is listed as Priority 1 on the DBCA priority listing. This species has a restricted habitat to the south of Meekatharra in Weld Range and near Lake Annean (Department of Biodiversity, Conservation, and Attractions 2018c; Atlas of Living Australia 2018). The preferred habitat of the Meekatharra slider is on open mulga on red loams and sandy loam plains (Cogger 2014; Wilson and Swan 2010). This species was described in 1996 (Smith 1996) and relatively little is known about its ecology. There are nine records of the Meekatharra slider within 6 km from GNH 660 SLK survey area and 11 km from the Cue Wondinong 7.1 SLK survey area (Department of Biodiversity, Conservation, and Attractions 2018c). Suitable habitat of Mulga Woodland on Sandy Plains and Samphire Plain habitats are only found within the GNH 770 SLK, GNH 764 SLK and GNH 523 SLK survey areas, which are 50 to 100 km from the known records; therefore, this species is only considered a moderate likelihood of occurring. Given this species is a small fossorial skink, it would have been unlikely to be recorded during a Level 1 fauna assessment.

##### Malleefowl (*Leipoa ocellata*)

The malleefowl is listed as Vulnerable under the EPBC Act and Vulnerable under the BC Act. Largely confined to arid and semi-arid woodland that is dominated by mallee eucalypts on sandy soils with less than 430 mm of rainfall annually (Johnstone and Storr 1998). The malleefowl has been previously recorded approximately 5 km (no date recorded on the observation) from the Cue Wondinong 7.1 SLK survey area and in 2016, 18 km from the GNH 593 SLK survey area (Department of Biodiversity, Conservation, and Attractions 2018c). However, suitable habitat of Mulga Woodland on Sandy Plains and Minor Drainage Line with Mulga habitat occur only within the GNH 770 SLK, GNH 764 SLK and GNH 523 SLK survey areas, which are located over 40 km from known records. The survey area is also on the edge of the known distribution for this species. No individuals or the characteristic nest mounds from this species were recorded in the survey area.



### Shorebird species

The following nine shorebird species were considered to have a moderate likelihood of occurring within the survey area because of previous records, mainly due to the presence of Lake Austin 2.7km from the nearest survey area and potentially suitable habitat within the survey area:

- bar-tailed godwit (*Limosa lapponica*) - listed as Migratory (IA) under the EPBC and BC Act
- marsh sandpiper (*Tringa stagnatilis*) - listed as Migratory (IA) under the EPBC and BC Act
- common greenshank (*Tringa nebularia*) - listed as Migratory (IA) under the EPBC and BC Act
- wood sandpiper (*Tringa glareola*) - listed as Migratory (IA) under the EPBC and BC Act
- common sandpiper (*Tringa hypoleucos*) - listed as Migratory (IA) under the EPBC and BC Act
- red-necked stint (*Calidris ruficollis*) - Listed as Migratory (IA) under the BC Act
- pectoral sandpiper (*Calidris melanotos*) - listed as Migratory (IA) under the EPBC and BC Act
- sharp-tailed sandpiper (*Calidris acuminata*) - listed as Migratory (IA) under the EPBC and BC Act
- curlew sandpiper (*Calidris ferruginea*) - listed as Critically Endangered and Migratory (IA) under the EPBC Act and Vulnerable and Migratory (IA) under the BC Act

Their preferred habitat is associated with water sources, which may include estuaries, beaches, near coastal salt lakes, swamps, lakes, fresh/brackish wetlands, sewerage ponds, bore overflows and irrigated areas. These species may be present within the Scattered Tall Shrubs on Cracking Clays habitat, when seasonally inundated after significant rainfall. This habitat is found within the GNH 764 SLK and GNH 593 SLK survey areas.

### Peregrine falcon (*Falco peregrinus*)

The Peregrine Falcon is listed as Other Specially Protected fauna under the BC Act. It is uncommon, although widespread throughout much of Australia excluding the extremely dry areas and has a wide and patchy distribution. It shows habitat preference for areas near cliffs along coastlines, rivers and ranges and within woodlands along watercourses and around lakes (Johnstone and Storr 1998). It is cosmopolitan and will hunt in any habitat, soaring at height or from a perch.

There are seven records of this species between 1994 and 2013 within the vicinity of the survey area, the closest being 7.5 km from the GNH 660 SLK survey area. This species has the potential to be found foraging at all habitats within the survey area.

### Long-tailed dunnart (*Sminthopsis longicaudata*)

The long-tailed dunnart is listed as P4 on the DBCA priority listing. In Western Australia it is known from the Pilbara and eastern coast to the NE goldfields and Gibson desert (Young Ranges) south to the Nullarbor Plain (Burbidge, McKenzie, and Fuller 2008). Its habitat includes rocky scree and plateau areas, generally with little vegetation or in areas of spinifex hummock grassland, shrubs and open woodland. There is one record of this species from 1981 within 16 km of the GNH 764 SLK survey area (Department of Biodiversity, Conservation, and Attractions 2018c). This species may potentially be found within the Rocky Plains habitat found within all survey areas and the Breakaway and BIF Rock Piles habitats found within the GNH 764 SLK and GNH 593 survey areas.

## 5 Conclusions

### 5.1 Flora and Vegetation

The survey area includes 874.7 ha of native vegetation. Approximately 1.7 ha (0.2%) of the survey area has been mapped as 'cleared' and includes areas of existing tracks and borrow pits. Weeds and historical clearing were the main disturbances noted. Vegetation condition ranged between 'Very Good' to 'Poor' with the majority (85.1%) recorded as 'Very Good'.

Twenty three vegetation units were described and mapped in the survey area. No TECs were recorded in the survey area. The buffer of two PECs intersects the survey area; *Trillbar Land System* and *Lake Austin vegetation complexes banded ironstone formation (BIF)* PEC. None of the vegetation types recorded within the survey area were considered representative of the *Trillbar Land System* PEC.

Due to limited information on the vegetation of the *Lake Austin vegetation complexes BIF* PEC it is difficult to assess the presence or extent, and therefore potential impact, if any, on the PEC in the survey area. Some small BIF manifestations were noted in site GNH 593 SLK however the vegetation composition did not change significantly from surrounding areas.

No flora species listed as threatened under the EPBC Act were recorded. One priority species, *Drummondita miniata* P3 was recorded within site GNH 764 SLK and associated with the P2 vegetation type. Following the survey three priority flora species were considered to have potential to occur but were not recorded: *Angianthus microcephalus* P2, *Goodenia berringbinensis* P4 and *Goodenia neogoodenia* P4. There is potential for *Angianthus microcephalus* P2 to occur in the gilgied soils and/ or drainage depressions that were observed within the Cue Wondinong 7.1 SLK and GNH 593 SLK survey areas. *Goodenia berringbinensis* P4 may occur in association with seasonally wet drainage lines within the GNH 660 SLK and Cue Wondinong 7.1 SLK survey areas, and there is potential for *Goodenia neogoodenia* P4 to occur within the plains/drainage depression identified within the GNH 523 SLK survey area. These three species are either annual or short-lived perennial taxa that may not have been present due to below average rainfall received in the winter months (June to August 2018) preceding the spring survey, or may have been difficult to detect, at the time of the survey.

Weed species diversity was considered low with six weed species recorded. None are listed as a WoNS or as declared pest plants in Western Australia. Abundance was considered low with a single specimen of each species recorded with the exception of *\*Spergula pentandra*, which was recorded twice with a single specimen at each point

### 5.2 Terrestrial Vertebrate Fauna

Fauna habitats within the survey area were not restricted within a local or regional level. On a local scale the Breakaway and BIF Rock Piles habitat is an uncommon geological unit but does not support any conservation significant fauna species. The habitats of the survey area have been impacted heavily by grazing from introduced mammals, evident by tracks, scats and a lack of understory in most habitat types. Other impacts included weeds, historic vegetation clearing for tracks and borrow pits.

No species of conservation significance were recorded or were considered a high likelihood of occurring within the survey area. Thirteen conservation significant fauna species were rated as having a 'moderate' likelihood of occurring in the survey area; Meekatharra slider (*L. eupoda*), malleefowl (*L. ocellata*), bar-tailed godwit (*L. lapponica*), marsh sandpiper (*T. stagnatilis*), common

greenshank (*T. nebularia*), wood sandpiper (*T. glareola*), common sandpiper (*T. hypoleucos*), red-necked stint (*C. ruficollis*), pectoral sandpiper (*C. melanotos*), sharp-tailed sandpiper (*C. acuminata*), curlew sandpiper (*C. ferruginea*), peregrine falcon (*F. peregrinus*) and long-tailed dunnart (*S. longicaudata*).

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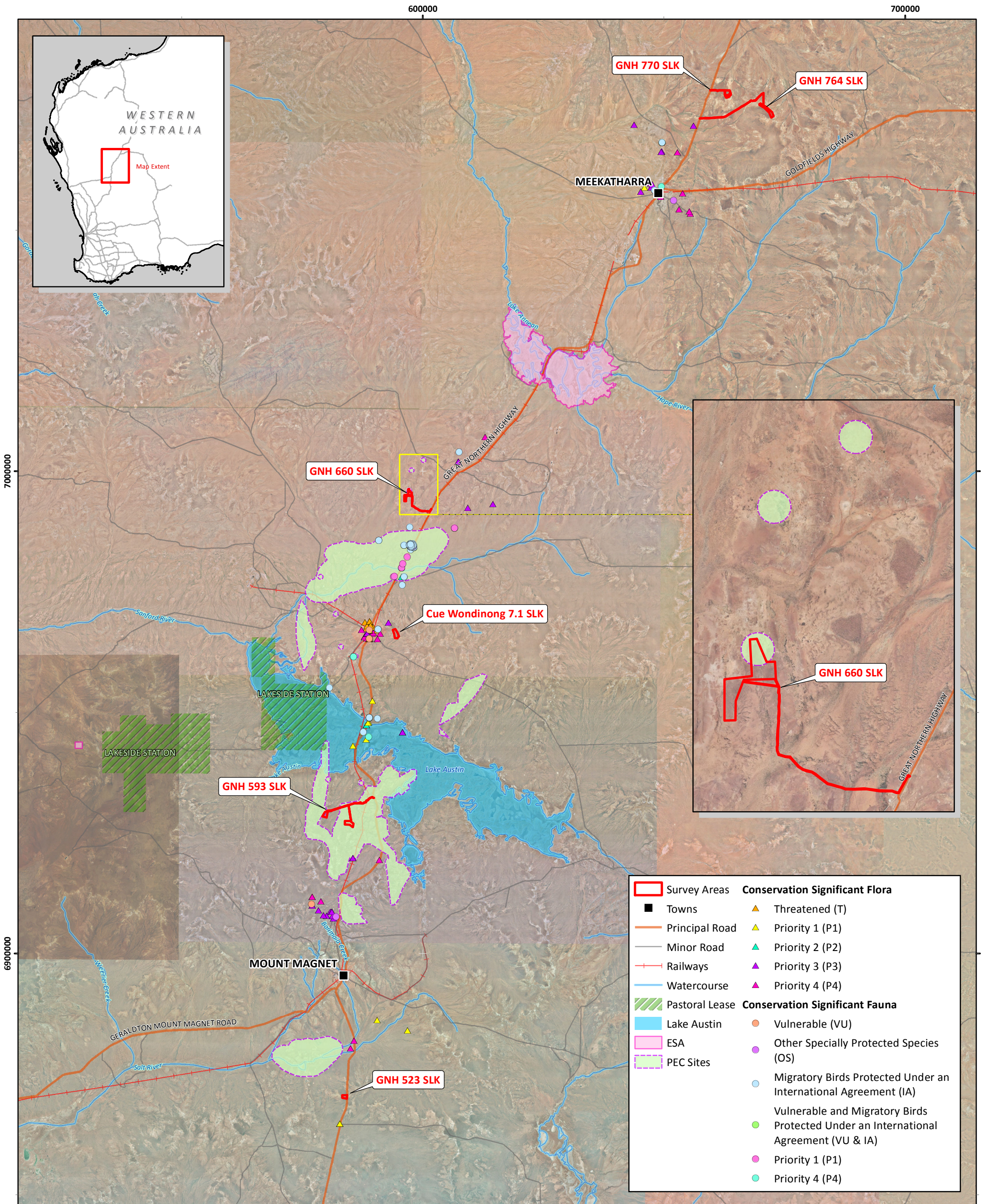
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## **Appendix A: Environmental Constraints Mapping**

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Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure A.1: Environmental constraints**

Author: L. Dadour

Date: 28-05-2019

Drawn: C. Dyde

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Env\_FigA1

Coordinate System: GDA 1994 MGA Zone 50  
0 10 20 30 Km





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## **Appendix B: Conservation Categories for Flora, Fauna and Ecological Communities, and Categories for Introduced Flora**

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Table B.1: Categories and definitions for threatened flora and fauna species listed under the *Environment Protection and Biodiversity Conservation Act 1999*.

| Conservation category              | Definition   |
|------------------------------------|--|
| <b>Extinct</b>                     | Taxa with no reasonable doubt that the last member of the species has died.  |
| <b>Extinct in the wild</b>         | Taxa known to survive only in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriated seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.  |
| <b>Critically endangered (CR)</b>  | Taxa facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.  |
| <b>Endangered (E)</b>              | Taxa are not critically endangered; and are facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.  |
| <b>Vulnerable (V)</b>              | Taxa are not critically endangered or endangered; and are facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.  |
| <b>Conservation dependent (CD)</b> | <p>Taxa are the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or the following subparagraphs are satisfied:</p> <ul style="list-style-type: none"> <li>i) the taxa is a species of fish;</li> <li>ii) the taxa is the focus of a management plan that provides management actions necessary to stop the decline of, and support the recovery of, the taxa so that its chances of long term survival in nature are maximised;</li> <li>iii) the management plan is in force under a law of the Commonwealth or of a State or Territory;</li> <li>iv) cessation of the management plan would adversely affect the conservation status of the taxa</li> </ul> <p>Fish includes all taxa of bony fish, sharks, rays, crustaceans, molluscs and other marine organisms, but does not include marine mammals/reptiles.</p> |
| <b>Migratory (Mi)</b>              | <p>Taxa are considered migratory species;</p> <ul style="list-style-type: none"> <li>i) if they are native to Australia and are included in the appendices to the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals Appendices I and II);</li> <li>ii) all migratory species included in annexes established under the Japan-Australia Migratory Bird Agreement (JAMBA) and the China-Australia Migratory Bird Agreement (CAMBA); and</li> <li>iii) Are native, migratory species identified in a list established under, or an instrument made under, an international agreement approved by the Minister, such as the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA).</li> </ul>  |

Note: CD and Mi are only related to conservation significant fauna

Table B.2: Definitions and criteria for threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999*.

| Categories of ecological communities |   |
|--------------------------------------|---|
| <b>Critically endangered</b>         | If, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.  |
| <b>Endangered</b>                    | If, at that time, it is not critically endangered and is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.                  |
| <b>Vulnerable</b>                    | If, at that time, it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria. |

Table B.3: Categories of threatened ecological communities (Department of Environment and Conservation 2013).

| PD: Presumed Totally Destroyed   |
|--|
| <p>An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.</p> <p>An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant <b>and either</b> of the following applies ( A or B):</p> <p>A) Records within the last 50 years have not been confirmed despite thorough searches of known or likely habitats <b>or</b></p> <p>B) All occurrences recorded within the last 50 years have since been destroyed.</p>  |
| CR : Critically Endangered   |
| <p>An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.</p> <p>An ecological community will be listed as <b>Critically Endangered</b> when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting <b>any one or more of</b> the following criteria (A, B or C):</p> <p>A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% <b>and either or both</b> of the following apply (i or ii):</p> <p>i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 10 years);</p> <p>ii) modification throughout its range is continuing such that in the immediate future (within approximately 10 years) the community is unlikely to be capable of being substantially rehabilitated.</p> <p>B) Current distribution is limited, <b>and one or more</b> of the following apply (i, ii or iii):</p> <p>i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 10 years);</p> <p>ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;</p> <p>iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.</p> <p>C) The ecological community exists only as highly modified occurrences that may be capable of being rehabilitated if such work begins in the immediate future (within approximately 10 years).</p> |



**En: Endangered**

An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.

An ecological community will be listed as **Endangered** when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information by it meeting **any one or more** of the following criteria (A, B, or C):

A) The geographic range, and/or total area occupied, and/or number of discrete occurrences have been reduced by at least 70% since European settlement **and either or both** of the following apply (i or ii):

i) the estimated geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term future (within approximately 20 years);

ii) modification throughout its range is continuing such that in the short term future (within approximately 20 years) the community is unlikely to be capable of being substantially restored or rehabilitated.

B) Current distribution is limited, **and one or more** of the following apply (i, ii or iii):

i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 20 years);

ii) there are few occurrences, each of which is small and/or isolated and all or most occurrences are very vulnerable to known threatening processes;

iii) there may be many occurrences but total area is small and all or most occurrences are small and/or isolated and very vulnerable to known threatening processes.

C) The ecological community exists only as very modified occurrences that may be capable of being substantially restored or rehabilitated if such work begins in the short-term future (within approximately 20 years).

**VU: Vulnerable**

An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

An ecological community will be listed as **Vulnerable** when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction or significant modification in the medium to long-term future. This will be determined on the basis of the best available information by it meeting **any one or more of** the following criteria (A, B or C):

A) The ecological community exists largely as modified occurrences that are likely to be capable of being substantially restored or rehabilitated.

B) The ecological community may already be modified and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.

C) The ecological community may be still widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

Possible Threatened Ecological Communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community Lists under Priorities 1, 2 and 3. Ecological communities that are adequately known, and are rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list, are placed in Priority 4. These ecological communities require regular monitoring. Conservation Dependent ecological communities are placed in Priority 5 (Table B.4).

**Table B.4: Definitions and criteria for priority ecological communities (Department of Environment and Conservation 2013)**

|   |
|---|
| <b>P1: Priority One – Poorly-known ecological communities</b>   |
| Ecological communities that are known from very few occurrences with a very restricted distribution (generally $\leq 5$ occurrences or a total area of $\leq 100\text{ha}$ ). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.  |
| <b>P2: Priority Two – Poorly-known ecological communities</b>   |
| Communities that are known from few occurrences with a restricted distribution (generally $\leq 10$ occurrences or a total area of $\leq 200\text{ha}$ ). At least some occurrences are not believed to be under immediate threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.   |
| <b>P3: Priority Three – Poorly-known ecological communities</b>   |
| <p>(i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:</p> <p>(ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;</p> <p>(iii) communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.</p> <p>Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.</p>           |
| <b>P4: Priority Four</b>  |
| <p>Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.</p> <p>(i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.</p> <p>(ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.</p> <p>(iii) Ecological communities that have been removed from the list of threatened communities during the past five years.</p> |
| <b>P5: Priority Five – Conservation dependent ecological communities</b>  |
| Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.  |

Table B.5: Conservation codes for threatened Western Australian flora and fauna under the *Biodiversity Conservation Act 2016* (Department of Biodiversity, Conservation, and Attractions 2019).

| Conservation category   | Conservation category   | Definition  |
|---|---|---|
| <b>Critically endangered (CR)</b>   | Schedule 1 of the <i>Wildlife Conservation</i> .  | Taxa “facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines.”  |
| <b>Endangered (EN)</b>  | Schedule 2 of the <i>Wildlife Conservation</i> .  | Taxa “facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines.”   |
| <b>Vulnerable (VU)</b>  | Schedule 3 of the <i>Wildlife Conservation</i> .  | Taxa “facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines.”   |
| <b>Extinct (EX)</b>   | Schedule 4 of the <i>Wildlife Conservation</i> .  | “there is no reasonable doubt that the last member of the species has died.”  |
| <b>Extinct in the wild (EW)</b>   | Listing in accordance with Ministerial Guidelines (Section 25 of the BC Act)  | Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”.<br><br>Currently there are no threatened flora species listed as EW. If listing of a species as EW occurs, then a schedule will be added to the applicable notice. |
| <b>Migratory species (MI)</b>   | Listed as migratory birds protected under an international agreement under schedule 5 of the <i>Wildlife Conservation</i> | “Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth.”   |
| <b>Species of special conservation interest (conservation dependent fauna) (CD)</b> | Listed as conservation dependent fauna under schedule 6 of the <i>Wildlife Conservation</i>                               | “Species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened.”   |
| <b>Other specially protected species (OS)</b>                                       | Listed as other specially protected fauna under schedule 7 of the <i>Wildlife Conservation</i>                            | “Fauna otherwise in need of special protection to ensure their conservation.”   |

Note: MI, CD and OS are only related to conservation significant fauna

Taxa that have not yet been adequately surveyed to be listed under Schedule 1 or 2 are added to the Priority Flora and Priority Fauna Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as Threatened flora or fauna. Taxa that are adequately known, are rare but not threatened, or meet criteria for Near Threatened, or that have been recently removed from the threatened list for other than taxonomic reasons, are placed in Priority 4. These taxa require regular monitoring.

**Table B.6: Priority species codes for Western Australian flora (Department of Biodiversity, Conservation, and Attractions 2019)**

|  |
|--|
| <b>P1: Priority One – Poorly known taxa</b>  |
| Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.      |
| <b>P2: Priority Two – Poorly known taxa</b>  |
| Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.  |
| <b>P3: Priority Three – Poorly known taxa</b>  |
| Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.  |
| <b>P4: Priority Four: Rare, near threatened and other taxa in need of monitoring</b>   |
| <p>(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.</p> <p>(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.</p> <p>(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.</p> |

The management of introduced flora species in Western Australia is now regulated through the *Biosecurity and Agriculture Management Act 2007* (BAM Act). A list of declared pests, including 'pest' plants is provided under the BAM Act, which has been updated to incorporate a number of other Acts that are administered by Department of Agriculture and Food Western Australia (Department of Agriculture and Food Western Australia 2016). Declared pests can fall into two categories: one that relates to the prevention of introducing the species or eradicating it; and the other relates to managing the species and whether it can be kept (i.e. for scientific purposes, education or other purpose).

The threat and risk posed to site-specific biodiversity values, influences to rehabilitation success, primary production, infrastructure assets or human health will differ depending on the unique characteristics of each site and the associated land management practice or operation. Therefore site or project specific weed assessments and priorities should be reviewed for each project.

As per introduced flora species, the BAM Act seeks to establish a modern biosecurity regulatory scheme to prevent serious animal pests from entering the State and becoming established, and to minimise the spread and impact of any that are already present within the State. Declared animal pests fall into three categories as Gazetted under the *Biosecurity and Agriculture Management Regulations 2013*. These categories are outlined in Table B.7.

**Table B.7: Declared pests control categories as gazetted under the *Biosecurity and Agriculture Management Regulations 2013*.**

| Category                | Description   |
|-------------------------|---|
| <b>C1 (Exclusion)</b>   | Pests will be assigned to this category if they are not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.  |
| <b>C2 (Eradication)</b> | Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.  |
| <b>C3 (Management)</b>  | Pests will be assigned to this category if they are established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest. |

## **Appendix C: Database Search Results**



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# EPBC Act Protected Matters Report

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

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

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 28/05/19 11:06:00

[Summary](#)

[Details](#)

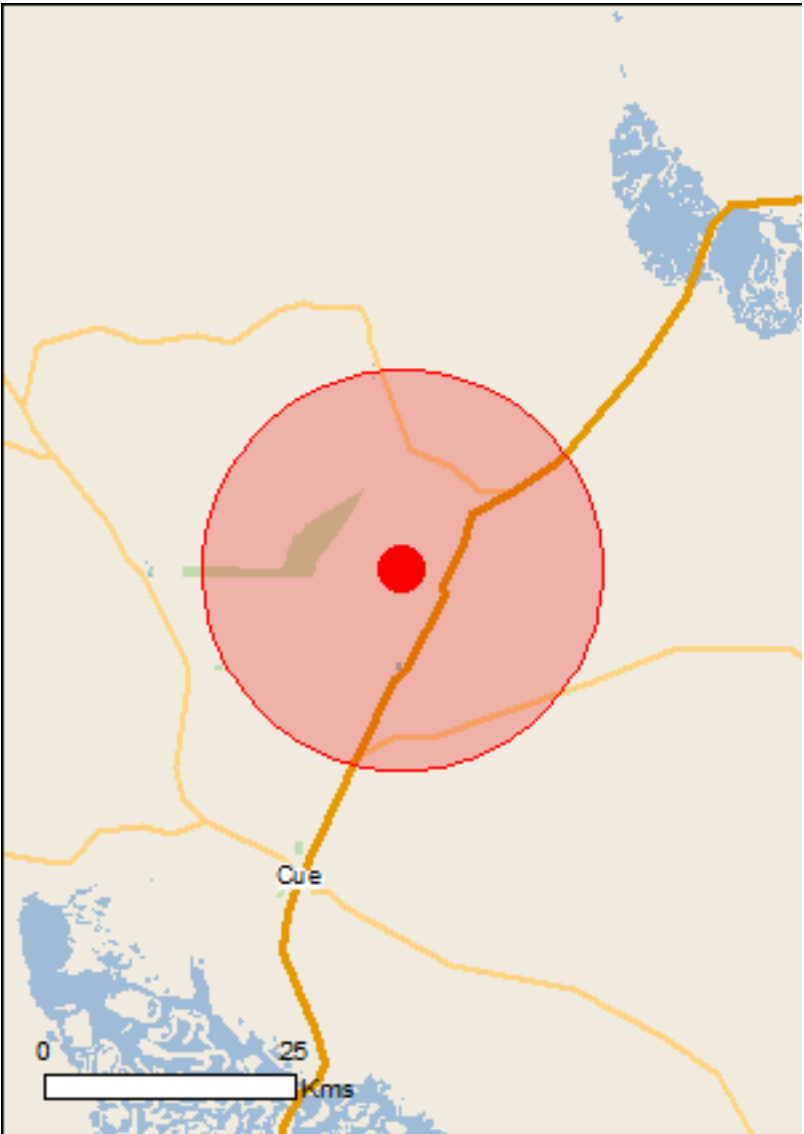
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

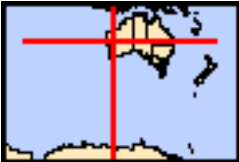
[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 20.0Km](#)



# Summary

## Matters of National Environmental Significance

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

|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                | None |
| <a href="#">National Heritage Places:</a>                 | None |
| <a href="#">Wetlands of International Importance:</a>     | None |
| <a href="#">Great Barrier Reef Marine Park:</a>           | None |
| <a href="#">Commonwealth Marine Area:</a>                 | None |
| <a href="#">Listed Threatened Ecological Communities:</a> | None |
| <a href="#">Listed Threatened Species:</a>                | 5    |
| <a href="#">Listed Migratory Species:</a>                 | 8    |

## Other Matters Protected by the EPBC Act

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

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

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

|  |      |
|--|------|
| <a href="#">Commonwealth Land:</a>                 | None |
| <a href="#">Commonwealth Heritage Places:</a>      | None |
| <a href="#">Listed Marine Species:</a>             | 11   |
| <a href="#">Whales and Other Cetaceans:</a>        | None |
| <a href="#">Critical Habitats:</a>                 | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a> | None |
| <a href="#">Australian Marine Parks:</a>           | None |

## Extra Information

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

|  |      |
|--|------|
| <a href="#">State and Territory Reserves:</a>    | None |
| <a href="#">Regional Forest Agreements:</a>      | None |
| <a href="#">Invasive Species:</a>                | 9    |
| <a href="#">Nationally Important Wetlands:</a>   | None |
| <a href="#">Key Ecological Features (Marine)</a> | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| Name   | Status                | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Leipoa ocellata</a><br>Malleefowl [934]  | Vulnerable            | Species or species habitat known to occur within area  |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]   | Endangered            | Species or species habitat may occur within area       |
| Other  |                       |  |
| <a href="#">Idiosoma nigrum</a><br>Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798] | Vulnerable            | Species or species habitat likely to occur within area |
| Plants   |                       |  |
| <a href="#">Eremophila rostrata</a><br>Beaked Eremophila [65124]                                       | Critically Endangered | Species or species habitat may occur within area       |

| Listed Migratory Species   |            | [ Resource Information ]                               |
|--|------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |            |  |
| Name   | Threatened | Type of Presence                                       |
| Migratory Marine Birds   |            |  |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]  |            | Species or species habitat likely to occur within area |
| Migratory Terrestrial Species  |            |  |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |            | Species or species habitat may occur within area       |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]  |            | Species or species habitat may occur within area       |
| Migratory Wetlands Species   |            |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |            | Species or species habitat known to occur within area  |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                               |            | Species or species habitat likely to occur within area |

| Name  | Threatened            | Type of Presence                                       |
|---|-----------------------|--|
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]           | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]          |                       | Species or species habitat may occur within area       |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832] |                       | Species or species habitat likely to occur within area |

### Other Matters Protected by the EPBC Act

| Listed Marine Species  | [ Resource Information ] |  |
|--|--------------------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |                          |  |
| Name   | Threatened               | Type of Presence                                       |
| Birds  |                          |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |                          | Species or species habitat known to occur within area  |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]  |                          | Species or species habitat likely to occur within area |
| <a href="#">Ardea alba</a><br>Great Egret, White Egret [59541]                                   |                          | Species or species habitat known to occur within area  |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                               |                          | Species or species habitat likely to occur within area |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                    | Critically Endangered    | Species or species habitat may occur within area       |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                                   |                          | Species or species habitat may occur within area       |
| <a href="#">Chrysococcyx osculans</a><br>Black-eared Cuckoo [705]                                |                          | Species or species habitat known to occur within area  |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]  |                          | Species or species habitat may occur within area       |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                          | Species or species habitat may occur within area       |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]  |                          | Species or species habitat may occur within area       |

| Name  | Threatened | Type of Presence                                       |
|---|------------|--|
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832] |            | Species or species habitat likely to occur within area |

### Extra Information

|                         |                                 |
|-------------------------|---------------------------------|
| <b>Invasive Species</b> | <b>[ Resource Information ]</b> |
|-------------------------|---------------------------------|

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

| Name   | Status | Type of Presence                                       |
|--|--------|--|
| <b>Birds</b>   |        |  |
| Columba livia<br>Rock Pigeon, Rock Dove, Domestic Pigeon [803]         |        | Species or species habitat likely to occur within area |
| Streptopelia senegalensis<br>Laughing Turtle-dove, Laughing Dove [781] |        | Species or species habitat likely to occur within area |
| <b>Mammals</b>   |        |  |
| Canis lupus familiaris<br>Domestic Dog [82654]                         |        | Species or species habitat likely to occur within area |
| Capra hircus<br>Goat [2]   |        | Species or species habitat likely to occur within area |
| Felis catus<br>Cat, House Cat, Domestic Cat [19]                       |        | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128]                 |        | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18]                                     |        | Species or species habitat likely to occur within area |
| <b>Plants</b>  |        |  |
| Carrichtera annua<br>Ward's Weed [9511]                                |        | Species or species habitat may occur within area       |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213]          |        | Species or species habitat may occur within area       |





# Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

## Coordinates

-27.18 117.98778

# Acknowledgements

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- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
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- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
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- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

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

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# EPBC Act Protected Matters Report

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

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

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 28/05/19 11:06:30

[Summary](#)

[Details](#)

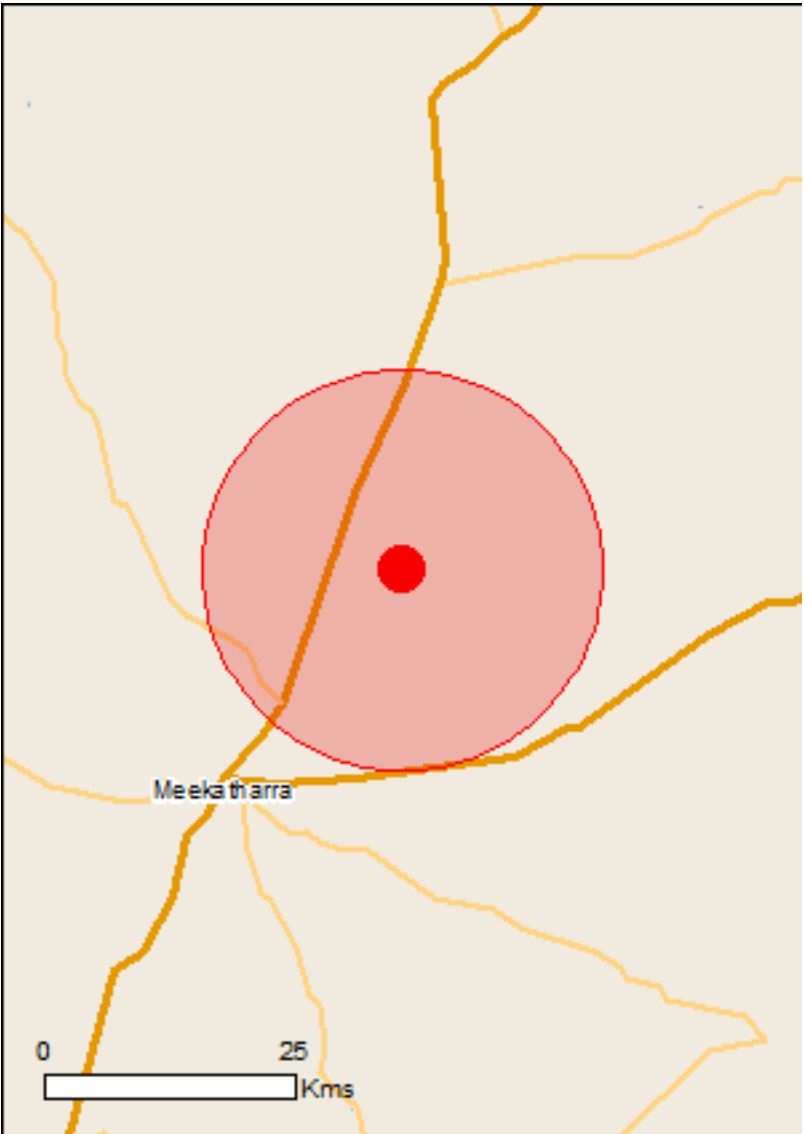
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 20.0Km](#)



# Summary

## Matters of National Environmental Significance

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

|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                | None |
| <a href="#">National Heritage Places:</a>                 | None |
| <a href="#">Wetlands of International Importance:</a>     | None |
| <a href="#">Great Barrier Reef Marine Park:</a>           | None |
| <a href="#">Commonwealth Marine Area:</a>                 | None |
| <a href="#">Listed Threatened Ecological Communities:</a> | None |
| <a href="#">Listed Threatened Species:</a>                | 4    |
| <a href="#">Listed Migratory Species:</a>                 | 7    |

## Other Matters Protected by the EPBC Act

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

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

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

|  |      |
|--|------|
| <a href="#">Commonwealth Land:</a>                 | None |
| <a href="#">Commonwealth Heritage Places:</a>      | None |
| <a href="#">Listed Marine Species:</a>             | 10   |
| <a href="#">Whales and Other Cetaceans:</a>        | None |
| <a href="#">Critical Habitats:</a>                 | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a> | None |
| <a href="#">Australian Marine Parks:</a>           | None |

## Extra Information

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

|  |      |
|--|------|
| <a href="#">State and Territory Reserves:</a>    | None |
| <a href="#">Regional Forest Agreements:</a>      | None |
| <a href="#">Invasive Species:</a>                | 10   |
| <a href="#">Nationally Important Wetlands:</a>   | None |
| <a href="#">Key Ecological Features (Marine)</a> | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species   |                       | [ Resource Information ]                               |
|---|-----------------------|--|
| Name  | Status                | Type of Presence                                       |
| Birds   |                       |  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                     | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Leipoa ocellata</a><br>Malleefowl [934]                               | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]                    | Endangered            | Species or species habitat may occur within area       |
| <a href="#">Polytelis alexandrae</a><br>Princess Parrot, Alexandra's Parrot [758] | Vulnerable            | Species or species habitat may occur within area       |

| Listed Migratory Species   |            | [ Resource Information ]                         |
|--|------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |            |  |
| Name   | Threatened | Type of Presence                                 |
| Migratory Terrestrial Species  |            |  |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |            | Species or species habitat may occur within area |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]  |            | Species or species habitat may occur within area |

|  |                       |  |
|--|-----------------------|--|
| Migratory Wetlands Species   |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                 |                       | Species or species habitat may occur within area |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]             |                       | Species or species habitat may occur within area |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                  | Critically Endangered | Species or species habitat may occur within area |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                 |                       | Species or species habitat may occur within area |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882] |                       | Species or species habitat may occur within area |



Other Matters Protected by the EPBC Act

| Listed Marine Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |                       |  |
| Name   | Threatened            | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |                       | Species or species habitat may occur within area       |
| <a href="#">Ardea alba</a><br>Great Egret, White Egret [59541]                                   |                       | Species or species habitat likely to occur within area |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                               |                       | Species or species habitat may occur within area       |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                    | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                                   |                       | Species or species habitat may occur within area       |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882]                   |                       | Species or species habitat may occur within area       |
| <a href="#">Chrysococcyx osculans</a><br>Black-eared Cuckoo [705]                                |                       | Species or species habitat likely to occur within area |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]  |                       | Species or species habitat may occur within area       |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                       | Species or species habitat may occur within area       |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]  |                       | Species or species habitat may occur within area       |

Extra Information

| Invasive Species  |        | [ Resource Information ]                               |
|---|--------|--|
| Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001. |        |  |
| Name  | Status | Type of Presence                                       |
| Birds   |        |  |
| Columba livia<br>Rock Pigeon, Rock Dove, Domestic Pigeon [803]  |        | Species or species habitat likely to occur within area |
| Mammals   |        |  |
| Camelus dromedarius<br>Dromedary, Camel [7]   |        | Species or species habitat likely to occur within area |
| Canis lupus familiaris<br>Domestic Dog [82654]  |        | Species or species                                     |

| Name  | Status | Type of Presence                                       |
|---|--------|--|
|   |        | habitat likely to occur within area                    |
| Capra hircus<br>Goat [2]                                      |        | Species or species habitat likely to occur within area |
| Equus asinus<br>Donkey, Ass [4]                               |        | Species or species habitat likely to occur within area |
| Felis catus<br>Cat, House Cat, Domestic Cat [19]              |        | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128]        |        | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18]                            |        | Species or species habitat likely to occur within area |
| Plants  |        |  |
| Carrichtera annua<br>Ward's Weed [9511]                       |        | Species or species habitat may occur within area       |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213] |        | Species or species habitat likely to occur within area |

# Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

# Coordinates

-26.41778 118.65861

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Report created: 28/05/19 11:06:45

[Summary](#)

[Details](#)

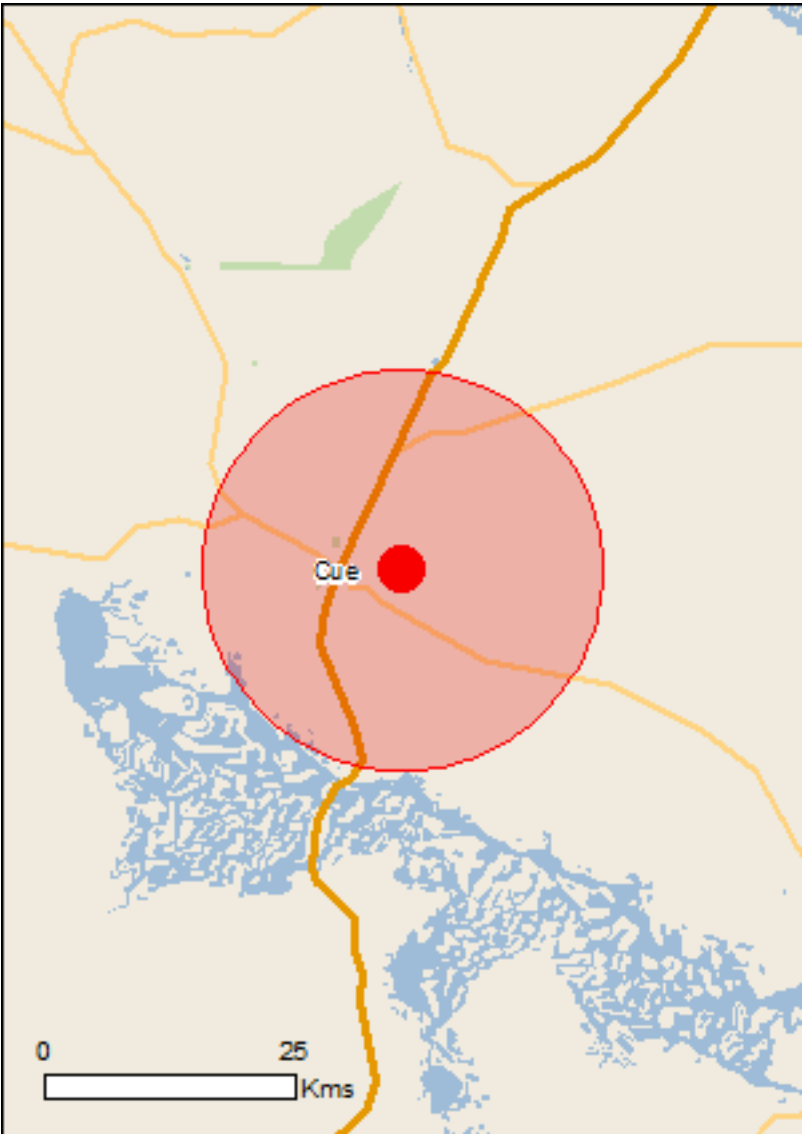
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

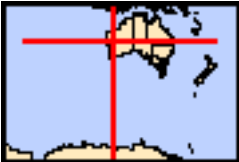
[Acknowledgements](#)



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[Buffer: 20.0Km](#)





# Summary

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|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                | None |
| <a href="#">National Heritage Places:</a>                 | None |
| <a href="#">Wetlands of International Importance:</a>     | None |
| <a href="#">Great Barrier Reef Marine Park:</a>           | None |
| <a href="#">Commonwealth Marine Area:</a>                 | None |
| <a href="#">Listed Threatened Ecological Communities:</a> | None |
| <a href="#">Listed Threatened Species:</a>                | 6    |
| <a href="#">Listed Migratory Species:</a>                 | 7    |

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

|  |      |
|--|------|
| <a href="#">Commonwealth Land:</a>                 | 1    |
| <a href="#">Commonwealth Heritage Places:</a>      | None |
| <a href="#">Listed Marine Species:</a>             | 11   |
| <a href="#">Whales and Other Cetaceans:</a>        | None |
| <a href="#">Critical Habitats:</a>                 | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a> | None |
| <a href="#">Australian Marine Parks:</a>           | None |

## Extra Information

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

|  |      |
|--|------|
| <a href="#">State and Territory Reserves:</a>    | 1    |
| <a href="#">Regional Forest Agreements:</a>      | None |
| <a href="#">Invasive Species:</a>                | 9    |
| <a href="#">Nationally Important Wetlands:</a>   | None |
| <a href="#">Key Ecological Features (Marine)</a> | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| Name   | Status                | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Leipoa ocellata</a><br>Malleefowl [934]  | Vulnerable            | Species or species habitat known to occur within area  |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]   | Endangered            | Species or species habitat may occur within area       |
| Other  |                       |  |
| <a href="#">Idiosoma nigrum</a><br>Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798] | Vulnerable            | Species or species habitat likely to occur within area |
| Plants   |                       |  |
| <a href="#">Eremophila rostrata</a><br>Beaked Eremophila [65124]                                       | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Minuria tridens</a><br>Minnie Daisy [13753]  | Vulnerable            | Species or species habitat may occur within area       |

| Listed Migratory Species   |            | [ Resource Information ]                               |
|--|------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |            |  |
| Name   | Threatened | Type of Presence                                       |
| Migratory Marine Birds   |            |  |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]  |            | Species or species habitat likely to occur within area |
| Migratory Terrestrial Species  |            |  |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |            | Species or species habitat may occur within area       |
| Migratory Wetlands Species   |            |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |            | Species or species habitat known to occur within area  |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                               |            | Species or species habitat known to occur within area  |

| Name  | Threatened            | Type of Presence                                       |
|---|-----------------------|--|
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]           | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]          |                       | Species or species habitat may occur within area       |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832] |                       | Species or species habitat likely to occur within area |

Other Matters Protected by the EPBC Act

|                   |  |
|-------------------|--|
| Commonwealth Land | <a href="#">[ Resource Information ]</a> |
|-------------------|--|

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

| Name                |
|---------------------|
| Commonwealth Land - |

|                       |  |
|-----------------------|--|
| Listed Marine Species | <a href="#">[ Resource Information ]</a> |
|-----------------------|--|

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

| Name   | Threatened            | Type of Presence                                       |
|--|-----------------------|--|
| Birds  |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]     |                       | Species or species habitat known to occur within area  |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]          |                       | Species or species habitat likely to occur within area |
| <a href="#">Ardea alba</a><br>Great Egret, White Egret [59541]     |                       | Species or species habitat known to occur within area  |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874] |                       | Species or species habitat known to occur within area  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]      | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]     |                       | Species or species habitat may occur within area       |
| <a href="#">Chrysococcyx osculans</a><br>Black-eared Cuckoo [705]  |                       | Species or species habitat known to occur within area  |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]          |                       | Species or species habitat may occur within area       |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]            |                       | Species or species habitat may occur within            |

| Name  | Threatened | Type of Presence  |
|---|------------|---|
| <a href="#">Thinornis rubricollis</a><br>Hooded Plover [59510]          |            | area<br><br>Species or species habitat known to occur within area |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832] |            | Species or species habitat likely to occur within area            |

Extra Information

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

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

| Name   | Status | Type of Presence                                       |
|--|--------|--|
| Birds  |        |  |
| Columba livia<br>Rock Pigeon, Rock Dove, Domestic Pigeon [803]         |        | Species or species habitat likely to occur within area |
| Streptopelia senegalensis<br>Laughing Turtle-dove, Laughing Dove [781] |        | Species or species habitat likely to occur within area |

|  |  |  |
|--|--|--|
| Mammals  |  |  |
| Canis lupus familiaris<br>Domestic Dog [82654]         |  | Species or species habitat likely to occur within area |
| Capra hircus<br>Goat [2]                               |  | Species or species habitat likely to occur within area |
| Felis catus<br>Cat, House Cat, Domestic Cat [19]       |  | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128] |  | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18]                     |  | Species or species habitat likely to occur within area |

|   |  |  |
|---|--|--|
| Plants  |  |  |
| Carrichtera annua<br>Ward's Weed [9511]                       |  | Species or species habitat may occur within area |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213] |  | Species or species habitat may occur within area |





# Caveat

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

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

- migratory and
- marine

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

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

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

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

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

# Coordinates

-27.42361 117.955

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- [-Ocean Biogeographic Information System](#)
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- [-American Museum of Natural History](#)
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- Other groups and individuals

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# EPBC Act Protected Matters Report

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

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

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 28/05/19 11:08:46

[Summary](#)

[Details](#)

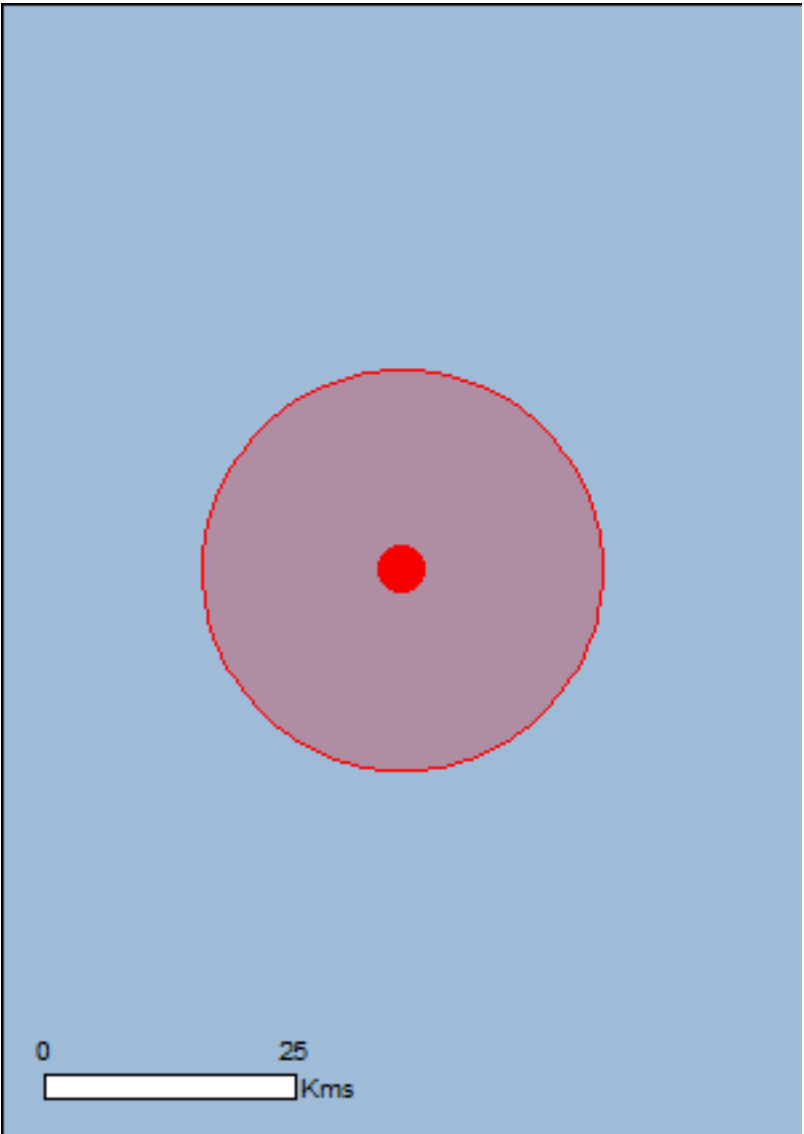
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

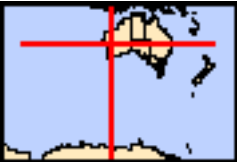
[Acknowledgements](#)



This map may contain data which are  
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[Coordinates](#)

Buffer: 20.0Km



# Summary

## Matters of National Environmental Significance

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

|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                | None |
| <a href="#">National Heritage Places:</a>                 | None |
| <a href="#">Wetlands of International Importance:</a>     | None |
| <a href="#">Great Barrier Reef Marine Park:</a>           | None |
| <a href="#">Commonwealth Marine Area:</a>                 | None |
| <a href="#">Listed Threatened Ecological Communities:</a> | None |
| <a href="#">Listed Threatened Species:</a>                | 5    |
| <a href="#">Listed Migratory Species:</a>                 | 5    |

## Other Matters Protected by the EPBC Act

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

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

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

|  |      |
|--|------|
| <a href="#">Commonwealth Land:</a>                 | None |
| <a href="#">Commonwealth Heritage Places:</a>      | None |
| <a href="#">Listed Marine Species:</a>             | 9    |
| <a href="#">Whales and Other Cetaceans:</a>        | None |
| <a href="#">Critical Habitats:</a>                 | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a> | None |
| <a href="#">Australian Marine Parks:</a>           | None |

## Extra Information

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

|  |      |
|--|------|
| <a href="#">State and Territory Reserves:</a>    | None |
| <a href="#">Regional Forest Agreements:</a>      | None |
| <a href="#">Invasive Species:</a>                | 9    |
| <a href="#">Nationally Important Wetlands:</a>   | None |
| <a href="#">Key Ecological Features (Marine)</a> | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| Name   | Status                | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Leipoa ocellata</a><br>Malleefowl [934]  | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]   | Endangered            | Species or species habitat may occur within area       |
| Mammals  |                       |  |
| <a href="#">Dasyurus geoffroii</a><br>Chuditch, Western Quoll [330]  | Vulnerable            | Species or species habitat may occur within area       |
| Reptiles   |                       |  |
| <a href="#">Egernia stokesii badia</a><br>Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483] | Endangered            | Species or species habitat likely to occur within area |
| Listed Migratory Species   |                       | [ Resource Information ]                               |
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list.               |                       |  |
| Name   | Threatened            | Type of Presence                                       |
| Migratory Terrestrial Species  |                       |  |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                       | Species or species habitat may occur within area       |
| Migratory Wetlands Species   |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]   |                       | Species or species habitat may occur within area       |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]   |                       | Species or species habitat may occur within area       |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]   |                       | Species or species habitat may occur within area       |



Other Matters Protected by the EPBC Act

| Listed Marine Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |                       |  |
| Name   | Threatened            | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |                       | Species or species habitat may occur within area       |
| <a href="#">Ardea alba</a><br>Great Egret, White Egret [59541]                                   |                       | Species or species habitat likely to occur within area |
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| <a href="#">Chrysococcyx osculans</a><br>Black-eared Cuckoo [705]                                |                       | Species or species habitat known to occur within area  |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]  |                       | Species or species habitat may occur within area       |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                       | Species or species habitat may occur within area       |
| <a href="#">Thinornis rubricollis</a><br>Hooded Plover [59510]                                   |                       | Species or species habitat may occur within area       |

Extra Information

| Invasive Species  |        | [ Resource Information ]                               |
|---|--------|--|
| Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001. |        |  |
| Name  | Status | Type of Presence                                       |
| Birds   |        |  |
| Columba livia<br>Rock Pigeon, Rock Dove, Domestic Pigeon [803]  |        | Species or species habitat likely to occur within area |
| Streptopelia senegalensis<br>Laughing Turtle-dove, Laughing Dove [781]  |        | Species or species habitat likely to occur within area |
| Mammals   |        |  |
| Canis lupus familiaris<br>Domestic Dog [82654]  |        | Species or species habitat likely to occur within area |
| Capra hircus<br>Goat [2]  |        | Species or species                                     |

| Name  | Status | Type of Presence                                       |
|---|--------|--|
|   |        | habitat likely to occur within area                    |
| Felis catus<br>Cat, House Cat, Domestic Cat [19]              |        | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128]        |        | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18]                            |        | Species or species habitat likely to occur within area |
| Plants  |        |  |
| Carrichtera annua<br>Ward's Weed [9511]                       |        | Species or species habitat may occur within area       |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213] |        | Species or species habitat may occur within area       |

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Report created: 28/05/19 11:08:46

[Summary](#)

[Details](#)

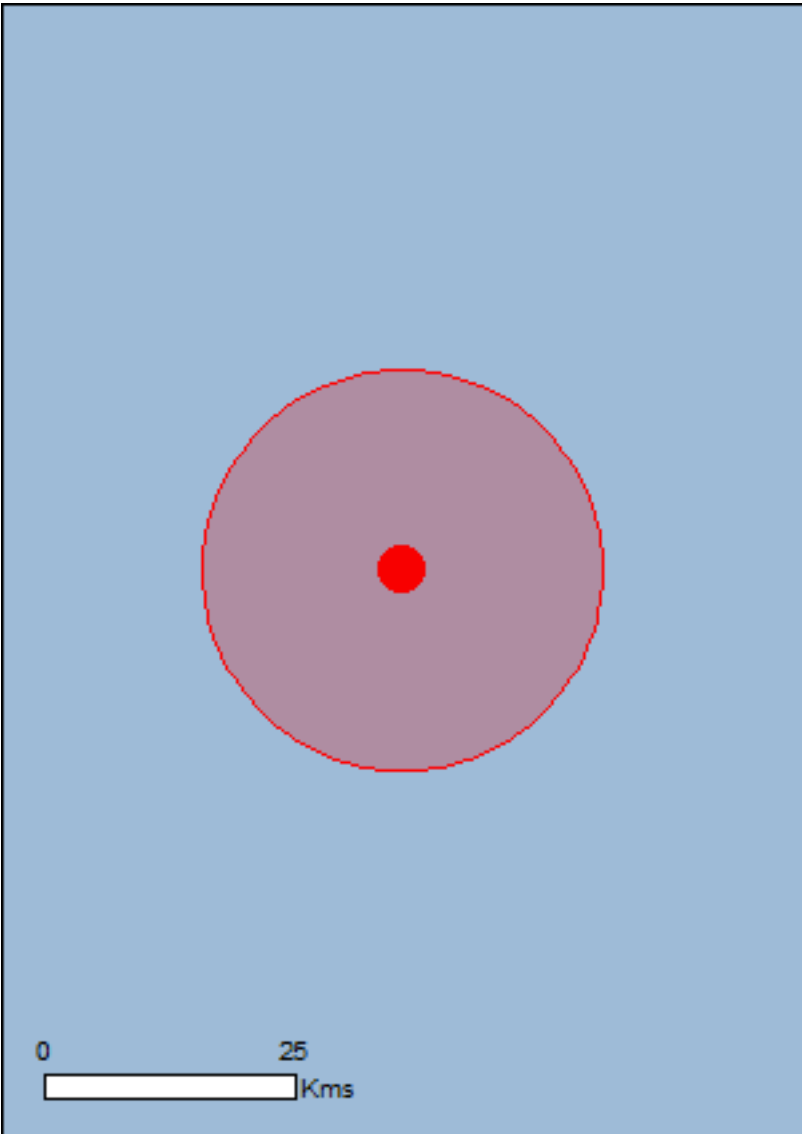
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[Extra Information](#)

[Caveat](#)

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[Coordinates](#)

[Buffer: 20.0Km](#)





# Summary

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|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                | None |
| <a href="#">National Heritage Places:</a>                 | None |
| <a href="#">Wetlands of International Importance:</a>     | None |
| <a href="#">Great Barrier Reef Marine Park:</a>           | None |
| <a href="#">Commonwealth Marine Area:</a>                 | None |
| <a href="#">Listed Threatened Ecological Communities:</a> | None |
| <a href="#">Listed Threatened Species:</a>                | 5    |
| <a href="#">Listed Migratory Species:</a>                 | 5    |

## Other Matters Protected by the EPBC Act

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

|  |      |
|--|------|
| <a href="#">Commonwealth Land:</a>                 | None |
| <a href="#">Commonwealth Heritage Places:</a>      | None |
| <a href="#">Listed Marine Species:</a>             | 8    |
| <a href="#">Whales and Other Cetaceans:</a>        | None |
| <a href="#">Critical Habitats:</a>                 | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a> | None |
| <a href="#">Australian Marine Parks:</a>           | None |

## Extra Information

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

|  |      |
|--|------|
| <a href="#">State and Territory Reserves:</a>    | 1    |
| <a href="#">Regional Forest Agreements:</a>      | None |
| <a href="#">Invasive Species:</a>                | 7    |
| <a href="#">Nationally Important Wetlands:</a>   | None |
| <a href="#">Key Ecological Features (Marine)</a> | None |

# Details

## Matters of National Environmental Significance

| Listed Threatened Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| Name   | Status                | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Leipoa ocellata</a><br>Malleefowl [934]  | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]   | Endangered            | Species or species habitat may occur within area       |
| Other  |                       |  |
| <a href="#">Idiosoma nigrum</a><br>Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]         | Vulnerable            | Species or species habitat known to occur within area  |
| Reptiles   |                       |  |
| <a href="#">Egernia stokesii badia</a><br>Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483] | Endangered            | Species or species habitat likely to occur within area |
| Listed Migratory Species   |                       | [ Resource Information ]                               |
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list.               |                       |  |
| Name   | Threatened            | Type of Presence                                       |
| Migratory Terrestrial Species  |                       |  |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                       | Species or species habitat may occur within area       |
| Migratory Wetlands Species   |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]   |                       | Species or species habitat may occur within area       |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]   |                       | Species or species habitat may occur within area       |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]  | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]   |                       | Species or species habitat may occur within area       |

Other Matters Protected by the EPBC Act

| Listed Marine Species  |                       | [ Resource Information ]                               |
|--|-----------------------|--|
| * Species is listed under a different scientific name on the EPBC Act - Threatened Species list. |                       |  |
| Name   | Threatened            | Type of Presence                                       |
| Birds  |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]                                   |                       | Species or species habitat may occur within area       |
| <a href="#">Ardea alba</a><br>Great Egret, White Egret [59541]                                   |                       | Species or species habitat likely to occur within area |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]                               |                       | Species or species habitat may occur within area       |
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| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                                   |                       | Species or species habitat may occur within area       |
| <a href="#">Chrysococcyx osculans</a><br>Black-eared Cuckoo [705]                                |                       | Species or species habitat likely to occur within area |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]  |                       | Species or species habitat may occur within area       |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]  |                       | Species or species habitat may occur within area       |

Extra Information

| State and Territory Reserves           |  | [ Resource Information ] |
|--|--|--------------------------|
| Name                                   |  | State                    |
| Dalgaranga and Noongal Pastoral Leases |  | WA                       |

| Invasive Species  |        | [ Resource Information ]                               |
|---|--------|--|
| Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001. |        |  |
| Name  | Status | Type of Presence                                       |
| Birds   |        |  |
| Streptopelia senegalensis<br>Laughing Turtle-dove, Laughing Dove [781]  |        | Species or species habitat likely to occur within area |
| Mammals   |        |  |
| Canis lupus familiaris<br>Domestic Dog [82654]  |        | Species or species habitat likely to occur within area |
| Capra hircus<br>Goat [2]  |        | Species or species habitat likely to occur within area |
| Felis catus<br>Cat, House Cat, Domestic Cat [19]  |        | Species or species habitat likely to occur             |

| Name  | Status | Type of Presence                                       |
|---|--------|--|
|   |        | within area  |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128]        |        | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18]                            |        | Species or species habitat likely to occur within area |
| Plants  |        |  |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213] |        | Species or species habitat likely to occur within area |

# Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

# Coordinates

-27.75417 117.09

# Acknowledgements

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

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

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

Please feel free to provide feedback via the [Contact Us](#) page.



# NatureMap Species Report

Created By Guest user on 09/10/2018

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 118° 39' 31" E, 26° 25' 04" S  
**Buffer** 20km

|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 1.  | 3217    | <i>Acacia aneura</i> (Mulga, Wanari)                         |             |                   |                                    |
| 2.  | 3248    | <i>Acacia burkittii</i> (Sandhill Wattle)                    |             |                   |                                    |
| 3.  | 36417   | <i>Acacia caesaneura</i>                                     |             |                   |                                    |
| 4.  | 3273    | <i>Acacia craspedocarpa</i> (Hop Mulga)                      |             |                   |                                    |
| 5.  | 15279   | <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i>           |             |                   |                                    |
| 6.  | 32118   | <i>Acacia effusifolia</i>                                    |             |                   |                                    |
| 7.  | 3330    | <i>Acacia exocarpoides</i>                                   |             |                   |                                    |
| 8.  | 36781   | <i>Acacia fuscaeura</i>                                      |             |                   |                                    |
| 9.  | 36418   | <i>Acacia incurvaneura</i>                                   |             |                   |                                    |
| 10. | 3399    | <i>Acacia kempeana</i> (Witchetty Bush, Ilykuwara)           |             |                   |                                    |
| 11. | 36416   | <i>Acacia mulganeura</i>                                     |             |                   |                                    |
| 12. | 15724   | <i>Acacia paraneura</i>                                      |             |                   |                                    |
| 13. | 36800   | <i>Acacia pteraneura</i>                                     |             |                   |                                    |
| 14. | 3507    | <i>Acacia quadrimarginea</i>                                 |             |                   |                                    |
| 15. | 19499   | <i>Acacia ramulosa</i> var. <i>ramulosa</i>                  |             |                   |                                    |
| 16. | 3577    | <i>Acacia tetragonophylla</i> (Kurara, Wakalpuka)            |             |                   |                                    |
| 17. | 29531   | <i>Acacia thoma</i>  |             |                   |                                    |
| 18. | 19470   | <i>Aluta maisonneuvei</i> subsp. <i>auriculata</i>           |             |                   |                                    |
| 19. | 2372    | <i>Amyema fitzgeraldii</i> (Pincushion Mistletoe)            |             |                   |                                    |
| 20. | 2382    | <i>Amyema nestor</i>   |             |                   |                                    |
| 21. | 212     | <i>Aristida inaequiglumis</i> (Feathertop Threeawn)          |             |                   |                                    |
| 22. | 17251   | <i>Austrostipa scabra</i>                                    |             |                   |                                    |
| 23. | 7413    | <i>Brunonia australis</i> (Native Cornflower)                |             |                   |                                    |
| 24. | 2845    | <i>Calandrinia brevipedata</i> (Short-stalked Purslane)      |             |                   |                                    |
| 25. | 8466    | <i>Callitris columellaris</i> (White Cypress Pine)           |             |                   |                                    |
| 26. | 7906    | <i>Calotis plumulifera</i>                                   |             |                   |                                    |
| 27. | 5438    | <i>Calytrix amethystina</i>                                  |             |                   |                                    |
| 28. | 5451    | <i>Calytrix desolata</i>                                     |             |                   |                                    |
| 29. | 5486    | <i>Calytrix verruculosa</i>                                  |             | P3                |                                    |
| 30. | 7921    | <i>Centipeda thespidioides</i> (Desert Sneezewood)           |             |                   |                                    |
| 31. | 13138   | <i>Chrysocephalum puteale</i>                                |             |                   |                                    |
| 32. | 7933    | <i>Chthonocephalus pseudevax</i> (Woolly Groundheads)        |             |                   |                                    |
| 33. | 12619   | <i>Chthonocephalus viscosus</i>                              |             |                   |                                    |
| 34. | 2778    | <i>Codonocarpus cotinifolius</i> (Native Poplar, Kundurangu) |             |                   |                                    |
| 35. | 6612    | <i>Convolvulus clementii</i>                                 |             |                   |                                    |
| 36. | 17077   | <i>Corymbia ferriticola</i>                                  |             |                   |                                    |
| 37. | 7943    | <i>Cotula australis</i> (Common Cotula)                      |             |                   |                                    |
| 38. | 6663    | <i>Cuscuta epithymum</i> (Lesser Dodder, Greater Dodder)     | Y           |                   |                                    |
| 39. | 6584    | <i>Cynanchum floribundum</i> (Dumara Bush, Tjipa)            |             |                   |                                    |
| 40. | 6774    | <i>Dicrastylis sessilifolia</i>                              |             |                   |                                    |
| 41. | 2499    | <i>Dissocarpus paradoxus</i> (Curious Saltbush)              |             |                   |                                    |
| 42. | 4772    | <i>Dodonaea pachyneura</i>                                   |             |                   |                                    |
| 43. | 4782    | <i>Dodonaea viscosa</i> (Sticky Hopbush)                     |             |                   |                                    |
| 44. | 6966    | <i>Duboisia hopwoodii</i> (Pituri, Kundugu)                  |             |                   |                                    |
| 45. | 365     | <i>Enneapogon polyphyllus</i> (Leafy Nineawn)                |             |                   |                                    |
| 46. | 380     | <i>Eragrostis eriopoda</i> (Woollybutt Grass, Wangumu)       |             |                   |                                    |
| 47. | 7189    | <i>Eremophila clarkei</i> (Turpentine Bush)                  |             |                   |                                    |
| 48. | 17155   | <i>Eremophila compacta</i> subsp. <i>fecunda</i>             |             |                   |                                    |
| 49. | 12951   | <i>Eremophila enata</i>                                      |             |                   |                                    |
| 50. | 16792   | <i>Eremophila flabellata</i>                                 |             |                   |                                    |
| 51. | 7207    | <i>Eremophila foliosissima</i>                               |             |                   |                                    |
| 52. | 7208    | <i>Eremophila forrestii</i> (Wilcox Bush)                    |             |                   |                                    |

| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 53.     | 16696 <i>Eremophila fraseri</i> subsp. <i>fraseri</i>                  |             |                   |                                    |
| 54.     | 29532 <i>Eremophila galeata</i>  |             |                   |                                    |
| 55.     | 7216 <i>Eremophila glutinosa</i>                                       |             |                   |                                    |
| 56.     | 7228 <i>Eremophila lachnocalyx</i> (Woolly-calyxed <i>Eremophila</i> ) |             |                   |                                    |
| 57.     | 7230 <i>Eremophila latrobei</i> (Warty Fuchsia Bush, Mintjingka)       |             |                   |                                    |
| 58.     | 17576 <i>Eremophila latrobei</i> subsp. <i>latrobei</i>                |             |                   |                                    |
| 59.     | 7233 <i>Eremophila linearis</i> (Harlequin Fuchsia Bush)               |             |                   |                                    |
| 60.     | 18570 <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>       |             |                   |                                    |
| 61.     | 17167 <i>Eremophila phyllopoda</i> subsp. <i>phyllopoda</i>            |             |                   |                                    |
| 62.     | 15058 <i>Eremophila platycalyx</i> subsp. <i>platycalyx</i>            |             |                   |                                    |
| 63.     | 7256 <i>Eremophila punctata</i>  |             |                   |                                    |
| 64.     | 7270 <i>Eremophila spathulata</i> (Spoon-leaved <i>Eremophila</i> )    |             |                   |                                    |
| 65.     | 17163 <i>Eremophila spectabilis</i> subsp. <i>brevis</i>               |             |                   |                                    |
| 66.     | 15168 <i>Eremophila spuria</i>   |             |                   |                                    |
| 67.     | 15155 <i>Eremophila youngii</i> subsp. <i>youngii</i>                  |             |                   |                                    |
| 68.     | 4334 <i>Erodium crinitum</i> (Corkscrew)                               |             |                   |                                    |
| 69.     | 4335 <i>Erodium cygnorum</i> (Blue Heronsbill)                         |             |                   |                                    |
| 70.     | 12739 <i>Erymophyllum ramosum</i>                                      |             |                   |                                    |
| 71.     | 5684 <i>Eucalyptus kingsmillii</i> (Kingsmill's Mallee)                |             |                   |                                    |
| 72.     | 29733 <i>Eucalyptus trivalva</i> (Victoria Spring Mallee)              |             |                   |                                    |
| 73.     | 12530 <i>Goodenia macroleptera</i>                                     |             |                   |                                    |
| 74.     | 7527 <i>Goodenia mimuloides</i>  |             |                   |                                    |
| 75.     | 7556 <i>Goodenia tenuiloba</i>   |             |                   |                                    |
| 76.     | 1986 <i>Grevillea deflexa</i>  |             |                   |                                    |
| 77.     | 2019 <i>Grevillea inconspicua</i> (Cue <i>Grevillea</i> )              |             | P4                |                                    |
| 78.     | 19137 <i>Hakea lorea</i> subsp. <i>lorea</i>                           |             |                   |                                    |
| 79.     | 17556 <i>Hakea recurva</i> subsp. <i>arida</i>                         |             |                   |                                    |
| 80.     | 6712 <i>Heliotropium heteranthum</i>                                   |             |                   |                                    |
| 81.     | 33779 <i>Hemigenia tomentosa</i>                                       |             |                   |                                    |
| 82.     | 4924 <i>Hibiscus burtonii</i>  |             |                   |                                    |
| 83.     | 15448 <i>Hyalosperma glutinosum</i> subsp. <i>venustum</i>             |             |                   |                                    |
| 84.     | 3974 <i>Indigofera georgei</i> (Bovine Indigo)                         |             |                   |                                    |
| 85.     | 3982 <i>Indigofera monophylla</i>                                      |             |                   |                                    |
| 86.     | 48615 <i>Isotropis</i> sp. Arid zone (G. Byrne 2775)                   |             |                   |                                    |
| 87.     | 8096 <i>Lactuca serriola</i> (Prickly Lettuce)                         | Y           |                   |                                    |
| 88.     | 13289 <i>Lawrencella davenportii</i>                                   |             |                   |                                    |
| 89.     | 12628 <i>Lemooria burkittii</i>  |             |                   |                                    |
| 90.     | 2538 <i>Maireana carnosa</i> (Cottony Bluebush)                        |             |                   |                                    |
| 91.     | 2539 <i>Maireana convexa</i> (Mulga Bluebush)                          |             |                   |                                    |
| 92.     | 2551 <i>Maireana melanocoma</i> (Pussy Bluebush)                       |             |                   |                                    |
| 93.     | 2566 <i>Maireana thesioides</i> (Lax Bluebush)                         |             |                   |                                    |
| 94.     | 3051 <i>Menkea draboides</i>   |             | P3                |                                    |
| 95.     | 4098 <i>Mirbelia rhagodioides</i>                                      |             |                   |                                    |
| 96.     | 490 <i>Monachather paradoxus</i>                                       |             |                   |                                    |
| 97.     | 8116 <i>Myriocephalus guerinae</i>                                     |             |                   |                                    |
| 98.     | 8151 <i>Olearia stuartii</i>   |             |                   |                                    |
| 99.     | 17 <i>Ophioglossum lusitanicum</i> (Adders Tongue)                     |             |                   |                                    |
| 100.    | 12670 <i>Parietaria cardiostegia</i>                                   |             |                   |                                    |
| 101.    | 5256 <i>Pimelea microcephala</i> (Shrubby Riceflower, Banjine)         |             |                   |                                    |
| 102.    | 19744 <i>Pittosporum angustifolium</i>                                 |             |                   |                                    |
| 103.    | 8173 <i>Podolepis capillaris</i> (Wiry Podolepis)                      |             |                   |                                    |
| 104.    | 8176 <i>Podolepis kendallii</i>  |             |                   |                                    |
| 105.    | 2879 <i>Portulaca cyclophylla</i>                                      |             |                   |                                    |
| 106.    | 6926 <i>Prostanthera wilkieana</i>                                     |             |                   |                                    |
| 107.    | 18154 <i>Psydrax latifolia</i>   |             |                   |                                    |
| 108.    | 18210 <i>Psydrax rigidula</i>  |             |                   |                                    |
| 109.    | 2690 <i>Ptilotus aervoides</i>   |             |                   |                                    |
| 110.    | 2691 <i>Ptilotus albidus</i>   |             |                   |                                    |
| 111.    | 2708 <i>Ptilotus chamaecladus</i>                                      |             |                   |                                    |
| 112.    | 2717 <i>Ptilotus divaricatus</i> (Climbing Mulla Mulla)                |             |                   |                                    |
| 113.    | 2727 <i>Ptilotus gaudichaudii</i>                                      |             |                   |                                    |
| 114.    | 2729 <i>Ptilotus grandiflorus</i>                                      |             |                   |                                    |
| 115.    | 2731 <i>Ptilotus helipteroides</i> (Hairy Mulla Mulla)                 |             |                   |                                    |
| 116.    | 2747 <i>Ptilotus obovatus</i> (Cotton Bush)                            |             |                   |                                    |
| 117.    | 2751 <i>Ptilotus polystachyus</i> (Prince of Wales Feather)            |             |                   |                                    |
| 118.    | 2755 <i>Ptilotus rotundifolius</i> (Royal Mulla Mulla)                 |             |                   |                                    |
| 119.    | 13242 <i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>           |             |                   |                                    |
| 120.    | <i>Riccia cavernosa</i>  |             |                   |                                    |
| 121.    | <i>Riccia crystallina</i>  |             |                   |                                    |
| 122.    | <i>Riccia nigrella</i>   |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 123. | 45154   | <i>Roebuckiella cheilocarpa</i> var. <i>cheilocarpa</i>              |             |                   |                                    |
| 124. | 45148   | <i>Roebuckiella ciliocarpa</i>                                       |             |                   |                                    |
| 125. | 11151   | <i>Rostraria pumila</i>  | Y           |                   |                                    |
| 126. | 2357    | <i>Santalum lanceolatum</i> (Northern Sandalwood, Yarnguli)          |             |                   |                                    |
| 127. | 2359    | <i>Santalum spicatum</i> (Sandalwood, Wilarak)                       |             |                   |                                    |
| 128. | 7644    | <i>Scaevola spinescens</i> (Currant Bush, Maroon)                    |             |                   |                                    |
| 129. | 8200    | <i>Schoenia cassiniana</i> ( <i>Schoenia</i> )                       |             |                   |                                    |
| 130. | 8877    | <i>Sclerolaena gardneri</i>  |             |                   |                                    |
| 131. | 18444   | <i>Senna charlesiana</i>   |             |                   |                                    |
| 132. | 12305   | <i>Senna glutinosa</i> subsp. <i>chatelainiana</i>                   |             |                   |                                    |
| 133. | 18445   | <i>Senna stricta</i>   |             |                   |                                    |
| 134. | 31854   | <i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)               |             |                   |                                    |
| 135. | 3069    | <i>Sisymbrium erysimoides</i> (Smooth Mustard)                       | Y           |                   |                                    |
| 136. | 7026    | <i>Solanum orbiculatum</i> (Wild Tomato)                             |             |                   |                                    |
| 137. | 16199   | <i>Stenanthemum petraeum</i>   |             |                   |                                    |
| 138. | 8236    | <i>Streptoglossa cylindriceps</i>                                    |             |                   |                                    |
| 139. | 7754    | <i>Stylidium longibracteatum</i> (Long-bracted Trigger Plant)        |             |                   |                                    |
| 140. | 12356   | <i>Swainsona formosa</i>   |             |                   |                                    |
| 141. | 4239    | <i>Swainsona pedunculata</i>   |             |                   |                                    |
| 142. | 31492   | <i>Tecticornia disarticulata</i>                                     |             |                   |                                    |
| 143. | 31851   | <i>Tecticornia</i> sp. <i>Yoothapina Station</i> (A.A. Mitchell 883) |             |                   |                                    |
| 144. | 48603   | <i>Teucrium teucriiflorum</i>  |             |                   |                                    |
| 145. | 6054    | <i>Thryptomene decussata</i>   |             |                   |                                    |
| 146. | 1338    | <i>Thysanotus manglesianus</i> (Fringed Lily)                        |             |                   |                                    |
| 147. | 44241   | <i>Trianthema glossostigmum</i>                                      |             |                   |                                    |
| 148. | 33276   | <i>Triglochin isingiana</i>  |             |                   |                                    |
| 149. | 13331   | <i>Waitzia acuminata</i> var. <i>acuminata</i>                       |             |                   |                                    |

**Conservation Codes**

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

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

# NatureMap Species Report

Created By Guest user on 09/10/2018

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 59' 16" E, 27° 10' 48" S  
**Buffer** 20km

|     | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|---|-------------|-------------------|------------------------------------|
| 1.  | 3217    | <i>Acacia aneura</i> (Mulga, Wanari)                          |             |                   |                                    |
| 2.  | 37260   | <i>Acacia aptaneura</i>                                       |             |                   |                                    |
| 3.  | 3248    | <i>Acacia burkittii</i> (Sandhill Wattle)                     |             |                   |                                    |
| 4.  | 3273    | <i>Acacia craspedocarpa</i> (Hop Mulga)                       |             |                   |                                    |
| 5.  | 3419    | <i>Acacia ligulata</i> (Umbrella Bush, Watarka)               |             |                   |                                    |
| 6.  | 37240   | <i>Acacia macraneura</i>                                      |             |                   |                                    |
| 7.  | 3500    | <i>Acacia pruinocarpa</i> (Gidgee)                            |             |                   |                                    |
| 8.  | 19483   | <i>Acacia ramulosa</i> var. <i>linophylla</i>                 |             |                   |                                    |
| 9.  | 13078   | <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>         |             |                   |                                    |
| 10. |         | <i>Acacia</i> sp.   |             |                   |                                    |
| 11. | 13070   | <i>Acacia synchronicia</i>                                    |             |                   |                                    |
| 12. | 3586    | <i>Acacia tysonii</i>   |             |                   |                                    |
| 13. | 11487   | <i>Alectryon oleifolius</i> subsp. <i>oleifolius</i>          |             |                   |                                    |
| 14. | 4907    | <i>Alyogyne pinoniana</i> (Sand Hibiscus)                     |             |                   |                                    |
| 15. | 2372    | <i>Amyema fitzgeraldii</i> (Pincushion Mistletoe)             |             |                   |                                    |
| 16. | 2374    | <i>Amyema hilliana</i>  |             |                   |                                    |
| 17. | 7832    | <i>Angianthus milnei</i> (Cone-spike Angianthus)              |             |                   |                                    |
| 18. | 207     | <i>Aristida contorta</i> (Bunched Kerosene Grass)             |             |                   |                                    |
| 19. |         | <i>Aristida</i> sp.   |             |                   |                                    |
| 20. | 17801   | <i>Atriplex cephalantha</i>                                   |             |                   |                                    |
| 21. | 12710   | <i>Bergia auriculata</i>                                      |             | P2                |                                    |
| 22. | 11726   | <i>Bergia perennis</i> subsp. <i>exigua</i>                   |             |                   |                                    |
| 23. | 4999    | <i>Brachychiton gregorii</i> (Desert Kurrajong, Ngaitta)      |             |                   |                                    |
| 24. | 7871    | <i>Brachyscome ciliaris</i>                                   |             |                   |                                    |
| 25. | 2869    | <i>Calandrinia schistorhiza</i>                               |             |                   |                                    |
| 26. | 4717    | <i>Callitriche stagnalis</i> (Common Starwort)                | Y           |                   |                                    |
| 27. | 7893    | <i>Calocephalus knappii</i>                                   |             |                   |                                    |
| 28. | 7905    | <i>Calotis multicaulis</i> (Many-stemmed Burr-daisy)          |             |                   |                                    |
| 29. | 5451    | <i>Calytrix desolata</i>                                      |             |                   |                                    |
| 30. | 5486    | <i>Calytrix verruculosa</i>                                   |             | P3                |                                    |
| 31. | 7916    | <i>Centaurea melitensis</i> (Maltese Cockspur, Malta Thistle) | Y           |                   |                                    |
| 32. | 2489    | <i>Chenopodium gaudichaudianum</i> (Cottony Saltbush)         |             |                   |                                    |
| 33. | 2495    | <i>Chenopodium nitriaceum</i> (Nitre Goosefoot)               |             |                   |                                    |
| 34. | 3756    | <i>Chorizema genistoides</i>                                  |             |                   |                                    |
| 35. | 2778    | <i>Codonocarpus cotinifolius</i> (Native Poplar, Kundurangu)  |             |                   |                                    |
| 36. | 1285    | <i>Corynotheca micrantha</i> (Sand Lily)                      |             |                   |                                    |
| 37. | 1286    | <i>Corynotheca pungens</i>                                    |             |                   |                                    |
| 38. | 6218    | <i>Daucus glochidiatus</i> (Australian Carrot)                |             |                   |                                    |
| 39. | 12721   | <i>Dielitzia tysonii</i>                                      |             |                   |                                    |
| 40. | 12034   | <i>Dodonaea microzyga</i> var. <i>acrolobata</i>              |             |                   |                                    |
| 41. | 4779    | <i>Dodonaea rigida</i>  |             |                   |                                    |
| 42. | 43544   | <i>Drosera finlaysoniana</i>                                  |             |                   |                                    |
| 43. | 376     | <i>Eragrostis curvula</i> (African Lovegrass)                 | Y           |                   |                                    |
| 44. | 17155   | <i>Eremophila compacta</i> subsp. <i>fecunda</i>              |             |                   |                                    |
| 45. | 7198    | <i>Eremophila deserti</i>                                     |             |                   |                                    |
| 46. | 7207    | <i>Eremophila foliosissima</i>                                |             |                   |                                    |
| 47. | 15052   | <i>Eremophila forrestii</i> subsp. <i>forrestii</i>           |             |                   |                                    |
| 48. | 29532   | <i>Eremophila galeata</i>                                     |             |                   |                                    |
| 49. | 7211    | <i>Eremophila georgei</i>                                     |             |                   |                                    |
| 50. | 16732   | <i>Eremophila gilesii</i> subsp. <i>gilesii</i>               |             |                   |                                    |
| 51. | 14191   | <i>Eremophila glabra</i> subsp. <i>tomentosa</i>              |             |                   |                                    |
| 52. | 7216    | <i>Eremophila glutinosa</i>                                   |             |                   |                                    |

| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 53.     | 17189 <i>Eremophila hygrophana</i>   |             |                   |                                    |
| 54.     | 17171 <i>Eremophila jucunda</i> subsp. <i>jucunda</i>                      |             |                   |                                    |
| 55.     | 7233 <i>Eremophila linearis</i> (Harlequin Fuchsia Bush)                   |             |                   |                                    |
| 56.     | 7236 <i>Eremophila macmillaniana</i> (Grey Turpentine Bush)                |             |                   |                                    |
| 57.     | 16363 <i>Eremophila maculata</i> subsp. <i>brevifolia</i> (Native Fuchsia) |             |                   |                                    |
| 58.     | 18570 <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>           |             |                   |                                    |
| 59.     | 15058 <i>Eremophila platycalyx</i> subsp. <i>platycalyx</i>                |             |                   |                                    |
| 60.     | 7257 <i>Eremophila punicea</i> (Crimson Eremophila)                        |             |                   |                                    |
| 61.     | <i>Eremophila</i> sp.  |             |                   |                                    |
| 62.     | 7270 <i>Eremophila spathulata</i> (Spoon-leaved Eremophila)                |             |                   |                                    |
| 63.     | 15168 <i>Eremophila spuria</i>   |             |                   |                                    |
| 64.     | 7273 <i>Eremophila strongylophylla</i>                                     |             |                   |                                    |
| 65.     | 16486 <i>Eriachne pulchella</i> subsp. <i>pulchella</i>                    |             |                   |                                    |
| 66.     | 2514 <i>Eriochiton sclerolaenoides</i> (Woolly Bindii)                     |             |                   |                                    |
| 67.     | 4335 <i>Erodium cygnorum</i> (Blue Heronsbill)                             |             |                   |                                    |
| 68.     | 5779 <i>Eucalyptus striatocalyx</i> (Cue York Gum)                         |             |                   |                                    |
| 69.     | 3938 <i>Glycine canescens</i> (Silky Glycine)                              |             |                   |                                    |
| 70.     | 12512 <i>Goodenia berrinbinensis</i>                                       |             | P4                |                                    |
| 71.     | 7556 <i>Goodenia tenuiloba</i>   |             |                   |                                    |
| 72.     | 1986 <i>Grevillea deflexa</i>  |             |                   |                                    |
| 73.     | 13459 <i>Grevillea sarissa</i> subsp. <i>succincta</i>                     |             |                   |                                    |
| 74.     | 6712 <i>Heliotropium heteranthum</i>                                       |             |                   |                                    |
| 75.     | 43022 <i>Hibiscus</i> sp. <i>Gardneri</i> (A.L. Payne PRP 1435)            |             |                   |                                    |
| 76.     | 3982 <i>Indigofera monophylla</i>  |             |                   |                                    |
| 77.     | 20019 <i>Lachnagrostis filiformis</i>                                      |             |                   |                                    |
| 78.     | 3039 <i>Lepidium platypetalum</i> (Slender Peppergrass)                    |             |                   |                                    |
| 79.     | 4061 <i>Lotus cruentus</i> (Redflower Lotus)                               |             |                   |                                    |
| 80.     | 36375 <i>Lysimachia arvensis</i> (Pimpernel)                               | Y           |                   |                                    |
| 81.     | 2538 <i>Maireana carnosae</i> (Cottony Bluebush)                           |             |                   |                                    |
| 82.     | 2567 <i>Maireana tomentosa</i> (Felt Bluebush)                             |             |                   |                                    |
| 83.     | 16538 <i>Marsdenia graniticola</i>   |             |                   |                                    |
| 84.     | 19449 <i>Melaleuca stereophloia</i>  |             |                   |                                    |
| 85.     | 3054 <i>Menkea villosula</i>   |             |                   |                                    |
| 86.     | 6003 <i>Micromyrtus sulphurea</i>  |             |                   |                                    |
| 87.     | 4111 <i>Muelleranthus trifoliolatus</i>                                    |             |                   |                                    |
| 88.     | 8114 <i>Myriocephalus appendiculatus</i> (White-tip Myriocephalus)         |             |                   |                                    |
| 89.     | 17925 <i>Myriocephalus oldfieldii</i>                                      |             |                   |                                    |
| 90.     | 14186 <i>Myriocephalus pygmaeus</i>  |             |                   |                                    |
| 91.     | 8121 <i>Myriocephalus rudallii</i>   |             |                   |                                    |
| 92.     | 11331 <i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>                  |             |                   |                                    |
| 93.     | 8188 <i>Pogonolepis stricta</i>  |             |                   |                                    |
| 94.     | 2884 <i>Portulaca oleracea</i> (Purslane, Wakati)                          |             |                   |                                    |
| 95.     | 12707 <i>Prostanthera albiflora</i>  |             |                   |                                    |
| 96.     | 6919 <i>Prostanthera magnifica</i> (Magnificent Prostanthera)              |             |                   |                                    |
| 97.     | 8192 <i>Pterocaulon sphacelatum</i> (Apple Bush, Fruit Salad Plant)        |             |                   |                                    |
| 98.     | 2700 <i>Ptilotus beardii</i> (Low Mulla Mulla)                             |             | P3                |                                    |
| 99.     | 2718 <i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)                   |             |                   |                                    |
| 100.    | 2731 <i>Ptilotus helipteroides</i> (Hairy Mulla Mulla)                     |             |                   |                                    |
| 101.    | 2741 <i>Ptilotus macrocephalus</i> (Featherheads)                          |             |                   |                                    |
| 102.    | 41001 <i>Ptilotus nobilis</i> subsp. <i>nobilis</i> (Yellow Tails)         |             |                   |                                    |
| 103.    | 2747 <i>Ptilotus obovatus</i> (Cotton Bush)                                |             |                   |                                    |
| 104.    | 2755 <i>Ptilotus rotundifolius</i> (Royal Mulla Mulla)                     |             |                   |                                    |
| 105.    | 2582 <i>Rhagodia eremaea</i> (Thorny Saltbush)                             |             |                   |                                    |
| 106.    | 13308 <i>Rhodanthe charsleyae</i>  |             |                   |                                    |
| 107.    | 13242 <i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>               |             |                   |                                    |
| 108.    | 13301 <i>Rhodanthe floribunda</i>  |             |                   |                                    |
| 109.    | 13238 <i>Rhodanthe maryonii</i>  |             |                   |                                    |
| 110.    | 13251 <i>Rhodanthe propinqua</i>   |             |                   |                                    |
| 111.    | 13303 <i>Rhodanthe sterilesens</i>   |             |                   |                                    |
| 112.    | 6599 <i>Rhynchospora linearis</i> (Bush Bean, Wintjulanypa)                |             |                   |                                    |
| 113.    | 45148 <i>Roebuckiella ciliocarpa</i>                                       |             |                   |                                    |
| 114.    | 11151 <i>Rostraria pumila</i>  | Y           |                   |                                    |
| 115.    | 46434 <i>Rumex hypogaeus</i>   | Y           |                   |                                    |
| 116.    | 30434 <i>Salsola australis</i>   |             |                   |                                    |
| 117.    | 2357 <i>Santalum lanceolatum</i> (Northern Sandalwood, Yarnguli)           |             |                   |                                    |
| 118.    | 2359 <i>Santalum spicatum</i> (Sandalwood, Wilarak)                        |             |                   |                                    |
| 119.    | 41660 <i>Schenkia australis</i>  |             |                   |                                    |
| 120.    | 8200 <i>Schoenia cassiniana</i> (Schoenia)                                 |             |                   |                                    |
| 121.    | 12305 <i>Senna glutinosa</i> subsp. <i>chatelainiana</i>                   |             |                   |                                    |
| 122.    | 14578 <i>Senna</i> sp. <i>Billabong</i> (J.D. Alonzo 721)                  |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 123. | 14577   | <i>Senna</i> sp. Meekatharra (E. Bailey 1-26)                |             |                   |                                    |
| 124. | 40861   | <i>Sida picklesiana</i>                                      |             | P3                |                                    |
| 125. | 19555   | <i>Stackhousia muricata</i> subsp. annual (W.R. Barker 2172) |             |                   |                                    |
| 126. | 4226    | <i>Swainsona elegans</i>                                     |             |                   |                                    |
| 127. | 2819    | <i>Tetragonia cristata</i>                                   |             |                   |                                    |
| 128. | 6936    | <i>Teucrium racemosum</i> (Grey Germander)                   |             |                   |                                    |
| 129. | 6054    | <i>Thryptomene decussata</i>                                 |             |                   |                                    |
| 130. | 1352    | <i>Thysanotus speckii</i>                                    |             |                   |                                    |
| 131. | 44241   | <i>Trianthema glossostigmum</i>                              |             |                   |                                    |
| 132. | 44362   | <i>Trianthema triquetrum</i>                                 |             |                   |                                    |
| 133. | 4374    | <i>Tribulus astrocarpus</i>                                  |             |                   |                                    |
| 134. | 4376    | <i>Tribulus forrestii</i>                                    |             |                   |                                    |
| 135. | 18072   | <i>Tribulus suberosus</i>                                    |             |                   |                                    |
| 136. | 4316    | <i>Trigonella suavissima</i> (Sweet Fenugreek)               |             |                   |                                    |
| 137. | 7660    | <i>Velleia glabrata</i> (Pee the Bed)                        |             |                   |                                    |
| 138. | 7661    | <i>Velleia hispida</i> (Hispid Velleia)                      |             |                   |                                    |
| 139. | 7664    | <i>Velleia rosea</i> (Pink Velleia)                          |             |                   |                                    |
| 140. | 7393    | <i>Wahlenbergia tumidifructa</i>                             |             |                   |                                    |
| 141. | 20183   | <i>Zygophyllum aurantiacum</i> subsp. <i>aurantiacum</i>     |             |                   |                                    |

**Conservation Codes**

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

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



# NatureMap Species Report

Created By Guest user on 09/10/2018

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 57' 18" E, 27° 25' 25" S  
**Buffer** 20km

|     | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|---|-------------|-------------------|------------------------------------|
| 1.  | 3200    | <i>Acacia acuminata</i> (Jam, Mangard)                    |             |                   |                                    |
| 2.  | 3217    | <i>Acacia aneura</i> (Mulga, Wanari)                      |             |                   |                                    |
| 3.  | 37260   | <i>Acacia aptaneura</i>                                   |             |                   |                                    |
| 4.  | 16112   | <i>Acacia aulacophylla</i>                                |             |                   |                                    |
| 5.  | 3248    | <i>Acacia burkittii</i> (Sandhill Wattle)                 |             |                   |                                    |
| 6.  | 36417   | <i>Acacia caesaneura</i>                                  |             |                   |                                    |
| 7.  | 3273    | <i>Acacia craspedocarpa</i> (Hop Mulga)                   |             |                   |                                    |
| 8.  | 15279   | <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i>        |             |                   |                                    |
| 9.  | 3321    | <i>Acacia eremaea</i>                                     |             |                   |                                    |
| 10. | 36781   | <i>Acacia fuscaneura</i>                                  |             |                   |                                    |
| 11. | 3355    | <i>Acacia grasbyi</i> (Miniritchie)                       |             |                   |                                    |
| 12. | 36418   | <i>Acacia incurvaneura</i>                                |             |                   |                                    |
| 13. | 3419    | <i>Acacia ligulata</i> (Umbrella Bush, Watarka)           |             |                   |                                    |
| 14. | 37240   | <i>Acacia macraneura</i>                                  |             |                   |                                    |
| 15. | 13503   | <i>Acacia masliniana</i>                                  |             |                   |                                    |
| 16. | 3500    | <i>Acacia pruinocarpa</i> (Gidgee)                        |             |                   |                                    |
| 17. | 36800   | <i>Acacia pteraneura</i>                                  |             |                   |                                    |
| 18. | 3507    | <i>Acacia quadrimarginea</i>                              |             |                   |                                    |
| 19. | 19483   | <i>Acacia ramulosa</i> var. <i>linophylla</i>             |             |                   |                                    |
| 20. | 19499   | <i>Acacia ramulosa</i> var. <i>ramulosa</i>               |             |                   |                                    |
| 21. | 3544    | <i>Acacia sibilans</i>                                    |             |                   |                                    |
| 22. |         | <i>Acacia</i> sp.   |             |                   |                                    |
| 23. | 14615   | <i>Acacia speckii</i>                                     |             | P4                |                                    |
| 24. | 13070   | <i>Acacia synchronicia</i>                                |             |                   |                                    |
| 25. | 3586    | <i>Acacia tysonii</i>                                     |             |                   |                                    |
| 26. | 31071   | <i>Acacia umbraculiformis</i>                             |             |                   |                                    |
| 27. | 19465   | <i>Aluta aspera</i> subsp. <i>hesperia</i>                |             |                   |                                    |
| 28. | 4907    | <i>Alyogyne pinoniana</i> (Sand Hibiscus)                 |             |                   |                                    |
| 29. | 2372    | <i>Amyema fitzgeraldii</i> (Pincushion Mistletoe)         |             |                   |                                    |
| 30. | 40910   | <i>Androcalva luteiflora</i> (Yellow-flowered Rulingia)   |             |                   |                                    |
| 31. | 7830    | <i>Angianthus microcephalus</i> (Small-headed Angianthus) |             | P2                |                                    |
| 32. | 12608   | <i>Angianthus uniflorus</i>                               |             | P1                |                                    |
| 33. | 207     | <i>Aristida contorta</i> (Bunched Kerosene Grass)         |             |                   |                                    |
| 34. | 7846    | <i>Asteridea athrioides</i>                               |             |                   |                                    |
| 35. | 7847    | <i>Asteridea chaetopoda</i>                               |             |                   |                                    |
| 36. | 17801   | <i>Atriplex cephalantha</i>                               |             |                   |                                    |
| 37. | 2453    | <i>Atriplex codonocarpa</i> (Flat-topped Saltbush)        |             |                   |                                    |
| 38. | 2459    | <i>Atriplex holocarpa</i> (Pop Saltbush)                  |             |                   |                                    |
| 39. | 2468    | <i>Atriplex nana</i>                                      |             |                   |                                    |
| 40. | 2476    | <i>Atriplex semilunaris</i> (Annual Saltbush)             |             |                   |                                    |
| 41. | 12710   | <i>Bergia auriculata</i>                                  |             | P2                |                                    |
| 42. | 11726   | <i>Bergia perennis</i> subsp. <i>exigua</i>               |             |                   |                                    |
| 43. | 7871    | <i>Brachyscome ciliaris</i>                               |             |                   |                                    |
| 44. | 7882    | <i>Brachyscome perpusilla</i>                             |             |                   |                                    |
| 45. | 247     | <i>Bromus arenarius</i> (Sand Brome)                      |             |                   |                                    |
| 46. | 1366    | <i>Bulbine semibarbata</i> (Leek Lily)                    |             |                   |                                    |
| 47. | 3167    | <i>Bursaria occidentalis</i>                              |             |                   |                                    |
| 48. | 2865    | <i>Calandrinia pumila</i>                                 |             |                   |                                    |
| 49. | 2869    | <i>Calandrinia schistorhiza</i>                           |             |                   |                                    |
| 50. | 7893    | <i>Calocephalus knappii</i>                               |             |                   |                                    |
| 51. | 48223   | <i>Calocephalus pilbarensis</i>                           |             |                   |                                    |
| 52. | 7903    | <i>Calotis hispidula</i> (Bindy Eye)                      |             |                   |                                    |

| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 53.     | 7905 <i>Calotis multicaulis</i> (Many-stemmed Burr-daisy)                  |             |                   |                                    |
| 54.     | 31671 <i>Calotis</i> sp. Perrinvale Station (R.J. Cranfield 7096)          |             | P3                |                                    |
| 55.     | 7916 <i>Centaurea melitensis</i> (Maltese Cockspur, Malta Thistle)         | Y           |                   |                                    |
| 56.     | 7922 <i>Cephalopterum drummondii</i> (Pompom Head)                         |             |                   |                                    |
| 57.     | 37 <i>Cheilanthes lasiophylla</i> (Woolly Cloak Fern)                      |             |                   |                                    |
| 58.     | 2489 <i>Chenopodium gaudichaudianum</i> (Cottony Saltbush)                 |             |                   |                                    |
| 59.     | 2494 <i>Chenopodium murale</i> (Nettle-leaf Goosefoot)                     | Y           |                   |                                    |
| 60.     | 3756 <i>Chorizema genistoides</i>  |             |                   |                                    |
| 61.     | 7370 <i>Citrullus lanatus</i> (Pie Melon)                                  | Y           |                   |                                    |
| 62.     | 2778 <i>Codonocarpus cotinifolius</i> (Native Poplar, Kundurangu)          |             |                   |                                    |
| 63.     | 1285 <i>Corynotheca micrantha</i> (Sand Lily)                              |             |                   |                                    |
| 64.     | 7946 <i>Cotula cotuloides</i> (Smooth Cotula)                              |             |                   |                                    |
| 65.     | 11709 <i>Crassula colorata</i> var. <i>acuminata</i>                       |             |                   |                                    |
| 66.     | 11021 <i>Cuscuta planiflora</i>  | Y           |                   |                                    |
| 67.     | 6747 <i>Cyanostegia angustifolia</i> (Tinsel-flower)                       |             |                   |                                    |
| 68.     | 6218 <i>Daucus glochidiatus</i> (Australian Carrot)                        |             |                   |                                    |
| 69.     | 13741 <i>Dichanthium sericeum</i> subsp. <i>humilius</i>                   |             |                   |                                    |
| 70.     | 18131 <i>Dicrastylis</i> sp. Cue (A.A. Mitchell 764)                       |             | P1                |                                    |
| 71.     | 31881 <i>Dodonaea amplisemina</i>  |             | P4                |                                    |
| 72.     | 4766 <i>Dodonaea inaequifolia</i>  |             |                   |                                    |
| 73.     | 4773 <i>Dodonaea petiolaris</i>  |             |                   |                                    |
| 74.     | 4782 <i>Dodonaea viscosa</i> (Sticky Hopbush)                              |             |                   |                                    |
| 75.     | 11674 <i>Dodonaea viscosa</i> subsp. <i>mucronata</i>                      |             |                   |                                    |
| 76.     | 11202 <i>Dodonaea viscosa</i> subsp. <i>spatulata</i> (Sticky Hop-bush)    |             |                   |                                    |
| 77.     | 43544 <i>Drosera finlaysoniana</i>   |             |                   |                                    |
| 78.     | 3098 <i>Drosera glanduligera</i> (Pimpernel Sundew)                        |             |                   |                                    |
| 79.     | 3106 <i>Drosera macrantha</i> (Bridal Rainbow)                             |             |                   |                                    |
| 80.     | 4460 <i>Drummondita miniata</i>  |             | P3                |                                    |
| 81.     | 44508 <i>Duma florulenta</i>   |             |                   |                                    |
| 82.     | 33479 <i>Dysphania melanocarpa</i> (Black Crumbweed)                       |             |                   |                                    |
| 83.     | 11653 <i>Dysphania rhadinostachya</i> subsp. <i>inflata</i>                |             |                   |                                    |
| 84.     | 357 <i>Enneapogon caerulescens</i> (Limestone Grass)                       |             |                   |                                    |
| 85.     | 376 <i>Eragrostis curvula</i> (African Lovegrass)                          | Y           |                   |                                    |
| 86.     | 378 <i>Eragrostis dielsii</i> (Mallee Lovegrass)                           |             |                   |                                    |
| 87.     | 381 <i>Eragrostis falcata</i> (Sickle Lovegrass)                           |             |                   |                                    |
| 88.     | 387 <i>Eragrostis lanipes</i> (Creeping Wanderrie)                         |             |                   |                                    |
| 89.     | 392 <i>Eragrostis pergracilis</i>  |             |                   |                                    |
| 90.     | 7189 <i>Eremophila clarkei</i> (Turpentine Bush)                           |             |                   |                                    |
| 91.     | 17157 <i>Eremophila compacta</i> subsp. <i>compacta</i>                    |             |                   |                                    |
| 92.     | 17155 <i>Eremophila compacta</i> subsp. <i>fecunda</i>                     |             |                   |                                    |
| 93.     | 7198 <i>Eremophila deserti</i>   |             |                   |                                    |
| 94.     | 7205 <i>Eremophila exilifolia</i>  |             |                   |                                    |
| 95.     | 16792 <i>Eremophila flabellata</i>   |             |                   |                                    |
| 96.     | 7207 <i>Eremophila foliosissima</i>  |             |                   |                                    |
| 97.     | 15052 <i>Eremophila forrestii</i> subsp. <i>forrestii</i>                  |             |                   |                                    |
| 98.     | 29532 <i>Eremophila galeata</i>  |             |                   |                                    |
| 99.     | 7211 <i>Eremophila georgei</i>   |             |                   |                                    |
| 100.    | 16732 <i>Eremophila gilesii</i> subsp. <i>gilesii</i>                      |             |                   |                                    |
| 101.    | 14191 <i>Eremophila glabra</i> subsp. <i>tomentosa</i>                     |             |                   |                                    |
| 102.    | 7216 <i>Eremophila glutinosa</i>   |             |                   |                                    |
| 103.    | 17189 <i>Eremophila hygrophana</i>   |             |                   |                                    |
| 104.    | 17171 <i>Eremophila jucunda</i> subsp. <i>jucunda</i>                      |             |                   |                                    |
| 105.    | 7228 <i>Eremophila lachnocalyx</i> (Woolly-calyxed Eremophila)             |             |                   |                                    |
| 106.    | 17576 <i>Eremophila latrobei</i> subsp. <i>latrobei</i>                    |             |                   |                                    |
| 107.    | 7234 <i>Eremophila longifolia</i> (Berrigan, Tulypurpa)                    |             |                   |                                    |
| 108.    | 7236 <i>Eremophila macmillaniana</i> (Grey Turpentine Bush)                |             |                   |                                    |
| 109.    | 16363 <i>Eremophila maculata</i> subsp. <i>brevifolia</i> (Native Fuchsia) |             |                   |                                    |
| 110.    | 7242 <i>Eremophila miniata</i> (Kopi Poverty Bush)                         |             |                   |                                    |
| 111.    | 15003 <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>              |             |                   |                                    |
| 112.    | 18570 <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>           |             |                   |                                    |
| 113.    | 15058 <i>Eremophila platycalyx</i> subsp. <i>platycalyx</i>                |             |                   |                                    |
| 114.    | 7257 <i>Eremophila punicea</i> (Crimson Eremophila)                        |             |                   |                                    |
| 115.    | 31192 <i>Eremophila rostrata</i> subsp. <i>rostrata</i>                    |             | T                 |                                    |
| 116.    | 7269 <i>Eremophila serrulata</i> (Serrate-leaved Eremophila)               |             |                   |                                    |
| 117.    | 15163 <i>Eremophila shonae</i> subsp. <i>shonae</i>                        |             |                   |                                    |
| 118.    | 17164 <i>Eremophila simulans</i> subsp. <i>simulans</i>                    |             |                   |                                    |
| 119.    | <i>Eremophila</i> sp.  |             |                   |                                    |
| 120.    | 15168 <i>Eremophila spuria</i>   |             |                   |                                    |
| 121.    | 15155 <i>Eremophila youngii</i> subsp. <i>youngii</i>                      |             |                   |                                    |
| 122.    | 408 <i>Eriachne flaccida</i> (Claypan Grass)                               |             |                   |                                    |

| Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|---|-------------|-------------------|------------------------------------|
| 123.    | 2514 <i>Eriochiton sclerolaenoides</i> (Woolly Bindii)                    |             |                   |                                    |
| 124.    | 4334 <i>Erodium crinitum</i> (Corkscrew)                                  |             |                   |                                    |
| 125.    | 4335 <i>Erodium cygnorum</i> (Blue Heronsbill)                            |             |                   |                                    |
| 126.    | 5779 <i>Eucalyptus striatocalyx</i> (Cue York Gum)                        |             |                   |                                    |
| 127.    | 12097 <i>Euphorbia tannensis</i> subsp. <i>eremophila</i> (Desert Spurge) |             |                   |                                    |
| 128.    | 10977 <i>Exocarpos aphyllus</i> (Leafless Ballart)                        |             |                   |                                    |
| 129.    | 12622 <i>Feldstonia nitens</i>  |             |                   |                                    |
| 130.    | 5200 <i>Frankenia fecunda</i>   |             |                   |                                    |
| 131.    | 5209 <i>Frankenia pauciflora</i> (Seaheath)                               |             |                   |                                    |
| 132.    | 3907 <i>Gastrolobium laytonii</i> (Breelya, Prilya)                       |             |                   |                                    |
| 133.    | 3938 <i>Glycine canescens</i> (Silky Glycine)                             |             |                   |                                    |
| 134.    | 12624 <i>Gnephosis angianthoides</i>                                      |             |                   |                                    |
| 135.    | 7989 <i>Gnephosis brevifolia</i> (Short-leaved Gnephosis)                 |             |                   |                                    |
| 136.    | 8002 <i>Gnephosis tenuissima</i>  |             |                   |                                    |
| 137.    | 12512 <i>Goodenia berringinensis</i>                                      |             | P4                |                                    |
| 138.    | 12527 <i>Goodenia kingiana</i>  |             |                   |                                    |
| 139.    | 7527 <i>Goodenia mimuloides</i>   |             |                   |                                    |
| 140.    | 7541 <i>Goodenia pusilliflora</i> (Smallflower Goodenia)                  |             |                   |                                    |
| 141.    | 1986 <i>Grevillea deflexa</i>   |             |                   |                                    |
| 142.    | 2019 <i>Grevillea inconspicua</i> (Cue Grevillea)                         |             | P4                |                                    |
| 143.    | 2808 <i>Gunniopsis rodwayi</i>  |             |                   |                                    |
| 144.    | 2196 <i>Hakea preissii</i> (Needle Tree, Dandjin)                         |             |                   |                                    |
| 145.    | 17485 <i>Halgania anagalloides</i>  |             |                   |                                    |
| 146.    | 29840 <i>Halgania cyanea</i> var. <i>Allambi Stn</i> (B.W. Strong 676)    |             |                   |                                    |
| 147.    | 6180 <i>Haloragis trigonocarpa</i>  |             |                   |                                    |
| 148.    | 8045 <i>Helipterum craspedioides</i> (Yellow Billy Buttons)               |             |                   |                                    |
| 149.    | 17397 <i>Hemigenia</i> sp. <i>Yalgoo</i> (A.M. Ashby 2624)                |             |                   |                                    |
| 150.    | 15448 <i>Hyalosperma glutinosum</i> subsp. <i>venustum</i>                |             |                   |                                    |
| 151.    | 8086 <i>Hypochoeris glabra</i> (Smooth Catsear)                           | Y           |                   |                                    |
| 152.    | 40320 <i>Indigofera australis</i> subsp. <i>hesperia</i>                  |             |                   |                                    |
| 153.    | 911 <i>Isolepis congrua</i>   |             |                   |                                    |
| 154.    | 7397 <i>Isotoma petraea</i> (Rock Isotome, Tundiwari)                     |             |                   |                                    |
| 155.    | 14779 <i>Jacksonia arida</i>  |             |                   |                                    |
| 156.    | 19372 <i>Jacksonia lanicarpa</i>  |             | P1                |                                    |
| 157.    | 8094 <i>Kippistia suaedifolia</i>   |             |                   |                                    |
| 158.    | 20019 <i>Lachnagrostis filiformis</i>                                     |             |                   |                                    |
| 159.    | 17209 <i>Lachnostachys verbascifolia</i> var. <i>verbascifolia</i>        |             |                   |                                    |
| 160.    | 4956 <i>Lawrencia helmsii</i> (Dunna Dunna)                               |             |                   |                                    |
| 161.    | 3033 <i>Lepidium oxytrichum</i>   |             |                   |                                    |
| 162.    | 3039 <i>Lepidium platypetalum</i> (Slender Peppergrass)                   |             |                   |                                    |
| 163.    | 7670 <i>Levenhookia dubia</i> (Hairy Stylewort)                           |             |                   |                                    |
| 164.    | 7403 <i>Lobelia heterophylla</i> (Wing-seeded Lobelia)                    |             |                   |                                    |
| 165.    | 4061 <i>Lotus cruentus</i> (Redflower Lotus)                              |             |                   |                                    |
| 166.    | 2396 <i>Lysiana casuarinae</i>  |             |                   |                                    |
| 167.    | 36375 <i>Lysimachia arvensis</i> (Pimpernel)                              | Y           |                   |                                    |
| 168.    | 2533 <i>Maireana amoena</i>   |             |                   |                                    |
| 169.    | 2538 <i>Maireana carnososa</i> (Cottony Bluebush)                         |             |                   |                                    |
| 170.    | 2539 <i>Maireana convexa</i> (Mulga Bluebush)                             |             |                   |                                    |
| 171.    | 2544 <i>Maireana georgei</i> (Satin Bluebush)                             |             |                   |                                    |
| 172.    | 2545 <i>Maireana glomerifolia</i> (Ball Leaf Bluebush)                    |             |                   |                                    |
| 173.    | 2553 <i>Maireana oppositifolia</i>  |             |                   |                                    |
| 174.    | 2556 <i>Maireana planifolia</i> (Low Bluebush)                            |             |                   |                                    |
| 175.    | 2559 <i>Maireana prosthecochaeta</i>                                      |             | P3                |                                    |
| 176.    | 2560 <i>Maireana pyramidata</i> (Sago Bush)                               |             |                   |                                    |
| 177.    | 2567 <i>Maireana tomentosa</i> (Felt Bluebush)                            |             |                   |                                    |
| 178.    | 11662 <i>Maireana tomentosa</i> subsp. <i>tomentosa</i>                   |             |                   |                                    |
| 179.    | 2568 <i>Maireana trichoptera</i> (Downy Bluebush)                         |             |                   |                                    |
| 180.    | 2569 <i>Maireana triptera</i> (Threewinged Bluebush)                      |             |                   |                                    |
| 181.    | 12949 <i>Marsdenia australis</i>  |             |                   |                                    |
| 182.    | 19449 <i>Melaleuca stereophloia</i>                                       |             |                   |                                    |
| 183.    | 3054 <i>Menkea villosula</i>  |             |                   |                                    |
| 184.    | 30411 <i>Micromyrtus placoides</i>  |             | P3                |                                    |
| 185.    | 8107 <i>Minuria cunninghamii</i> (Bush Minuria)                           |             |                   |                                    |
| 186.    | 8108 <i>Minuria gardneri</i>  |             |                   |                                    |
| 187.    | 4097 <i>Mirbelia ramulosa</i>   |             |                   |                                    |
| 188.    | 4098 <i>Mirbelia rhagodioides</i>   |             |                   |                                    |
| 189.    | 4111 <i>Muelleranthus trifoliolatus</i>                                   |             |                   |                                    |
| 190.    | 8114 <i>Myriocephalus appendiculatus</i> (White-tip Myriocephalus)        |             |                   |                                    |
| 191.    | 8116 <i>Myriocephalus guerinae</i>  |             |                   |                                    |
| 192.    | 17925 <i>Myriocephalus oldfieldii</i>                                     |             |                   |                                    |

|      | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|---|-------------|-------------------|------------------------------------|
| 193. | 8121    | <i>Myriocephalus rudallii</i>   |             |                   |                                    |
| 194. | 11331   | <i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>                         |             |                   |                                    |
| 195. | 12734   | <i>Olearia humilis</i>  |             |                   |                                    |
| 196. | 6723    | <i>Omphalolappula concava</i> (Burr Stickseed)                              |             |                   |                                    |
| 197. | 17      | <i>Ophioglossum lusitanicum</i> (Adders Tongue)                             |             |                   |                                    |
| 198. | 5227    | <i>Opuntia stricta</i> (Common Prickly Pear)                                | Y           |                   |                                    |
| 199. | 40424   | <i>Pentameris airoides</i> subsp. <i>airoides</i>                           | Y           |                   |                                    |
| 200. | 18537   | <i>Philotheca brucei</i> subsp. <i>brucei</i>                               |             |                   |                                    |
| 201. | 5245    | <i>Pimelea forrestiana</i>  |             |                   |                                    |
| 202. | 11185   | <i>Pimelea microcephala</i> subsp. <i>microcephala</i>                      |             |                   |                                    |
| 203. | 5271    | <i>Pimelea trichostachya</i> (Spiked Riceflower)                            |             |                   |                                    |
| 204. | 19744   | <i>Pittosporum angustifolium</i>  |             |                   |                                    |
| 205. | 14198   | <i>Plantago</i> sp. Mt Magnet (A.S. George 6793)                            |             |                   |                                    |
| 206. | 8173    | <i>Podolepis capillaris</i> (Wiry Podolepis)                                |             |                   |                                    |
| 207. | 8188    | <i>Pogonolepis stricta</i>  |             |                   |                                    |
| 208. | 2884    | <i>Portulaca oleracea</i> (Purslane, Wakati)                                |             |                   |                                    |
| 209. | 16688   | <i>Prasophyllum gracile</i>   |             |                   |                                    |
| 210. | 12707   | <i>Prostanthera albiflora</i>   |             |                   |                                    |
| 211. | 12703   | <i>Prostanthera petrophila</i>  |             | P3                |                                    |
| 212. | 8189    | <i>Pseudognaphalium luteoalbum</i> (Jersey Cudweed)                         |             |                   |                                    |
| 213. | 18154   | <i>Psydrax latifolia</i>  |             |                   |                                    |
| 214. | 18210   | <i>Psydrax rigidula</i>   |             |                   |                                    |
| 215. | 8192    | <i>Pterocaulon sphacelatum</i> (Apple Bush, Fruit Salad Plant)              |             |                   |                                    |
| 216. | 2708    | <i>Ptilotus chamaecladus</i>  |             |                   |                                    |
| 217. | 2727    | <i>Ptilotus gaudichaudii</i>  |             |                   |                                    |
| 218. | 2728    | <i>Ptilotus gomphrenoides</i>   |             |                   |                                    |
| 219. | 2729    | <i>Ptilotus grandiflorus</i>  |             |                   |                                    |
| 220. | 2731    | <i>Ptilotus helipteroides</i> (Hairy Mulla Mulla)                           |             |                   |                                    |
| 221. | 2741    | <i>Ptilotus macrocephalus</i> (Featherheads)                                |             |                   |                                    |
| 222. | 2747    | <i>Ptilotus obovatus</i> (Cotton Bush)                                      |             |                   |                                    |
| 223. | 34700   | <i>Ptilotus polakii</i> subsp. <i>polakii</i>                               |             |                   |                                    |
| 224. | 2755    | <i>Ptilotus rotundifolius</i> (Royal Mulla Mulla)                           |             |                   |                                    |
| 225. | 2757    | <i>Ptilotus schwartzii</i>  |             |                   |                                    |
| 226. | 2582    | <i>Rhagodia eremaea</i> (Thorny Saltbush)                                   |             |                   |                                    |
| 227. | 13306   | <i>Rhodanthe battii</i>   |             |                   |                                    |
| 228. | 13308   | <i>Rhodanthe charsleyae</i>   |             |                   |                                    |
| 229. | 13242   | <i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>                      |             |                   |                                    |
| 230. | 13294   | <i>Rhodanthe laevis</i>   |             |                   |                                    |
| 231. | 13238   | <i>Rhodanthe maryonii</i>   |             |                   |                                    |
| 232. | 13251   | <i>Rhodanthe propinqua</i>  |             |                   |                                    |
| 233. | 13303   | <i>Rhodanthe sterilesens</i>  |             |                   |                                    |
| 234. | 45148   | <i>Roebuckiella ciliocarpa</i>  |             |                   |                                    |
| 235. | 11151   | <i>Rostraria pumila</i>   | Y           |                   |                                    |
| 236. | 46434   | <i>Rumex hypogaeus</i>  | Y           |                   |                                    |
| 237. | 40425   | <i>Rytidosperma caespitosum</i>   |             |                   |                                    |
| 238. | 30434   | <i>Salsola australis</i>  |             |                   |                                    |
| 239. | 7644    | <i>Scaevola spinescens</i> (Currant Bush, Maroon)                           |             |                   |                                    |
| 240. | 7648    | <i>Scaevola tomentosa</i> (Raggedleaf Fanflower)                            |             |                   |                                    |
| 241. | 41660   | <i>Schenkia australis</i>   |             |                   |                                    |
| 242. | 13285   | <i>Schoenia ayersii</i>   |             |                   |                                    |
| 243. | 8200    | <i>Schoenia cassiniana</i> (Schoenia)                                       |             |                   |                                    |
| 244. | 13287   | <i>Schoenia filifolia</i> subsp. <i>filifolia</i>                           |             |                   |                                    |
| 245. | 17409   | <i>Schoenus variicellae</i>   |             |                   |                                    |
| 246. | 2606    | <i>Sclerolaena cuneata</i> (Yellow Bindii)                                  |             |                   |                                    |
| 247. | 2609    | <i>Sclerolaena diacantha</i> (Grey Copperburr)                              |             |                   |                                    |
| 248. | 2611    | <i>Sclerolaena eriacantha</i> (Tall Bindii)                                 |             |                   |                                    |
| 249. | 2613    | <i>Sclerolaena fimbriolata</i>  |             |                   |                                    |
| 250. | 8877    | <i>Sclerolaena gardneri</i>   |             |                   |                                    |
| 251. | 8207    | <i>Senecio glossanthus</i> (Slender Groundsel)                              |             |                   |                                    |
| 252. | 12279   | <i>Senna artemisioides</i> subsp. <i>helmsii</i>                            |             |                   |                                    |
| 253. | 18449   | <i>Senna glaucifolia</i>  |             |                   |                                    |
| 254. | 12305   | <i>Senna glutinosa</i> subsp. <i>chatelainiana</i>                          |             |                   |                                    |
| 255. | 14579   | <i>Senna</i> sp. Austin (A. Strid 20210)                                    |             |                   |                                    |
| 256. | 7018    | <i>Solanum lasiophyllum</i> (Flannel Bush, Mindjulu)                        |             |                   |                                    |
| 257. | 7023    | <i>Solanum nummularium</i> (Money-leaved Solanum)                           |             |                   |                                    |
| 258. | 11241   | <i>Solanum orbiculatum</i> subsp. <i>orbiculatum</i> (Round-leaved Solanum) |             |                   |                                    |
| 259. | 29813   | <i>Stackhousia</i> sp. Mt Keith (G. Cockerton & G. O'Keefe 11017)           |             |                   |                                    |
| 260. | 3074    | <i>Stenopetalum anfractum</i>   |             |                   |                                    |
| 261. | 30212   | <i>Stenopetalum lineare</i> var. <i>lineare</i>                             |             |                   |                                    |
| 262. | 8238    | <i>Streptoglossa liatroides</i>   |             |                   |                                    |

| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 263.    | 7740 <i>Stylidium induratum</i> (Desert Triggerplant)          |             |                   |                                    |
| 264.    | 4226 <i>Swainsona elegans</i>                                  |             |                   |                                    |
| 265.    | 12356 <i>Swainsona formosa</i>                                 |             |                   |                                    |
| 266.    | 4229 <i>Swainsona gracilis</i>                                 |             |                   |                                    |
| 267.    | 4231 <i>Swainsona kingii</i>                                   |             |                   |                                    |
| 268.    | 4237 <i>Swainsona oliveri</i>                                  |             |                   |                                    |
| 269.    | 13581 <i>Swainsona paradoxa</i>                                |             |                   |                                    |
| 270.    | 2819 <i>Tetragonia cristata</i>                                |             |                   |                                    |
| 271.    | 6936 <i>Teucrium racemosum</i> (Grey Germander)                |             |                   |                                    |
| 272.    | 48603 <i>Teucrium teucriiflorum</i>                            |             |                   |                                    |
| 273.    | 6054 <i>Thryptomene decussata</i>                              |             |                   |                                    |
| 274.    | 48213 <i>Thyridia repens</i>                                   |             |                   |                                    |
| 275.    | 1338 <i>Thysanotus manglesianus</i> (Fringed Lily)             |             |                   |                                    |
| 276.    | 6279 <i>Trachymene ornata</i> (Spongefruit)                    |             |                   |                                    |
| 277.    | 44362 <i>Trianthema triquetrum</i>                             |             |                   |                                    |
| 278.    | 4376 <i>Tribulus forrestii</i>                                 |             |                   |                                    |
| 279.    | 4316 <i>Trigonella suavissima</i> (Sweet Fenugreek)            |             |                   |                                    |
| 280.    | 48319 <i>Tripogonella loliiformis</i>                          |             |                   |                                    |
| 281.    | 8253 <i>Triptilodiscus pygmaeus</i>                            |             |                   |                                    |
| 282.    | 30716 <i>Vachellia farnesiana</i> (Mimosa Bush)                | Y           |                   |                                    |
| 283.    | 7660 <i>Velleia glabrata</i> (Pee the Bed)                     |             |                   |                                    |
| 284.    | 7661 <i>Velleia hispida</i> (Hispid Velleia)                   |             |                   |                                    |
| 285.    | 7664 <i>Velleia rosea</i> (Pink Velleia)                       |             |                   |                                    |
| 286.    | 8265 <i>Vittadinia eremaea</i>                                 |             |                   |                                    |
| 287.    | 7393 <i>Wahlenbergia tumidifructa</i>                          |             |                   |                                    |
| 288.    | 1391 <i>Wurmbea densiflora</i>                                 |             |                   |                                    |
| 289.    | 1397 <i>Wurmbea inframediana</i>                               |             |                   |                                    |
| 290.    | 20183 <i>Zygophyllum aurantiacum</i> subsp. <i>aurantiacum</i> |             |                   |                                    |
| 291.    | 18140 <i>Zygophyllum eichleri</i>                              |             |                   |                                    |
| 292.    | 4389 <i>Zygophyllum eremaeum</i>                               |             |                   |                                    |
| 293.    | 4390 <i>Zygophyllum fruticosum</i> (Shrubby Twinleaf)          |             |                   |                                    |
| 294.    | 4392 <i>Zygophyllum iodocarpum</i>                             |             |                   |                                    |
| 295.    | 4393 <i>Zygophyllum kochii</i>                                 |             |                   |                                    |
| 296.    | 17277 <i>Zygophyllum lobulatum</i>                             |             |                   |                                    |

**Conservation Codes**

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

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

# NatureMap Species Report

Created By Guest user on 09/10/2018

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 51' 24" E, 27° 45' 15" S  
**Buffer** 20km

|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 1.  | 37260   | <i>Acacia aptaneura</i>                                      |             |                   |                                    |
| 2.  | 3248    | <i>Acacia burkittii</i> (Sandhill Wattle)                    |             |                   |                                    |
| 3.  | 36417   | <i>Acacia caesaneura</i>                                     |             |                   |                                    |
| 4.  | 3273    | <i>Acacia craspedocarpa</i> (Hop Mulga)                      |             |                   |                                    |
| 5.  | 36781   | <i>Acacia fuscaneura</i>                                     |             |                   |                                    |
| 6.  | 3355    | <i>Acacia grasbyi</i> (Miniritchie)                          |             |                   |                                    |
| 7.  | 44482   | <i>Acacia lapidosa</i>                                       |             | P1                |                                    |
| 8.  | 32116   | <i>Acacia lator</i>  |             |                   |                                    |
| 9.  | 13503   | <i>Acacia masliniana</i>                                     |             |                   |                                    |
| 10. | 36416   | <i>Acacia mulganeura</i>                                     |             |                   |                                    |
| 11. | 3500    | <i>Acacia pruinocarpa</i> (Gidgee)                           |             |                   |                                    |
| 12. | 36800   | <i>Acacia pteraneura</i>                                     |             |                   |                                    |
| 13. | 19499   | <i>Acacia ramulosa</i> var. <i>ramulosa</i>                  |             |                   |                                    |
| 14. | 13078   | <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>        |             |                   |                                    |
| 15. |         | <i>Acacia</i> sp.  |             |                   |                                    |
| 16. | 14615   | <i>Acacia speckii</i>  |             | P4                |                                    |
| 17. | 3577    | <i>Acacia tetragonophylla</i> (Kurara, Wakalpuka)            |             |                   |                                    |
| 18. | 31071   | <i>Acacia umbraculiformis</i>                                |             |                   |                                    |
| 19. | 19465   | <i>Aluta aspera</i> subsp. <i>hesperia</i>                   |             |                   |                                    |
| 20. | 7830    | <i>Angianthus microcephalus</i> (Small-headed Angianthus)    |             | P2                |                                    |
| 21. | 12608   | <i>Angianthus uniflorus</i>                                  |             | P1                |                                    |
| 22. | 207     | <i>Aristida contorta</i> (Bunched Kerosene Grass)            |             |                   |                                    |
| 23. | 7847    | <i>Asteridea chaetopoda</i>                                  |             |                   |                                    |
| 24. | 2453    | <i>Atriplex codonocarpa</i> (Flat-topped Saltbush)           |             |                   |                                    |
| 25. | 2468    | <i>Atriplex nana</i>   |             |                   |                                    |
| 26. | 2476    | <i>Atriplex semilunaris</i> (Annual Saltbush)                |             |                   |                                    |
| 27. | 7871    | <i>Brachyscome ciliaris</i>                                  |             |                   |                                    |
| 28. | 2859    | <i>Calandrinia papillata</i>                                 |             |                   |                                    |
| 29. | 7895    | <i>Calocephalus multiflorus</i> (Yellow-top)                 |             |                   |                                    |
| 30. | 7903    | <i>Calotis hispidula</i> (Bindy Eye)                         |             |                   |                                    |
| 31. | 5438    | <i>Calytrix amethystina</i>                                  |             |                   |                                    |
| 32. | 37      | <i>Cheilanthes lasiophylla</i> (Woolly Cloak Fern)           |             |                   |                                    |
| 33. | 7926    | <i>Chondropyxis halophila</i>                                |             |                   |                                    |
| 34. | 3769    | <i>Clitoria ternatea</i>                                     | Y           |                   |                                    |
| 35. | 2778    | <i>Codonocarpus cotinifolius</i> (Native Poplar, Kundurangu) |             |                   |                                    |
| 36. | 7946    | <i>Cotula cotuloides</i> (Smooth Cotula)                     |             |                   |                                    |
| 37. | 32341   | <i>Crossidium davidai</i>                                    |             |                   |                                    |
| 38. | 3010    | <i>Cuphonotus andraeanus</i>                                 |             |                   |                                    |
| 39. | 12721   | <i>Dielitzia tysonii</i>                                     |             |                   |                                    |
| 40. | 3011    | <i>Diplotaxis muralis</i> (Wall Rocket)                      | Y           |                   |                                    |
| 41. | 14298   | <i>Drosera macrantha</i> subsp. <i>macrantha</i>             |             |                   |                                    |
| 42. | 31334   | <i>Duperreya sericea</i>                                     |             |                   |                                    |
| 43. | 11632   | <i>Dysphania glomulifera</i> subsp. <i>eremaea</i>           |             |                   |                                    |
| 44. | 33479   | <i>Dysphania melanocarpa</i> (Black Crumbweed)               |             |                   |                                    |
| 45. | 32348   | <i>Eccremidium arcuatum</i>                                  |             |                   |                                    |
| 46. | 378     | <i>Eragrostis dielsii</i> (Mallee Lovegrass)                 |             |                   |                                    |
| 47. | 381     | <i>Eragrostis falcata</i> (Sickle Lovegrass)                 |             |                   |                                    |
| 48. | 387     | <i>Eragrostis lanipes</i> (Creeping Wanderrie)               |             |                   |                                    |
| 49. | 7205    | <i>Eremophila exilifolia</i>                                 |             |                   |                                    |
| 50. | 7207    | <i>Eremophila foliosissima</i>                               |             |                   |                                    |
| 51. | 15052   | <i>Eremophila forrestii</i> subsp. <i>forrestii</i>          |             |                   |                                    |
| 52. | 7211    | <i>Eremophila georgei</i>                                    |             |                   |                                    |



| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 53.     | 7216 <i>Eremophila glutinosa</i>   |             |                   |                                    |
| 54.     | 17189 <i>Eremophila hygrophana</i>   |             |                   |                                    |
| 55.     | 17576 <i>Eremophila latrobei</i> subsp. <i>latrobei</i>                    |             |                   |                                    |
| 56.     | 7234 <i>Eremophila longifolia</i> (Berrigan, Tulypurpa)                    |             |                   |                                    |
| 57.     | 15158 <i>Eremophila mackinlayi</i> subsp. <i>spathulata</i>                |             |                   |                                    |
| 58.     | 7242 <i>Eremophila miniata</i> (Kopi Poverty Bush)                         |             |                   |                                    |
| 59.     | 7250 <i>Eremophila pantonii</i>  |             |                   |                                    |
| 60.     | 7253 <i>Eremophila platycalyx</i> (Granite Poverty Bush)                   |             |                   |                                    |
| 61.     | 15058 <i>Eremophila platycalyx</i> subsp. <i>platycalyx</i>                |             |                   |                                    |
| 62.     | 7257 <i>Eremophila punicea</i> (Crimson <i>Eremophila</i> )                |             |                   |                                    |
| 63.     | 7269 <i>Eremophila serrulata</i> (Serrate-leaved <i>Eremophila</i> )       |             |                   |                                    |
| 64.     | 15168 <i>Eremophila spuria</i>   |             |                   |                                    |
| 65.     | 5779 <i>Eucalyptus striatocalyx</i> (Cue York Gum)                         |             |                   |                                    |
| 66.     | 17914 <i>Euryomyrtus recurva</i>   |             | P3                |                                    |
| 67.     | 5191 <i>Frankenia cinerea</i>  |             |                   |                                    |
| 68.     | 5211 <i>Frankenia sessilis</i>   |             |                   |                                    |
| 69.     | 12624 <i>Gnephosis angianthoides</i>                                       |             |                   |                                    |
| 70.     | 7989 <i>Gnephosis brevifolia</i> (Short-leaved <i>Gnephosis</i> )          |             |                   |                                    |
| 71.     | 7998 <i>Gnephosis macrocephala</i>   |             |                   |                                    |
| 72.     | 8004 <i>Gnephosis trifida</i>  |             |                   |                                    |
| 73.     | 7527 <i>Goodenia mimuloides</i>  |             |                   |                                    |
| 74.     | 1986 <i>Grevillea deflexa</i>  |             |                   |                                    |
| 75.     | 2004 <i>Grevillea extorris</i>   |             |                   |                                    |
| 76.     | 2019 <i>Grevillea inconspicua</i> (Cue <i>Grevillea</i> )                  |             | P4                |                                    |
| 77.     | 15981 <i>Grevillea obliquistigma</i> subsp. <i>obliquistigma</i>           |             |                   |                                    |
| 78.     | 12822 <i>Grevillea sarissa</i> subsp. <i>bicolor</i>                       |             |                   |                                    |
| 79.     | 32386 <i>Grimmia laevigata</i>   |             |                   |                                    |
| 80.     | 2196 <i>Hakea preissii</i> (Needle Tree, Dandjin)                          |             |                   |                                    |
| 81.     | 8045 <i>Helipterum craspedioides</i> (Yellow Billy Buttons)                |             |                   |                                    |
| 82.     | 43022 <i>Hibiscus</i> sp. <i>Gardneri</i> (A.L. Payne PRP 1435)            |             |                   |                                    |
| 83.     | 7 <i>Isoetes australis</i>   |             |                   |                                    |
| 84.     | 8094 <i>Kippistia suaeifolia</i>   |             |                   |                                    |
| 85.     | 4955 <i>Lawrencia glomerata</i>  |             |                   |                                    |
| 86.     | 4956 <i>Lawrencia helmsii</i> (Dunna Dunna)                                |             |                   |                                    |
| 87.     | 3033 <i>Lepidium oxytrichum</i>  |             |                   |                                    |
| 88.     | 2398 <i>Lysiana murrayi</i> (Mistletoe, Parka-Parka)                       |             |                   |                                    |
| 89.     | 2536 <i>Maireana atkinsiana</i> (Bronze Bluebush)                          |             |                   |                                    |
| 90.     | 2548 <i>Maireana lobiiflora</i>  |             |                   |                                    |
| 91.     | 2569 <i>Maireana triptera</i> (Threewinged Bluebush)                       |             |                   |                                    |
| 92.     | 8107 <i>Minuria cunninghamii</i> (Bush <i>Minuria</i> )                    |             |                   |                                    |
| 93.     | 8108 <i>Minuria gardneri</i>   |             |                   |                                    |
| 94.     | 8113 <i>Minuria tridens</i>  |             | P1                | Y                                  |
| 95.     | 8114 <i>Myriocephalus appendiculatus</i> (White-tip <i>Myriocephalus</i> ) |             |                   |                                    |
| 96.     | 17925 <i>Myriocephalus oldfieldii</i>                                      |             |                   |                                    |
| 97.     | 14186 <i>Myriocephalus pygmaeus</i>  |             |                   |                                    |
| 98.     | 18537 <i>Philothea brucei</i> subsp. <i>brucei</i>                         |             |                   |                                    |
| 99.     | 18508 <i>Philothea sericea</i>   |             |                   |                                    |
| 100.    | 5271 <i>Pimelea trichostachya</i> (Spiked Riceflower)                      |             |                   |                                    |
| 101.    | 19744 <i>Pittosporum angustifolium</i>                                     |             |                   |                                    |
| 102.    | 8188 <i>Pogonolepis stricta</i>  |             |                   |                                    |
| 103.    | 8189 <i>Pseudognaphalium luteoalbum</i> (Jersey Cudweed)                   |             |                   |                                    |
| 104.    | 8196 <i>Quinqueremulus linearis</i>  |             |                   |                                    |
| 105.    | 2581 <i>Rhagodia drummondii</i>  |             |                   |                                    |
| 106.    | 13242 <i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>               |             |                   |                                    |
| 107.    | 13238 <i>Rhodanthe maryonii</i>  |             |                   |                                    |
| 108.    | 13309 <i>Rhodanthe spicata</i>   |             |                   |                                    |
| 109.    | <i>Riccia crinita</i>  |             |                   |                                    |
| 110.    | <i>Riccia lamellosa</i>  |             |                   |                                    |
| 111.    | 30434 <i>Salsola australis</i>   |             |                   |                                    |
| 112.    | 7648 <i>Scaevola tomentosa</i> (Raggedleaf Fanflower)                      |             |                   |                                    |
| 113.    | 13285 <i>Schoenia ayersii</i>  |             |                   |                                    |
| 114.    | 8200 <i>Schoenia cassiniana</i> ( <i>Schoenia</i> )                        |             |                   |                                    |
| 115.    | 2613 <i>Sclerolaena fimbriolata</i>  |             |                   |                                    |
| 116.    | 12283 <i>Senna artemisioides</i> subsp. <i>x sturtii</i>                   |             |                   |                                    |
| 117.    | 8231 <i>Sonchus oleraceus</i> (Common Sowthistle)                          | Y           |                   |                                    |
| 118.    | 12647 <i>Sondottia connata</i>   |             |                   |                                    |
| 119.    | 12487 <i>Stemodia florulenta</i>   |             |                   |                                    |
| 120.    | 13581 <i>Swainsona paradoxa</i>  |             |                   |                                    |
| 121.    | 4246 <i>Swainsona unifoliolata</i>   |             |                   |                                    |
| 122.    | 31917 <i>Tecticornia calyprata</i>   |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 123. | 31714   | <i>Tecticornia fimbriata</i>                                       |             | P3                |                                    |
| 124. | 31835   | <i>Tecticornia laevigata</i>                                       |             |                   |                                    |
| 125. | 31853   | <i>Tecticornia</i> sp. <i>Burnerbinmah</i> (D. Edinger et al. 101) |             |                   |                                    |
| 126. | 31717   | <i>Tecticornia undulata</i>  |             |                   |                                    |
| 127. | 48603   | <i>Teucrium teucriiflorum</i>                                      |             |                   |                                    |
| 128. | 19696   | <i>Thryptomene costata</i>   |             |                   |                                    |
| 129. | 6054    | <i>Thryptomene decussata</i>                                       |             |                   |                                    |
| 130. | 48213   | <i>Thyridia repens</i>   |             |                   |                                    |
| 131. | 44362   | <i>Trianthema triquetrum</i>                                       |             |                   |                                    |
| 132. | 48226   | <i>Trichanthodium exilis</i>                                       |             |                   |                                    |
| 133. | 12652   | <i>Trichanthodium skirrophorum</i>                                 |             |                   |                                    |
| 134. | 9008    | <i>Urodon dasyphyllus</i> (Mop Bushpea)                            |             |                   |                                    |
| 135. | 7664    | <i>Velleia rosea</i> (Pink Velleia)                                |             |                   |                                    |
| 136. | 4388    | <i>Zygophyllum compressum</i>                                      |             |                   |                                    |
| 137. | 4390    | <i>Zygophyllum fruticosum</i> (Shrubby Twinleaf)                   |             |                   |                                    |

**Conservation Codes**

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

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

# NatureMap Species Report

Created By Guest user on 09/10/2018

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 51' 15" E, 28° 17' 31" S  
**Buffer** 20km

|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 1.  | 4889    | <i>Abutilon cryptopetalum</i>  |             |                   |                                    |
| 2.  | 3199    | <i>Acacia acuraria</i>   |             |                   |                                    |
| 3.  | 3232    | <i>Acacia ayersiana</i>  |             |                   |                                    |
| 4.  | 3248    | <i>Acacia burkittii</i> (Sandhill Wattle)                                |             |                   |                                    |
| 5.  | 36417   | <i>Acacia caesaneura</i>   |             |                   |                                    |
| 6.  | 3273    | <i>Acacia craspedocarpa</i> (Hop Mulga)                                  |             |                   |                                    |
| 7.  | 32118   | <i>Acacia effusifolia</i>  |             |                   |                                    |
| 8.  | 3330    | <i>Acacia exocarpoides</i>   |             |                   |                                    |
| 9.  | 3355    | <i>Acacia grasbyi</i> (Miniritchie)                                      |             |                   |                                    |
| 10. | 15287   | <i>Acacia heteroneura</i> var. <i>prolixa</i>                            |             |                   |                                    |
| 11. | 36418   | <i>Acacia incurvaneura</i>   |             |                   |                                    |
| 12. | 3392    | <i>Acacia jamesiana</i>  |             |                   |                                    |
| 13. | 13503   | <i>Acacia masliniana</i>   |             |                   |                                    |
| 14. | 36416   | <i>Acacia mulganeura</i>   |             |                   |                                    |
| 15. | 3452    | <i>Acacia murrayana</i> (Sandplain Wattle)                               |             |                   |                                    |
| 16. | 36800   | <i>Acacia pteraneura</i>   |             |                   |                                    |
| 17. | 19499   | <i>Acacia ramulosa</i> var. <i>ramulosa</i>                              |             |                   |                                    |
| 18. | 13078   | <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>                    |             |                   |                                    |
| 19. | 15294   | <i>Acacia stereophylla</i> var. <i>stereophylla</i>                      |             |                   |                                    |
| 20. | 3586    | <i>Acacia tysonii</i>  |             |                   |                                    |
| 21. | 19901   | <i>Actinobole oldfieldianum</i>  |             |                   |                                    |
| 22. | 19465   | <i>Aluta aspera</i> subsp. <i>hesperia</i>                               |             |                   |                                    |
| 23. | 11614   | <i>Amyema gibberula</i> var. <i>gibberula</i>                            |             |                   |                                    |
| 24. | 40910   | <i>Androcalva luteiflora</i> (Yellow-flowered Rulingia)                  |             |                   |                                    |
| 25. | 5344    | <i>Baeckea elderiana</i>   |             |                   |                                    |
| 26. | 4409    | <i>Boronia coerulescens</i>  |             |                   |                                    |
| 27. | 752     | <i>Bulbostylis turbinata</i>   |             |                   |                                    |
| 28. | 8466    | <i>Callitris columellaris</i> (White Cypress Pine)                       |             |                   |                                    |
| 29. | 5408    | <i>Calothamnus gilesii</i>   |             |                   |                                    |
| 30. | 7905    | <i>Calotis multicaulis</i> (Many-stemmed Burr-daisy)                     |             |                   |                                    |
| 31. | 1124    | <i>Centrolepis cephaloformis</i>   |             |                   |                                    |
| 32. | 13124   | <i>Centrolepis strigosa</i> subsp. <i>rupestris</i>                      |             |                   |                                    |
| 33. | 35640   | <i>Chamelaucium pauciflorum</i> subsp. <i>Perenjori</i> (B.J. Conn 2181) |             |                   |                                    |
| 34. | 12818   | <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>                         |             |                   |                                    |
| 35. | 809     | <i>Cyperus rigidellus</i>  |             |                   |                                    |
| 36. | 814     | <i>Cyperus squarrosus</i>  |             |                   |                                    |
| 37. | 6765    | <i>Dicrastylis linearifolia</i>  |             | P3                |                                    |
| 38. | 310     | <i>Digitaria brownii</i> (Cotton Panic Grass)                            |             |                   |                                    |
| 39. | 4773    | <i>Dodonaea petiolaris</i>   |             |                   |                                    |
| 40. | 4779    | <i>Dodonaea rigida</i>   |             |                   |                                    |
| 41. | 2500    | <i>Dysphania glandulosa</i>  |             |                   |                                    |
| 42. | 7189    | <i>Eremophila clarkei</i> (Turpentine Bush)                              |             |                   |                                    |
| 43. | 7205    | <i>Eremophila exilifolia</i>   |             |                   |                                    |
| 44. | 7211    | <i>Eremophila georgei</i>  |             |                   |                                    |
| 45. | 14340   | <i>Eremophila glabra</i> subsp. <i>glabra</i>                            |             |                   |                                    |
| 46. | 17576   | <i>Eremophila latrobei</i> subsp. <i>latrobei</i>                        |             |                   |                                    |
| 47. | 7234    | <i>Eremophila longifolia</i> (Berrigan, Tulypurpa)                       |             |                   |                                    |
| 48. | 15158   | <i>Eremophila mackinlayi</i> subsp. <i>spathulata</i>                    |             |                   |                                    |
| 49. | 7250    | <i>Eremophila pantonii</i>   |             |                   |                                    |
| 50. | 7257    | <i>Eremophila punicea</i> (Crimson Eremophila)                           |             |                   |                                    |
| 51. | 15168   | <i>Eremophila spuria</i>   |             |                   |                                    |
| 52. | 16486   | <i>Eriachne pulchella</i> subsp. <i>pulchella</i>                        |             |                   |                                    |

|      | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|---|-------------|-------------------|------------------------------------|
| 53.  | 4335    | <i>Erodium cygnorum</i> (Blue Heronsbill)                     |             |                   |                                    |
| 54.  | 5673    | <i>Eucalyptus horistes</i>                                    |             |                   |                                    |
| 55.  | 15670   | <i>Eucalyptus kochii</i> subsp. <i>plenissima</i>             |             |                   |                                    |
| 56.  | 12622   | <i>Feldstonia nitens</i>                                      |             |                   |                                    |
| 57.  | 3938    | <i>Glycine canescens</i> (Silky Glycine)                      |             |                   |                                    |
| 58.  | 6159    | <i>Gonocarpus nodulosus</i>                                   |             |                   |                                    |
| 59.  | 12553   | <i>Goodenia neogoodenia</i>                                   |             | P4                |                                    |
| 60.  | 15981   | <i>Grevillea obliquistigma</i> subsp. <i>obliquistigma</i>    |             |                   |                                    |
| 61.  | 2068    | <i>Grevillea pityophylla</i>                                  |             |                   |                                    |
| 62.  | 5815    | <i>Homalocalyx thryptomenoides</i>                            |             |                   |                                    |
| 63.  | 6229    | <i>Hydrocotyle diantha</i>                                    |             |                   |                                    |
| 64.  | 9       | <i>Isoetes caroli</i>   |             |                   |                                    |
| 65.  | 911     | <i>Isolepis congrua</i>                                       |             |                   |                                    |
| 66.  | 13289   | <i>Lawrencella davenportii</i>                                |             |                   |                                    |
| 67.  | 7670    | <i>Levenhookia dubia</i> (Hairy Stylewort)                    |             |                   |                                    |
| 68.  | 7671    | <i>Levenhookia leptantha</i> (Trumpet Stylewort)              |             |                   |                                    |
| 69.  | 2398    | <i>Lysiana murrayi</i> (Mistletoe, Parka-Parka)               |             |                   |                                    |
| 70.  | 2538    | <i>Maireana carnosae</i> (Cottony Bluebush)                   |             |                   |                                    |
| 71.  | 2539    | <i>Maireana convexa</i> (Mulga Bluebush)                      |             |                   |                                    |
| 72.  | 2545    | <i>Maireana glomerifolia</i> (Ball Leaf Bluebush)             |             |                   |                                    |
| 73.  | 5929    | <i>Melaleuca leiocarpa</i>                                    |             |                   |                                    |
| 74.  | 5995    | <i>Micromyrtus flaviflora</i>                                 |             |                   |                                    |
| 75.  | 14341   | <i>Millotia depauperata</i>                                   |             | P1                |                                    |
| 76.  | 17925   | <i>Myriocephalus oldfieldii</i>                               |             |                   |                                    |
| 77.  | 8145    | <i>Olearia pimeleoides</i> (Pimelea Daisybush, Burrobunga)    |             |                   |                                    |
| 78.  | 7092    | <i>Peplidium muelleri</i>                                     |             |                   |                                    |
| 79.  | 18538   | <i>Philotheca brucei</i> subsp. <i>brevifolia</i>             |             |                   |                                    |
| 80.  | 18511   | <i>Philotheca nutans</i>                                      |             | P1                |                                    |
| 81.  | 8188    | <i>Pogonolepis stricta</i>                                    |             |                   |                                    |
| 82.  | 16688   | <i>Prasophyllum gracile</i>                                   |             |                   |                                    |
| 83.  | 15822   | <i>Prostanthera althoferi</i> subsp. <i>althoferi</i>         |             |                   |                                    |
| 84.  | 2717    | <i>Ptilotus divaricatus</i> (Climbing Mulla Mulla)            |             |                   |                                    |
| 85.  | 2718    | <i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)           |             |                   |                                    |
| 86.  | 8196    | <i>Quinqueremulus linearis</i>                                |             |                   |                                    |
| 87.  | 11643   | <i>Ranunculus pentandrus</i> var. <i>platycarpus</i>          |             |                   |                                    |
| 88.  | 13254   | <i>Rhodanthe stricta</i>                                      |             |                   |                                    |
| 89.  | 6599    | <i>Rhyncharrhena linearis</i> (Bush Bean, Wintjulanypa)       |             |                   |                                    |
| 90.  |         | <i>Riccia bifurca</i>   |             |                   |                                    |
| 91.  |         | <i>Riccia crinita</i>   |             |                   |                                    |
| 92.  |         | <i>Riccia</i> sp.   |             |                   |                                    |
| 93.  | 2359    | <i>Santalum spicatum</i> (Sandalwood, Wilarak)                |             |                   |                                    |
| 94.  | 13171   | <i>Scaevola parvifolia</i> subsp. <i>acuminata</i>            |             |                   |                                    |
| 95.  | 8200    | <i>Schoenia cassiniana</i> (Schoenia)                         |             |                   |                                    |
| 96.  | 2595    | <i>Sclerolaena alata</i>                                      |             |                   |                                    |
| 97.  | 2611    | <i>Sclerolaena eriacantha</i> (Tall Bindii)                   |             |                   |                                    |
| 98.  | 31857   | <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32)       |             |                   |                                    |
| 99.  | 7008    | <i>Solanum ferocissimum</i>                                   |             |                   |                                    |
| 100. | 7018    | <i>Solanum lasiophyllum</i> (Flannel Bush, Mindjulu)          |             |                   |                                    |
| 101. | 31080   | <i>Spergularia bocconeii</i>                                  | Y           |                   |                                    |
| 102. | 20538   | <i>Stachystemon intricatus</i>                                |             |                   |                                    |
| 103. | 8236    | <i>Streptoglossa cylindriceps</i>                             |             |                   |                                    |
| 104. | 7754    | <i>Stylidium longibracteatum</i> (Long-bracted Trigger Plant) |             |                   |                                    |
| 105. | 12355   | <i>Swainsona affinis</i>                                      |             |                   |                                    |
| 106. | 4229    | <i>Swainsona gracilis</i>                                     |             |                   |                                    |
| 107. | 13339   | <i>Synaptantha tillaeacea</i> var. <i>tillaeacea</i>          |             |                   |                                    |
| 108. | 48603   | <i>Teucrium teucriiflorum</i>                                 |             |                   |                                    |
| 109. | 6054    | <i>Thryptomene decussata</i>                                  |             |                   |                                    |
| 110. | 4383    | <i>Tribulus terrestris</i> (Caltrop)                          | Y           |                   |                                    |
| 111. | 17874   | <i>Triodia rigidissima</i>                                    |             |                   |                                    |
| 112. | 8253    | <i>Triptilodiscus pygmaeus</i>                                |             |                   |                                    |
| 113. | 7664    | <i>Velleia rosea</i> (Pink Velleia)                           |             |                   |                                    |
| 114. | 12436   | <i>Verticordia interioris</i>                                 |             |                   |                                    |
| 115. |         | <i>Wahlenbergia</i> sp.                                       |             |                   |                                    |

**Conservation Codes**

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

| Name ID | Species Name | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--------------|-------------|-------------------|------------------------------------|
|---------|--------------|-------------|-------------------|------------------------------------|

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

# NatureMap Species Report

Created By Guest user on 28/05/2019

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 118° 39' 31" E, 26° 25' 04" S  
**Buffer** 20km

|     | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|---|-------------|-------------------|------------------------------------|
| 1.  | 24559   | <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)                        |             |                   |                                    |
| 2.  | 24261   | <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)                            |             |                   |                                    |
| 3.  | 24264   | <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)                          |             |                   |                                    |
| 4.  | 24265   | <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)                          |             |                   |                                    |
| 5.  |         | <i>Acariformes</i> sp.  |             |                   |                                    |
| 6.  | 24281   | <i>Accipiter cirrocephalus</i> subsp. <i>cirrocephalus</i> (Collared Sparrowhawk) |             |                   |                                    |
| 7.  |         | <i>Anidiops villosus</i>  |             |                   |                                    |
| 8.  | 25528   | <i>Aphelocephala leucopsis</i> (Southern Whiteface)                               |             |                   |                                    |
| 9.  | 24268   | <i>Aphelocephala nigricincta</i> (Banded Whiteface)                               |             |                   |                                    |
| 10. | 24285   | <i>Aquila audax</i> (Wedge-tailed Eagle)  |             |                   |                                    |
| 11. | 25566   | <i>Artamus cinereus</i> (Black-faced Woodswallow)                                 |             |                   |                                    |
| 12. | 24356   | <i>Artamus personatus</i> (Masked Woodswallow)                                    |             |                   |                                    |
| 13. | 42307   | <i>Cacomantis pallidus</i> (Pallid Cuckoo)  |             |                   |                                    |
| 14. | 47909   | <i>Cheramoeca leucosterna</i> (White-backed Swallow)                              |             |                   |                                    |
| 15. | 25675   | <i>Colluricincla harmonica</i> (Grey Shrike-thrush)                               |             |                   |                                    |
| 16. | 25568   | <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)                       |             |                   |                                    |
| 17. | 24416   | <i>Corvus bennetti</i> (Little Crow)  |             |                   |                                    |
| 18. | 25593   | <i>Corvus orru</i> (Torresian Crow)   |             |                   |                                    |
| 19. | 24420   | <i>Cracticus nigrogularis</i> (Pied Butcherbird)                                  |             |                   |                                    |
| 20. | 25595   | <i>Cracticus tibicen</i> (Australian Magpie)                                      |             |                   |                                    |
| 21. | 25596   | <i>Cracticus torquatus</i> (Grey Butcherbird)                                     |             |                   |                                    |
| 22. | 24869   | <i>Ctenophorus caudicinctus</i> subsp. <i>mensarum</i> (Ring-tailed Dragon)       |             |                   |                                    |
| 23. | 24882   | <i>Ctenophorus nuchalis</i> (Central Netted Dragon)                               |             |                   |                                    |
| 24. | 24886   | <i>Ctenophorus reticulatus</i> (Western Netted Dragon)                            |             |                   |                                    |
| 25. | 25045   | <i>Ctenotus helenae</i>   |             |                   |                                    |
| 26. | 25052   | <i>Ctenotus leonhardii</i>  |             |                   |                                    |
| 27. | 24470   | <i>Dromaius novaehollandiae</i> (Emu)   |             |                   |                                    |
| 28. | 24570   | <i>Epthianura tricolor</i> (Crimson Chat)   |             |                   |                                    |
| 29. | 25109   | <i>Eremiascincus richardsonii</i> (Broad-banded Sand Swimmer)                     |             |                   |                                    |
| 30. | 25621   | <i>Falco berigora</i> (Brown Falcon)  |             |                   |                                    |
| 31. | 25622   | <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)                    |             |                   |                                    |
| 32. | 24958   | <i>Gehyra punctata</i>  |             |                   |                                    |
| 33. | 24959   | <i>Gehyra variegata</i>   |             |                   |                                    |
| 34. | 24401   | <i>Geopelia cuneata</i> (Diamond Dove)  |             |                   |                                    |
| 35. | 24443   | <i>Grallina cyanoleuca</i> (Magpie-lark)  |             |                   |                                    |
| 36. | 24295   | <i>Haliastur sphenurus</i> (Whistling Kite)                                       |             |                   |                                    |
| 37. | 24961   | <i>Heteronotia binoei</i> (Bynoe's Gecko)   |             |                   |                                    |
| 38. | 24491   | <i>Hirundo neoxena</i> (Welcome Swallow)  |             |                   |                                    |
| 39. | 42411   | <i>Lerista timida</i>   |             |                   |                                    |
| 40. | 42415   | <i>Lucasium squarrosum</i>  |             |                   |                                    |
| 41. | 24583   | <i>Manorina flavigula</i> (Yellow-throated Miner)                                 |             |                   |                                    |
| 42. | 47997   | <i>Melanodryas cucullata</i> (Hooded Robin)                                       |             |                   |                                    |
| 43. | 24736   | <i>Melopsittacus undulatus</i> (Budgerigar)                                       |             |                   |                                    |
| 44. | 25184   | <i>Menetia greyii</i>   |             |                   |                                    |
| 45. | 25542   | <i>Milvus migrans</i> (Black Kite)  |             |                   |                                    |
| 46. |         | <i>Neopsephotus bourkii</i>   |             |                   |                                    |
| 47. | 24742   | <i>Nymphicus hollandicus</i> (Cockatiel)  |             |                   |                                    |
| 48. | 24407   | <i>Ocyphaps lophotes</i> (Crested Pigeon)   |             |                   |                                    |
| 49. | 24618   | <i>Oreoica gutturalis</i> (Crested Bellbird)                                      |             |                   |                                    |
| 50. | 25680   | <i>Pachycephala rufiventris</i> (Rufous Whistler)                                 |             |                   |                                    |
| 51. | 25254   | <i>Parasuta monachus</i>  |             |                   |                                    |
| 52. | 48060   | <i>Petrochelidon ariel</i> (Fairy Martin)   |             |                   |                                    |



|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 53. | 24659   | <i>Petroica goodenovii</i> (Red-capped Robin)                |             |                   |                                    |
| 54. | 24409   | <i>Phaps chalcoptera</i> (Common Bronzewing)                 |             |                   |                                    |
| 55. | 24681   | <i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)     |             |                   |                                    |
| 56. | 24683   | <i>Pomatostomus superciliosus</i> (White-browed Babbler)     |             |                   |                                    |
| 57. | 25706   | <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)        |             |                   |                                    |
| 58. | 24106   | <i>Pseudantechinus woolleyae</i> (Woolley's Pseudantechinus) |             |                   |                                    |
| 59. | 42416   | <i>Pseudonaja mengdeni</i> (Western Brown Snake)             |             |                   |                                    |
| 60. | 42344   | <i>Purnella albifrons</i> (White-fronted Honeyeater)         |             |                   |                                    |
| 61. | 25614   | <i>Rhipidura leucophrys</i> (Willie Wagtail)                 |             |                   |                                    |
| 62. | 30870   | <i>Taeniopygia guttata</i> (Zebra Finch)                     |             |                   |                                    |
| 63. | 25223   | <i>Varanus panoptes</i> subsp. <i>rubidus</i>                |             |                   |                                    |
| 64. | 24202   | <i>Vespadelus baverstocki</i> (Inland Forest Bat)            |             |                   |                                    |

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

# NatureMap Species Report

Created By Guest user on 28/05/2019

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 59' 16" E, 27° 10' 48" S  
**Buffer** 20km

| Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|---|-------------|-------------------|------------------------------------|
| 1.      | 24559 <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)  |             |                   |                                    |
| 2.      | 24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)  |             |                   |                                    |
| 3.      | 24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)  |             |                   |                                    |
| 4.      | 25527 <i>Acanthiza iredalei</i> (Samphire Thornbill, Slender-billed Thornbill)  |             |                   |                                    |
| 5.      | 24264 <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)  |             |                   |                                    |
| 6.      | 24265 <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)  |             |                   |                                    |
| 7.      | 25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)   |             |                   |                                    |
| 8.      | 25536 <i>Accipiter fasciatus</i> (Brown Goshawk)  |             |                   |                                    |
| 9.      | 41323 <i>Actitis hypoleucos</i> (Common Sandpiper)  |             | IA                |                                    |
| 10.     | 25544 <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)   |             |                   |                                    |
| 11.     | 24310 <i>Anas castanea</i> (Chestnut Teal)  |             |                   |                                    |
| 12.     | 24312 <i>Anas gracilis</i> (Grey Teal)  |             |                   |                                    |
| 13.     | 24315 <i>Anas rhynchotis</i> (Australasian Shoveler)  |             |                   |                                    |
| 14.     | 24316 <i>Anas superciliosa</i> (Pacific Black Duck)   |             |                   |                                    |
| 15.     | 47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)  |             |                   |                                    |
| 16.     | 25318 <i>Antaresia perthensis</i> (Pygmy Python)  |             |                   |                                    |
| 17.     | 25528 <i>Aphelocephala leucopsis</i> (Southern Whiteface)   |             |                   |                                    |
| 18.     | 24285 <i>Aquila audax</i> (Wedge-tailed Eagle)  |             |                   |                                    |
| 19.     | 41324 <i>Ardea modesta</i> (great egret, white egret)   |             |                   |                                    |
| 20.     | 24341 <i>Ardea pacifica</i> (White-necked Heron)  |             |                   |                                    |
| 21.     | 25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)   |             |                   |                                    |
| 22.     | 24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)  |             |                   |                                    |
| 23.     | 24355 <i>Artamus minor</i> (Little Woodswallow)   |             |                   |                                    |
| 24.     | 24356 <i>Artamus personatus</i> (Masked Woodswallow)  |             |                   |                                    |
| 25.     | 24357 <i>Artamus superciliosus</i> (White-browed Woodswallow)   |             |                   |                                    |
| 26.     | 24318 <i>Aythya australis</i> (Hardhead)  |             |                   |                                    |
| 27.     | <i>Barnardius zonarius</i>  |             |                   |                                    |
| 28.     | 24319 <i>Biziura lobata</i> (Musk Duck)   |             |                   |                                    |
| 29.     | 24359 <i>Burhinus grallarius</i> (Bush Stone-curlew)  |             |                   |                                    |
| 30.     | 25716 <i>Cacatua sanguinea</i> (Little Corella)   |             |                   |                                    |
| 31.     | 42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)  |             |                   |                                    |
| 32.     | 24269 <i>Calamanthus campestris</i> (Rufous Fieldwren)  |             |                   |                                    |
| 33.     | 34000 <i>Calamanthus campestris</i> subsp. <i>montanellus</i> (Rufous Fieldwren, Western Fieldwren (western wheatbelt)) |             |                   |                                    |
| 34.     | 24779 <i>Calidris acuminata</i> (Sharp-tailed Sandpiper)  |             | IA                |                                    |
| 35.     | 24788 <i>Calidris ruficollis</i> (Red-necked Stint)   |             | IA                |                                    |
| 36.     | 24564 <i>Certhionyx variegatus</i> (Pied Honeyeater)  |             |                   |                                    |
| 37.     | 24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)  |             |                   |                                    |
| 38.     | 25339 <i>Chelodina steindachneri</i> (Flat-shelled Turtle)  |             |                   |                                    |
| 39.     | 24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)  |             |                   |                                    |
| 40.     | 47909 <i>Cheramoeca leucosterna</i> (White-backed Swallow)  |             |                   |                                    |
| 41.     | <i>Cherax destructor</i>  |             |                   |                                    |
| 42.     | 41332 <i>Chlidonias leucopterus</i> (White-winged Black Tern, white-winged tern)  |             | IA                |                                    |
| 43.     | <i>Chroicocephalus novaehollandiae</i>  |             |                   |                                    |
| 44.     | 25580 <i>Cinclosoma castaneothorax</i> (Chestnut-breasted Quail-thrush)   |             |                   |                                    |
| 45.     | 42311 <i>Cinclosoma marginatum</i> (Western Quail-thrush)   |             |                   |                                    |
| 46.     | 24288 <i>Circus approximans</i> (Swamp Harrier)   |             |                   |                                    |
| 47.     | 24289 <i>Circus assimilis</i> (Spotted Harrier)   |             |                   |                                    |
| 48.     | 24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt)   |             |                   |                                    |
| 49.     | 25581 <i>Climacteris affinis</i> (White-browed Treecreeper)   |             |                   |                                    |
| 50.     | 25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)   |             |                   |                                    |
| 51.     | 24399 <i>Columba livia</i> (Domestic Pigeon)  |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 52.  | 24361   | <i>Coracina maxima</i> (Ground Cuckoo-shrike)                        |             |                   |                                    |
| 53.  | 25568   | <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)          |             |                   |                                    |
| 54.  | 24416   | <i>Corvus bennetti</i> (Little Crow)                                 |             |                   |                                    |
| 55.  | 25592   | <i>Corvus coronoides</i> (Australian Raven)                          |             |                   |                                    |
| 56.  | 25593   | <i>Corvus orru</i> (Torresian Crow)                                  |             |                   |                                    |
| 57.  | 24671   | <i>Coturnix pectoralis</i> (Stubble Quail)                           |             |                   |                                    |
| 58.  | 25701   | <i>Coturnix ypsilophora</i> (Brown Quail)                            |             |                   |                                    |
| 59.  | 24420   | <i>Cracticus nigrogularis</i> (Pied Butcherbird)                     |             |                   |                                    |
| 60.  | 25595   | <i>Cracticus tibicen</i> (Australian Magpie)                         |             |                   |                                    |
| 61.  | 25596   | <i>Cracticus torquatus</i> (Grey Butcherbird)                        |             |                   |                                    |
| 62.  |         | <i>Craterocephalus cuneiceps</i>                                     |             |                   |                                    |
| 63.  | 25458   | <i>Ctenophorus caudicinctus</i> (Ring-tailed Dragon)                 |             |                   |                                    |
| 64.  | 24882   | <i>Ctenophorus nuchalis</i> (Central Netted Dragon)                  |             |                   |                                    |
| 65.  | 24886   | <i>Ctenophorus reticulatus</i> (Western Netted Dragon)               |             |                   |                                    |
| 66.  | 24888   | <i>Ctenophorus salinarum</i> (Salt Pan Dragon)                       |             |                   |                                    |
| 67.  | 24889   | <i>Ctenophorus scutulatus</i> (Lozenge-marked Dragon)                |             |                   |                                    |
| 68.  | 25052   | <i>Ctenotus leonhardii</i>   |             |                   |                                    |
| 69.  | 25074   | <i>Ctenotus schomburgkii</i>   |             |                   |                                    |
| 70.  | 25075   | <i>Ctenotus severus</i>  |             |                   |                                    |
| 71.  | 25465   | <i>Ctenotus uber</i> (Spotted Ctenotus)                              |             |                   |                                    |
| 72.  | 24322   | <i>Cygnus atratus</i> (Black Swan)                                   |             |                   |                                    |
| 73.  | 25673   | <i>Daphoenositta chrysoptera</i> (Varied Sittella)                   |             |                   |                                    |
| 74.  | 25607   | <i>Dicaeum hirundinaceum</i> (Mistletoebird)                         |             |                   |                                    |
| 75.  | 25231   | <i>Diplodactylus klugei</i>  |             |                   |                                    |
| 76.  | 24940   | <i>Diplodactylus pulcher</i>   |             |                   |                                    |
| 77.  | 24470   | <i>Dromaius novaehollandiae</i> (Emu)                                |             |                   |                                    |
| 78.  | 25092   | <i>Egernia depressa</i> (Southern Pygmy Spiny-tailed Skink)          |             |                   |                                    |
| 79.  |         | <i>Egretta novaehollandiae</i>                                       |             |                   |                                    |
| 80.  |         | <i>Elanus axillaris</i>  |             |                   |                                    |
| 81.  | 47937   | <i>Elseya melanops</i> (Black-fronted Dotterel)                      |             |                   |                                    |
| 82.  |         | <i>Eolophus roseicapillus</i>  |             |                   |                                    |
| 83.  | 24567   | <i>Epthianura albigula</i> (White-fronted Chat)                      |             |                   |                                    |
| 84.  | 24568   | <i>Epthianura aurifrons</i> (Orange Chat)                            |             |                   |                                    |
| 85.  | 24570   | <i>Epthianura tricolor</i> (Crimson Chat)                            |             |                   |                                    |
| 86.  | 25109   | <i>Eremiascincus richardsonii</i> (Broad-banded Sand Swimmer)        |             |                   |                                    |
| 87.  | 24379   | <i>Erythronyx cinctus</i> (Red-kneed Dotterel)                       |             |                   |                                    |
| 88.  | 24368   | <i>Eurostopodus argus</i> (Spotted Nightjar)                         |             |                   |                                    |
| 89.  | 25621   | <i>Falco berigora</i> (Brown Falcon)                                 |             |                   |                                    |
| 90.  | 25622   | <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)       |             |                   |                                    |
| 91.  | 25623   | <i>Falco longipennis</i> (Australian Hobby)                          |             |                   |                                    |
| 92.  | 25624   | <i>Falco peregrinus</i> (Peregrine Falcon)                           |             | S                 |                                    |
| 93.  | 24476   | <i>Falco subniger</i> (Black Falcon)                                 |             |                   |                                    |
| 94.  | 25727   | <i>Fulica atra</i> (Eurasian Coot)                                   |             |                   |                                    |
| 95.  | 24958   | <i>Gehyra punctata</i>   |             |                   |                                    |
| 96.  | 24959   | <i>Gehyra variegata</i>  |             |                   |                                    |
| 97.  | 47954   | <i>Gelochelidon nilotica</i> (Gull-billed Tern)                      |             | IA                |                                    |
| 98.  | 24401   | <i>Geopelia cuneata</i> (Diamond Dove)                               |             |                   |                                    |
| 99.  | 25585   | <i>Geopelia striata</i> (Zebra Dove)                                 |             |                   |                                    |
| 100. | 24404   | <i>Geophaps plumifera</i> (Spinifex Pigeon)                          |             |                   |                                    |
| 101. | 25530   | <i>Gerygone fusca</i> (Western Gerygone)                             |             |                   |                                    |
| 102. | 24271   | <i>Gerygone fusca</i> subsp. <i>fusca</i> (Western Gerygone)         |             |                   |                                    |
| 103. | 24443   | <i>Grallina cyanoleuca</i> (Magpie-lark)                             |             |                   |                                    |
| 104. | 24295   | <i>Haliastur sphenurus</i> (Whistling Kite)                          |             |                   |                                    |
| 105. | 24296   | <i>Hamirostra isura</i> (Square-tailed Kite)                         |             |                   |                                    |
| 106. | 24297   | <i>Hamirostra melanostemon</i> (Black-breasted Buzzard)              |             |                   |                                    |
| 107. | 24961   | <i>Heteronotia binoceri</i> (Bynoe's Gecko)                          |             |                   |                                    |
| 108. | 47965   | <i>Hieraaetus morphnoides</i> (Little Eagle)                         |             |                   |                                    |
| 109. | 25734   | <i>Himantopus himantopus</i> (Black-winged Stilt)                    |             |                   |                                    |
| 110. | 24491   | <i>Hirundo neoxena</i> (Welcome Swallow)                             |             |                   |                                    |
| 111. |         | <i>Hoggicosa bicolor</i>   |             |                   |                                    |
| 112. | 48587   | <i>Hydroprogne caspia</i> (Caspian Tern)                             |             | IA                |                                    |
| 113. | 24572   | <i>Lacustroica whitei</i> (Grey Honeyeater)                          |             |                   |                                    |
| 114. |         | <i>Leiopotherapon unicolor</i>                                       |             |                   |                                    |
| 115. | 25134   | <i>Lerista eupoda</i> (West Coast mulga slider, Good-legged Lerista) |             | P1                |                                    |
| 116. | 25482   | <i>Lerista macropisthopus</i>  |             |                   |                                    |
| 117. | 25152   | <i>Lerista macropisthopus</i> subsp. <i>galea</i>                    |             |                   |                                    |
| 118. | 25155   | <i>Lerista muelleri</i>  |             |                   |                                    |
| 119. | 25157   | <i>Lerista nicholli</i>  |             |                   |                                    |
| 120. | 42411   | <i>Lerista timida</i>  |             |                   |                                    |
| 121. | 25005   | <i>Lialis burtonis</i>   |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 122. | 25661   | <i>Lichmera indistincta</i> (Brown Honeyeater)                                 |             |                   |                                    |
| 123. | 25392   | <i>Litoria rubella</i> (Little Red Tree Frog)                                  |             |                   |                                    |
| 124. | 24326   | <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)                           |             |                   |                                    |
| 125. | 25651   | <i>Malurus lamberti</i> (Variegated Fairy-wren)                                |             |                   |                                    |
| 126. | 25652   | <i>Malurus leucopterus</i> (White-winged Fairy-wren)                           |             |                   |                                    |
| 127. | 25654   | <i>Malurus splendens</i> (Splendid Fairy-wren)                                 |             |                   |                                    |
| 128. | 24583   | <i>Manorina flavigula</i> (Yellow-throated Miner)                              |             |                   |                                    |
| 129. | 47997   | <i>Melanodryas cucullata</i> (Hooded Robin)                                    |             |                   |                                    |
| 130. | 24736   | <i>Melopsittacus undulatus</i> (Budgerigar)                                    |             |                   |                                    |
| 131. | 25184   | <i>Menetia greyii</i>  |             |                   |                                    |
| 132. | 25185   | <i>Menetia maini</i>   |             |                   |                                    |
| 133. | 24598   | <i>Merops ornatus</i> (Rainbow Bee-eater)                                      |             |                   |                                    |
| 134. |         | <i>Microcarbo melanoleucos</i>   |             |                   |                                    |
| 135. | 25693   | <i>Microeca fascians</i> (Jacky Winter)  |             |                   |                                    |
| 136. | 25542   | <i>Milvus migrans</i> (Black Kite)   |             |                   |                                    |
| 137. | 25427   | <i>Neobatrachus sutor</i> (Shoemaker Frog)                                     |             |                   |                                    |
| 138. | 24737   | <i>Neophema bourkii</i> (Bourke's Parrot)                                      |             |                   |                                    |
| 139. |         | <i>Neopsephotes bourkii</i>  |             |                   |                                    |
| 140. | 24973   | <i>Nephurus wheeleri</i> subsp. <i>wheeleri</i>                                |             |                   |                                    |
| 141. | 24742   | <i>Nymphicus hollandicus</i> (Cockatiel)                                       |             |                   |                                    |
| 142. | 24407   | <i>Ocyphaps lophotes</i> (Crested Pigeon)                                      |             |                   |                                    |
| 143. | 24618   | <i>Oreoica gutturalis</i> (Crested Bellbird)                                   |             |                   |                                    |
| 144. | 34012   | <i>Oreoica gutturalis</i> subsp. <i>pallescens</i> (Crested Bellbird, central) |             |                   |                                    |
| 145. | 24085   | <i>Oryctolagus cuniculus</i> (Rabbit)  | Y           |                   |                                    |
| 146. | 24328   | <i>Oxyura australis</i> (Blue-billed Duck)                                     |             | P4                |                                    |
| 147. | 25680   | <i>Pachycephala rufiventris</i> (Rufous Whistler)                              |             |                   |                                    |
| 148. | 25254   | <i>Parasuta monachus</i>   |             |                   |                                    |
| 149. | 25682   | <i>Pardalotus striatus</i> (Striated Pardalote)                                |             |                   |                                    |
| 150. | 24648   | <i>Pelecanus conspicillatus</i> (Australian Pelican)                           |             |                   |                                    |
| 151. | 48060   | <i>Petrochelidon ariel</i> (Fairy Martin)                                      |             |                   |                                    |
| 152. | 48061   | <i>Petrochelidon nigricans</i> (Tree Martin)                                   |             |                   |                                    |
| 153. | 24659   | <i>Petroica goodenovii</i> (Red-capped Robin)                                  |             |                   |                                    |
| 154. | 25697   | <i>Phalacrocorax carbo</i> (Great Cormorant)                                   |             |                   |                                    |
| 155. | 24667   | <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)                     |             |                   |                                    |
| 156. | 24409   | <i>Phaps chalcoptera</i> (Common Bronzewing)                                   |             |                   |                                    |
| 157. |         | <i>Phryganoporus candidus</i>  |             |                   |                                    |
| 158. | 24841   | <i>Platalea flavipes</i> (Yellow-billed Spoonbill)                             |             |                   |                                    |
| 159. | 24842   | <i>Platalea regia</i> (Royal Spoonbill)  |             |                   |                                    |
| 160. | 24843   | <i>Plegadis falcinellus</i> (Glossy Ibis)                                      |             | IA                |                                    |
| 161. | 25703   | <i>Podargus strigoides</i> (Tawny Frogmouth)                                   |             |                   |                                    |
| 162. | 25704   | <i>Podiceps cristatus</i> (Great Crested Grebe)                                |             |                   |                                    |
| 163. | 25510   | <i>Pogona minor</i> (Dwarf Bearded Dragon)                                     |             |                   |                                    |
| 164. | 24907   | <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)                 |             |                   |                                    |
| 165. | 24681   | <i>Poliocephalus poliocephalus</i> (Hoary-headed Grebe)                        |             |                   |                                    |
| 166. | 24683   | <i>Pomatostomus superciliosus</i> (White-browed Babbler)                       |             |                   |                                    |
| 167. | 25706   | <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)                          |             |                   |                                    |
| 168. | 24769   | <i>Porzana fluminea</i> (Australian Spotted Crane)                             |             |                   |                                    |
| 169. | 24106   | <i>Pseudantechinus woolleyae</i> (Woolley's Pseudantechinus)                   |             |                   |                                    |
| 170. | 42416   | <i>Pseudonaja mengdeni</i> (Western Brown Snake)                               |             |                   |                                    |
| 171. | 25263   | <i>Pseudonaja modesta</i> (Ringed Brown Snake)                                 |             |                   |                                    |
| 172. | 24390   | <i>Psophodes occidentalis</i> (Western Wedgebill, Chiming Wedgebill)           |             |                   |                                    |
| 173. |         | <i>Ptilonorhynchus guttatus</i>  |             |                   |                                    |
| 174. | 24757   | <i>Ptilonorhynchus maculatus</i> subsp. <i>guttatus</i> (Western Bowerbird)    |             |                   |                                    |
| 175. | 42344   | <i>Purnella albifrons</i> (White-fronted Honeyeater)                           |             |                   |                                    |
| 176. | 25009   | <i>Pygopus nigriceps</i>   |             |                   |                                    |
| 177. | 24278   | <i>Pyrrholaemus brunneus</i> (Redthroat)                                       |             |                   |                                    |
| 178. | 24776   | <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)                       |             |                   |                                    |
| 179. | 48096   | <i>Rhipidura albiscapa</i> (Grey Fantail)                                      |             |                   |                                    |
| 180. | 25614   | <i>Rhipidura leucophrys</i> (Willie Wagtail)                                   |             |                   |                                    |
| 181. | 24982   | <i>Rhynchoedura ornata</i> (Western Beaked Gecko)                              |             |                   |                                    |
| 182. | 30948   | <i>Smicrornis brevirostris</i> (Weebill)                                       |             |                   |                                    |
| 183. | 24109   | <i>Sminthopsis dolichura</i> (Little long-tailed Dunnart)                      |             |                   |                                    |
| 184. | 24116   | <i>Sminthopsis macroura</i> (Stripe-faced Dunnart)                             |             |                   |                                    |
| 185. | 24329   | <i>Stictonetta naevosa</i> (Freckled Duck)                                     |             |                   |                                    |
| 186. |         | <i>Storena sinuosa</i>   |             |                   |                                    |
| 187. | 24949   | <i>Strophurus wellingtonae</i>   |             |                   |                                    |
| 188. | 25269   | <i>Suta fasciata</i> (Rosen's Snake)   |             |                   |                                    |
| 189. | 25705   | <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)  |             |                   |                                    |
| 190. | 24207   | <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)                           |             |                   |                                    |
| 191. | 24331   | <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)                |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 192. | 30870   | <i>Taeniopygia guttata</i> (Zebra Finch)                       |             |                   |                                    |
| 193. | 48135   | <i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)  |             | P4                |                                    |
| 194. | 24845   | <i>Threskiornis spinicollis</i> (Straw-necked Ibis)            |             |                   |                                    |
| 195. | 42351   | <i>Todiramphus pyrrhopygius</i> (Red-backed Kingfisher)        |             |                   |                                    |
| 196. | 25549   | <i>Todiramphus sanctus</i> (Sacred Kingfisher)                 |             |                   |                                    |
| 197. | 48141   | <i>Tribonyx ventralis</i> (Black-tailed Native-hen)            |             |                   |                                    |
| 198. | 24806   | <i>Tringa glareola</i> (Wood Sandpiper)                        |             | IA                |                                    |
| 199. | 24808   | <i>Tringa nebularia</i> (Common Greenshank, greenshank)        |             | IA                |                                    |
| 200. | 24809   | <i>Tringa stagnatilis</i> (Marsh Sandpiper, little greenshank) |             | IA                |                                    |
| 201. | 24851   | <i>Turnix velox</i> (Little Button-quail)                      |             |                   |                                    |
| 202. |         | <i>Urodacus armatus</i>  |             |                   |                                    |
| 203. | 24386   | <i>Vanellus tricolor</i> (Banded Lapwing)                      |             |                   |                                    |
| 204. | 25211   | <i>Varanus caudolineatus</i>                                   |             |                   |                                    |
| 205. | 25524   | <i>Varanus panoptes</i> (Yellow-spotted Monitor)               |             |                   |                                    |
| 206. | 25223   | <i>Varanus panoptes</i> subsp. <i>rubidus</i>                  |             |                   |                                    |

**Conservation Codes**

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

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

# NatureMap Species Report

Created By Guest user on 28/05/2019

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 57' 18" E, 27° 25' 25" S  
**Buffer** 20km

|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 1.  | 24559   | <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)   |             |                   |                                    |
| 2.  | 24260   | <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)                                   |             |                   |                                    |
| 3.  | 24261   | <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)   |             |                   |                                    |
| 4.  | 25527   | <i>Acanthiza iredalei</i> (Samphire Thornbill, Slender-billed Thornbill)                               |             |                   |                                    |
| 5.  | 24263   | <i>Acanthiza iredalei</i> subsp. <i>iredalei</i> (Samphire Thornbill, Slender-billed Thornbill)        |             |                   |                                    |
| 6.  | 24264   | <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)   |             |                   |                                    |
| 7.  | 24265   | <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)   |             |                   |                                    |
| 8.  | 25535   | <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)  |             |                   |                                    |
| 9.  | 25536   | <i>Accipiter fasciatus</i> (Brown Goshawk)   |             |                   |                                    |
| 10. | 41323   | <i>Actitis hypoleucos</i> (Common Sandpiper)   |             | IA                |                                    |
| 11. | 25544   | <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)  |             |                   |                                    |
| 12. | 24301   | <i>Aegotheles cristatus</i> subsp. <i>cristatus</i> (Australian Owlet-nightjar)                        |             |                   |                                    |
| 13. |         | <i>Aganippe occidentalis</i>   |             |                   |                                    |
| 14. | 24541   | <i>Amytornis textilis</i> subsp. <i>textilis</i> (Western Grasswren, Thick-billed Grasswren (western)) |             | P4                |                                    |
| 15. | 24310   | <i>Anas castanea</i> (Chestnut Teal)   |             |                   |                                    |
| 16. | 24312   | <i>Anas gracilis</i> (Grey Teal)   |             |                   |                                    |
| 17. | 24315   | <i>Anas rhynchotis</i> (Australasian Shoveler)   |             |                   |                                    |
| 18. | 24316   | <i>Anas superciliosa</i> (Pacific Black Duck)  |             |                   |                                    |
| 19. | 47414   | <i>Anhinga novaehollandiae</i> (Australasian Darter)   |             |                   |                                    |
| 20. | 24087   | <i>Antechinomys laniger</i> (Kultarr)  |             |                   |                                    |
| 21. | 25670   | <i>Anthus australis</i> (Australian Pipit)   |             |                   |                                    |
| 22. | 24599   | <i>Anthus australis</i> subsp. <i>australis</i> (Australian Pipit)                                     |             |                   |                                    |
| 23. | 25528   | <i>Aphelocephala leucopsis</i> (Southern Whiteface)  |             |                   |                                    |
| 24. | 24266   | <i>Aphelocephala leucopsis</i> subsp. <i>castaneiventris</i> (Southern Whiteface)                      |             |                   |                                    |
| 25. | 24268   | <i>Aphelocephala nigricincta</i> (Banded Whiteface)  |             |                   |                                    |
| 26. | 24285   | <i>Aquila audax</i> (Wedge-tailed Eagle)   |             |                   |                                    |
| 27. | 41324   | <i>Ardea modesta</i> (great egret, white egret)  |             |                   |                                    |
| 28. | 24341   | <i>Ardea pacifica</i> (White-necked Heron)   |             |                   |                                    |
| 29. | 25566   | <i>Artamus cinereus</i> (Black-faced Woodswallow)  |             |                   |                                    |
| 30. | 24352   | <i>Artamus cinereus</i> subsp. <i>melanops</i> (Black-faced Woodswallow)                               |             |                   |                                    |
| 31. | 24353   | <i>Artamus cyanopterus</i> (Dusky Woodswallow)   |             |                   |                                    |
| 32. | 24355   | <i>Artamus minor</i> (Little Woodswallow)  |             |                   |                                    |
| 33. | 24356   | <i>Artamus personatus</i> (Masked Woodswallow)   |             |                   |                                    |
| 34. | 24318   | <i>Aythya australis</i> (Hardhead)   |             |                   |                                    |
| 35. |         | <i>Barnardius zonarius</i>   |             |                   |                                    |
| 36. | 24319   | <i>Biziura lobata</i> (Musk Duck)  |             |                   |                                    |
| 37. | 24251   | <i>Bos taurus</i> (European Cattle)  | Y           |                   |                                    |
| 38. | 25331   | <i>Brachyurophis approximans</i> (North-western Shovel-nosed Snake)                                    |             |                   |                                    |
| 39. |         | <i>Branchinella longirostris</i>   |             |                   |                                    |
| 40. | 24359   | <i>Burhinus grallarius</i> (Bush Stone-curlew)   |             |                   |                                    |
| 41. | 25716   | <i>Cacatua sanguinea</i> (Little Corella)  |             |                   |                                    |
| 42. | 42307   | <i>Cacomantis pallidus</i> (Pallid Cuckoo)   |             |                   |                                    |
| 43. | 24269   | <i>Calamanthus campestris</i> (Rufous Fieldwren)   |             |                   |                                    |
| 44. | 24779   | <i>Calidris acuminata</i> (Sharp-tailed Sandpiper)   |             | IA                |                                    |
| 45. | 24784   | <i>Calidris ferruginea</i> (Curlew Sandpiper)  |             | T                 |                                    |
| 46. | 24788   | <i>Calidris ruficollis</i> (Red-necked Stint)  |             | IA                |                                    |
| 47. | 24253   | <i>Capra hircus</i> (Goat)   | Y           |                   |                                    |
| 48. |         | <i>Cercophonium granulosus</i>   |             |                   |                                    |
| 49. | 24564   | <i>Certhionyx variegatus</i> (Pied Honeyeater)   |             |                   |                                    |
| 50. | 24377   | <i>Charadrius ruficapillus</i> (Red-capped Plover)   |             |                   |                                    |
| 51. | 24321   | <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)   |             |                   |                                    |



|      | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|---|-------------|-------------------|------------------------------------|
| 52.  | 47909   | <i>Cheramoeca leucosterna</i> (White-backed Swallow)  |             |                   |                                    |
| 53.  | 41332   | <i>Chlidonias leucopterus</i> (White-winged Black Tern, white-winged tern)                      |             | IA                |                                    |
| 54.  |         | <i>Chroicocephalus novaehollandiae</i>  |             |                   |                                    |
| 55.  | 25580   | <i>Cinclosoma castaneothorax</i> (Chestnut-breasted Quail-thrush)                               |             |                   |                                    |
| 56.  | 42311   | <i>Cinclosoma marginatum</i> (Western Quail-thrush)   |             |                   |                                    |
| 57.  | 24288   | <i>Circus approximans</i> (Swamp Harrier)   |             |                   |                                    |
| 58.  | 24289   | <i>Circus assimilis</i> (Spotted Harrier)   |             |                   |                                    |
| 59.  | 24774   | <i>Cladorhynchus leucocephalus</i> (Banded Stilt)   |             |                   |                                    |
| 60.  | 25581   | <i>Climacteris affinis</i> (White-browed Treecreeper)   |             |                   |                                    |
| 61.  | 25675   | <i>Colluricincla harmonica</i> (Grey Shrike-thrush)   |             |                   |                                    |
| 62.  | 24613   | <i>Colluricincla harmonica</i> subsp. <i>rufiventris</i> (Grey Shrike-thrush)                   |             |                   |                                    |
| 63.  | 24399   | <i>Columba livia</i> (Domestic Pigeon)  | Y           |                   |                                    |
| 64.  | 24361   | <i>Coracina maxima</i> (Ground Cuckoo-shrike)   |             |                   |                                    |
| 65.  | 25568   | <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)                                     |             |                   |                                    |
| 66.  |         | <i>Corimaethes campestris</i>   |             |                   |                                    |
| 67.  | 24416   | <i>Corvus bennetti</i> (Little Crow)  |             |                   |                                    |
| 68.  | 25592   | <i>Corvus coronoides</i> (Australian Raven)   |             |                   |                                    |
| 69.  | 25593   | <i>Corvus orru</i> (Torresian Crow)   |             |                   |                                    |
| 70.  | 24671   | <i>Coturnix pectoralis</i> (Stubble Quail)  |             |                   |                                    |
| 71.  | 25701   | <i>Coturnix ypsilophora</i> (Brown Quail)   |             |                   |                                    |
| 72.  | 24420   | <i>Cracticus nigrogularis</i> (Pied Butcherbird)  |             |                   |                                    |
| 73.  | 25595   | <i>Cracticus tibicen</i> (Australian Magpie)  |             |                   |                                    |
| 74.  | 25596   | <i>Cracticus torquatus</i> (Grey Butcherbird)   |             |                   |                                    |
| 75.  | 24882   | <i>Ctenophorus nuchalis</i> (Central Netted Dragon)   |             |                   |                                    |
| 76.  | 24883   | <i>Ctenophorus ornatus</i> (Ornate Crevice-Dragon)  |             |                   |                                    |
| 77.  | 24886   | <i>Ctenophorus reticulatus</i> (Western Netted Dragon)  |             |                   |                                    |
| 78.  | 24888   | <i>Ctenophorus salinarum</i> (Salt Pan Dragon)  |             |                   |                                    |
| 79.  | 24889   | <i>Ctenophorus scutulatus</i> (Lozenge-marked Dragon)   |             |                   |                                    |
| 80.  | 25052   | <i>Ctenotus leonhardii</i>  |             |                   |                                    |
| 81.  | 25074   | <i>Ctenotus schomburgkii</i>  |             |                   |                                    |
| 82.  | 24322   | <i>Cygnus atratus</i> (Black Swan)  |             |                   |                                    |
| 83.  | 25673   | <i>Daphoenositta chrysoptera</i> (Varied Sittella)  |             |                   |                                    |
| 84.  | 24606   | <i>Daphoenositta chrysoptera</i> subsp. <i>pileata</i> (Varied Sittella, Black-capped Sittella) |             |                   |                                    |
| 85.  | 25607   | <i>Dicaeum hirundinaceum</i> (Mistletoebird)  |             |                   |                                    |
| 86.  |         | <i>Dingosa simsoni</i>  |             |                   |                                    |
| 87.  | 24470   | <i>Dromaius novaehollandiae</i> (Emu)   |             |                   |                                    |
| 88.  | 25092   | <i>Egernia depressa</i> (Southern Pygmy Spiny-tailed Skink)                                     |             |                   |                                    |
| 89.  |         | <i>Egretta novaehollandiae</i>  |             |                   |                                    |
| 90.  |         | <i>Elanus axillaris</i>   |             |                   |                                    |
| 91.  | 47937   | <i>Euseyornis melanops</i> (Black-fronted Dotterel)   |             |                   |                                    |
| 92.  |         | <i>Eolophus roseicapillus</i>   |             |                   |                                    |
| 93.  | 24567   | <i>Epthianura albifrons</i> (White-fronted Chat)  |             |                   |                                    |
| 94.  | 24568   | <i>Epthianura aurifrons</i> (Orange Chat)   |             |                   |                                    |
| 95.  | 24570   | <i>Epthianura tricolor</i> (Crimson Chat)   |             |                   |                                    |
| 96.  | 25109   | <i>Eremiascincus richardsonii</i> (Broad-banded Sand Swimmer)                                   |             |                   |                                    |
| 97.  | 24379   | <i>Erythronyx cinctus</i> (Red-kneed Dotterel)  |             |                   |                                    |
| 98.  |         | <i>Eulimnadia</i> sp. 3 (Garden Rock)   |             |                   | Y                                  |
| 99.  | 24368   | <i>Eurostopodus argus</i> (Spotted Nightjar)  |             |                   |                                    |
| 100. | 25621   | <i>Falco berigora</i> (Brown Falcon)  |             |                   |                                    |
| 101. | 24471   | <i>Falco berigora</i> subsp. <i>berigora</i> (Brown Falcon)                                     |             |                   |                                    |
| 102. | 25622   | <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)                                  |             |                   |                                    |
| 103. | 25623   | <i>Falco longipennis</i> (Australian Hobby)   |             |                   |                                    |
| 104. | 25624   | <i>Falco peregrinus</i> (Peregrine Falcon)  |             | S                 |                                    |
| 105. | 24476   | <i>Falco subniger</i> (Black Falcon)  |             |                   |                                    |
| 106. | 25727   | <i>Fulica atra</i> (Eurasian Coot)  |             |                   |                                    |
| 107. | 42314   | <i>Gavicalis virescens</i> (Singing Honeyeater)   |             |                   |                                    |
| 108. | 24959   | <i>Gehyra variegata</i>   |             |                   |                                    |
| 109. | 47954   | <i>Gelochelidon nilotica</i> (Gull-billed Tern)   |             | IA                |                                    |
| 110. | 24401   | <i>Geopelia cuneata</i> (Diamond Dove)  |             |                   |                                    |
| 111. | 25585   | <i>Geopelia striata</i> (Zebra Dove)  |             |                   |                                    |
| 112. | 24404   | <i>Geophaps plumifera</i> (Spinifex Pigeon)   |             |                   |                                    |
| 113. | 25530   | <i>Gerygone fusca</i> (Western Gerygone)  |             |                   |                                    |
| 114. | 24271   | <i>Gerygone fusca</i> subsp. <i>fusca</i> (Western Gerygone)                                    |             |                   |                                    |
| 115. | 24443   | <i>Grallina cyanoleuca</i> (Magpie-lark)  |             |                   |                                    |
| 116. | 24295   | <i>Haliastur sphenurus</i> (Whistling Kite)   |             |                   |                                    |
| 117. | 24297   | <i>Hamirostra melanostemon</i> (Black-breasted Buzzard)   |             |                   |                                    |
| 118. | 24961   | <i>Heteronotia binoei</i> (Bynoe's Gecko)   |             |                   |                                    |
| 119. | 47965   | <i>Hieraaetus morphnoides</i> (Little Eagle)  |             |                   |                                    |
| 120. | 25734   | <i>Himantopus himantopus</i> (Black-winged Stilt)   |             |                   |                                    |
| 121. | 24491   | <i>Hirundo neoxena</i> (Welcome Swallow)  |             |                   |                                    |

|      | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|--|-------------|-------------------|------------------------------------|
| 122. | 48587   | <i>Hydroprogne caspia</i> (Caspian Tern)                               |             | IA                |                                    |
| 123. | 24572   | <i>Lacustroica whitei</i> (Grey Honeyeater)                            |             |                   |                                    |
| 124. | 24367   | <i>Lalage tricolor</i> (White-winged Triller)                          |             |                   |                                    |
| 125. |         | <i>Latrodectus hasseltii</i>   |             |                   |                                    |
| 126. | 24557   | <i>Leipoa ocellata</i> (Malleefowl)                                    |             | T                 |                                    |
| 127. | 25134   | <i>Lerista eupoda</i> (West Coast mulga slider, Good-legged Lerista)   |             | P1                |                                    |
| 128. | 25482   | <i>Lerista macropisthopus</i>  |             |                   |                                    |
| 129. | 25157   | <i>Lerista nicholli</i>  |             |                   |                                    |
| 130. | 42411   | <i>Lerista timida</i>  |             |                   |                                    |
| 131. | 25661   | <i>Lichmera indistincta</i> (Brown Honeyeater)                         |             |                   |                                    |
| 132. | 24136   | <i>Macropus rufus</i> (Red Kangaroo, Marlu)                            |             |                   |                                    |
| 133. | 24168   | <i>Macrotis lagotis</i> (Bilby, Dalgyte, Ninu)                         |             | T                 |                                    |
| 134. | 24326   | <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)                   |             |                   |                                    |
| 135. | 25651   | <i>Malurus lamberti</i> (Variegated Fairy-wren)                        |             |                   |                                    |
| 136. | 24544   | <i>Malurus lamberti subsp. assimilis</i> (Variegated Fairy-wren)       |             |                   |                                    |
| 137. | 25652   | <i>Malurus leucopterus</i> (White-winged Fairy-wren)                   |             |                   |                                    |
| 138. | 24549   | <i>Malurus leucopterus subsp. leuconotus</i> (White-winged Fairy-wren) |             |                   |                                    |
| 139. | 25654   | <i>Malurus splendens</i> (Splendid Fairy-wren)                         |             |                   |                                    |
| 140. | 24583   | <i>Manorina flavigula</i> (Yellow-throated Miner)                      |             |                   |                                    |
| 141. | 47997   | <i>Melanodryas cucullata</i> (Hooded Robin)                            |             |                   |                                    |
| 142. | 24736   | <i>Melopsittacus undulatus</i> (Budgerigar)                            |             |                   |                                    |
| 143. | 24598   | <i>Merops ornatus</i> (Rainbow Bee-eater)                              |             |                   |                                    |
| 144. |         | <i>Microcarbo melanoleucos</i>   |             |                   |                                    |
| 145. | 25693   | <i>Microeca fascians</i> (Jacky Winter)                                |             |                   |                                    |
| 146. | 25542   | <i>Milvus migrans</i> (Black Kite)                                     |             |                   |                                    |
| 147. | 24904   | <i>Moloch horridus</i> (Thorny Devil)                                  |             |                   |                                    |
| 148. | 25427   | <i>Neobatrachus sutor</i> (Shoemaker Frog)                             |             |                   |                                    |
| 149. | 24737   | <i>Neophema bourkii</i> (Bourke's Parrot)                              |             |                   |                                    |
| 150. |         | <i>Neopsephotus bourkii</i>  |             |                   |                                    |
| 151. | 24973   | <i>Nephurus wheeleri subsp. wheeleri</i>                               |             |                   |                                    |
| 152. | 24224   | <i>Notomys alexis</i> (Spinifex Hopping-mouse)                         |             |                   |                                    |
| 153. | 24742   | <i>Nymphicus hollandicus</i> (Cockatiel)                               |             |                   |                                    |
| 154. | 24407   | <i>Ocyphaps lophotes</i> (Crested Pigeon)                              |             |                   |                                    |
| 155. | 24618   | <i>Oreoica gutturalis</i> (Crested Bellbird)                           |             |                   |                                    |
| 156. | 24085   | <i>Oryctolagus cuniculus</i> (Rabbit)                                  | Y           |                   |                                    |
| 157. | 24328   | <i>Oxyura australis</i> (Blue-billed Duck)                             |             | P4                |                                    |
| 158. | 25680   | <i>Pachycephala rufiventris</i> (Rufous Whistler)                      |             |                   |                                    |
| 159. |         | <i>Parartemia sp.</i>  |             |                   |                                    |
| 160. | 25682   | <i>Pardalotus striatus</i> (Striated Pardalote)                        |             |                   |                                    |
| 161. |         | <i>Pediana tenuis</i>  |             |                   |                                    |
| 162. | 24648   | <i>Pelecanus conspicillatus</i> (Australian Pelican)                   |             |                   |                                    |
| 163. | 24380   | <i>Peltohyas australis</i> (Inland Dotterel)                           |             |                   |                                    |
| 164. | 48060   | <i>Petrochelidon ariel</i> (Fairy Martin)                              |             |                   |                                    |
| 165. | 48061   | <i>Petrochelidon nigricans</i> (Tree Martin)                           |             |                   |                                    |
| 166. | 24659   | <i>Petroica goodenovii</i> (Red-capped Robin)                          |             |                   |                                    |
| 167. | 25697   | <i>Phalacrocorax carbo</i> (Great Cormorant)                           |             |                   |                                    |
| 168. | 24667   | <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)             |             |                   |                                    |
| 169. | 24409   | <i>Phaps chalcoptera</i> (Common Bronzewing)                           |             |                   |                                    |
| 170. |         | <i>Phryganoporus candidus</i>  |             |                   |                                    |
| 171. | 24841   | <i>Platalea flavipes</i> (Yellow-billed Spoonbill)                     |             |                   |                                    |
| 172. | 24842   | <i>Platalea regia</i> (Royal Spoonbill)                                |             |                   |                                    |
| 173. | 24748   | <i>Platycercus varius</i> (Mulga Parrot)                               |             |                   |                                    |
| 174. | 24843   | <i>Plegadis falcinellus</i> (Glossy Ibis)                              |             | IA                |                                    |
| 175. | 25703   | <i>Podargus strigoides</i> (Tawny Frogmouth)                           |             |                   |                                    |
| 176. | 25704   | <i>Podiceps cristatus</i> (Great Crested Grebe)                        |             |                   |                                    |
| 177. | 24907   | <i>Pogona minor subsp. minor</i> (Dwarf Bearded Dragon)                |             |                   |                                    |
| 178. | 24681   | <i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)               |             |                   |                                    |
| 179. | 24683   | <i>Pomatostomus superciliosus</i> (White-browed Babbler)               |             |                   |                                    |
| 180. | 25706   | <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)                  |             |                   |                                    |
| 181. | 24769   | <i>Porzana fluminea</i> (Australian Spotted Crane)                     |             |                   |                                    |
| 182. | 42416   | <i>Pseudonaja mengdeni</i> (Western Brown Snake)                       |             |                   |                                    |
| 183. | 25263   | <i>Pseudonaja modesta</i> (Ringed Brown Snake)                         |             |                   |                                    |
| 184. | 24390   | <i>Psophodes occidentalis</i> (Western Wedgebill, Chiming Wedgebill)   |             |                   |                                    |
| 185. |         | <i>Ptilonorhynchus guttatus</i>  |             |                   |                                    |
| 186. | 42344   | <i>Purnella albifrons</i> (White-fronted Honeyeater)                   |             |                   |                                    |
| 187. | 25009   | <i>Pygopus nigriceps</i>   |             |                   |                                    |
| 188. | 24278   | <i>Pyrrholaemus brunneus</i> (Redthroat)                               |             |                   |                                    |
| 189. | 24776   | <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)               |             |                   |                                    |
| 190. | 48096   | <i>Rhipidura albiscapa</i> (Grey Fantail)                              |             |                   |                                    |
| 191. | 25614   | <i>Rhipidura leucophrys</i> (Willie Wagtail)                           |             |                   |                                    |

|      | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|------|---------|---|-------------|-------------------|------------------------------------|
| 192. | 24454   | <i>Rhipidura leucophrys</i> subsp. <i>leucophrys</i> (Willie Wagtail)         |             |                   |                                    |
| 193. | 30948   | <i>Smicromis brevirostris</i> (Weebill)                                       |             |                   |                                    |
| 194. | 24108   | <i>Sminthopsis crassicaudata</i> (Fat-tailed Dunnart)                         |             |                   |                                    |
| 195. | 24116   | <i>Sminthopsis macroura</i> (Stripe-faced Dunnart)                            |             |                   |                                    |
| 196. | 24329   | <i>Stictonetta naevosa</i> (Freckled Duck)                                    |             |                   |                                    |
| 197. |         | <i>Storena sinuosa</i>  |             |                   |                                    |
| 198. | 25590   | <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)                       | Y           |                   |                                    |
| 199. | 24946   | <i>Strophurus strophurus</i>  |             |                   |                                    |
| 200. | 24949   | <i>Strophurus wellingtonae</i>  |             |                   |                                    |
| 201. |         | <i>Supunna picta</i>  |             |                   |                                    |
| 202. | 25269   | <i>Suta fasciata</i> (Rosen's Snake)  |             |                   |                                    |
| 203. | 25705   | <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe) |             |                   |                                    |
| 204. | 24207   | <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)                          |             |                   |                                    |
| 205. | 24331   | <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)               |             |                   |                                    |
| 206. | 30870   | <i>Taeniopygia guttata</i> (Zebra Finch)                                      |             |                   |                                    |
| 207. | 48135   | <i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)                 |             | P4                |                                    |
| 208. | 24845   | <i>Threskiornis spinicollis</i> (Straw-necked Ibis)                           |             |                   |                                    |
| 209. | 42351   | <i>Todiramphus pyrrhopygius</i> (Red-backed Kingfisher)                       |             |                   |                                    |
| 210. | 25549   | <i>Todiramphus sanctus</i> (Sacred Kingfisher)                                |             |                   |                                    |
| 211. | 48141   | <i>Tribonyx ventralis</i> (Black-tailed Native-hen)                           |             |                   |                                    |
| 212. | 24806   | <i>Tringa glareola</i> (Wood Sandpiper)                                       |             | IA                |                                    |
| 213. | 24808   | <i>Tringa nebularia</i> (Common Greenshank, greenshank)                       |             | IA                |                                    |
| 214. | 24809   | <i>Tringa stagnatilis</i> (Marsh Sandpiper, little greenshank)                |             | IA                |                                    |
| 215. | 24851   | <i>Turnix velox</i> (Little Button-quail)                                     |             |                   |                                    |
| 216. | 30814   | <i>Tympanocryptis cephalus</i> (Pebble Dragon)                                |             |                   |                                    |
| 217. |         | <i>Urodacus armatus</i>   |             |                   |                                    |
| 218. |         | <i>Urodacus hoplurus</i>  |             |                   |                                    |
| 219. | 24386   | <i>Vanellus tricolor</i> (Banded Lapwing)                                     |             |                   |                                    |
| 220. | 25211   | <i>Varanus caudolineatus</i>  |             |                   |                                    |
| 221. | 25223   | <i>Varanus panoptes</i> subsp. <i>rubidus</i>                                 |             |                   |                                    |
| 222. |         | <i>Wesmaldra waldockae</i>  |             |                   |                                    |
| 223. | 25765   | <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)               |             |                   |                                    |

#### Conservation Codes

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

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

# NatureMap Species Report

Created By Guest user on 28/05/2019

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 05' 24" E, 27° 45' 15" S  
**Buffer** 20km

|     | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|---|-------------|-------------------|------------------------------------|
| 1.  | 24559   | <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)                  |             |                   |                                    |
| 2.  | 24261   | <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)                      |             |                   |                                    |
| 3.  | 24264   | <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)                    |             |                   |                                    |
| 4.  | 24265   | <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)                    |             |                   |                                    |
| 5.  | 25535   | <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)                       |             |                   |                                    |
| 6.  | 25544   | <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)                     |             |                   |                                    |
| 7.  | 24312   | <i>Anas gracilis</i> (Grey Teal)  |             |                   |                                    |
| 8.  | 25528   | <i>Aphelocephala leucopsis</i> (Southern Whiteface)                         |             |                   |                                    |
| 9.  | 24268   | <i>Aphelocephala nigricincta</i> (Banded Whiteface)                         |             |                   |                                    |
| 10. | 24285   | <i>Aquila audax</i> (Wedge-tailed Eagle)                                    |             |                   |                                    |
| 11. | 25566   | <i>Artamus cinereus</i> (Black-faced Woodswallow)                           |             |                   |                                    |
| 12. | 24355   | <i>Artamus minor</i> (Little Woodswallow)                                   |             |                   |                                    |
| 13. | 24356   | <i>Artamus personatus</i> (Masked Woodswallow)                              |             |                   |                                    |
| 14. |         | <i>Barnardius zonarius</i>  |             |                   |                                    |
| 15. | 33936   | <i>Branchinella wellardi</i> (fairy shrimp (Carnavon and Murchison))        |             | P3                |                                    |
| 16. | 24564   | <i>Certhionyx variegatus</i> (Pied Honeyeater)                              |             |                   |                                    |
| 17. | 47909   | <i>Cheramoeca leucosterna</i> (White-backed Swallow)                        |             |                   |                                    |
| 18. | 25580   | <i>Cinclosoma castaneothorax</i> (Chestnut-breasted Quail-thrush)           |             |                   |                                    |
| 19. | 25675   | <i>Colluricincla harmonica</i> (Grey Shrike-thrush)                         |             |                   |                                    |
| 20. | 24361   | <i>Coracina maxima</i> (Ground Cuckoo-shrike)                               |             |                   |                                    |
| 21. | 25568   | <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)                 |             |                   |                                    |
| 22. | 24416   | <i>Corvus bennetti</i> (Little Crow)  |             |                   |                                    |
| 23. | 25592   | <i>Corvus coronoides</i> (Australian Raven)                                 |             |                   |                                    |
| 24. | 25593   | <i>Corvus orru</i> (Torresian Crow)   |             |                   |                                    |
| 25. | 24420   | <i>Cracticus nigrogularis</i> (Pied Butcherbird)                            |             |                   |                                    |
| 26. | 25595   | <i>Cracticus tibicen</i> (Australian Magpie)                                |             |                   |                                    |
| 27. | 25596   | <i>Cracticus torquatus</i> (Grey Butcherbird)                               |             |                   |                                    |
| 28. | 24869   | <i>Ctenophorus caudicinctus</i> subsp. <i>mensarum</i> (Ring-tailed Dragon) |             |                   |                                    |
| 29. | 24886   | <i>Ctenophorus reticulatus</i> (Western Netted Dragon)                      |             |                   |                                    |
| 30. | 24470   | <i>Dromaius novaehollandiae</i> (Emu)                                       |             |                   |                                    |
| 31. | 25092   | <i>Egernia depressa</i> (Southern Pygmy Spiny-tailed Skink)                 |             |                   |                                    |
| 32. |         | <i>Eolophus roseicapillus</i>   |             |                   |                                    |
| 33. | 24570   | <i>Epthianura tricolor</i> (Crimson Chat)                                   |             |                   |                                    |
| 34. | 25621   | <i>Falco berigora</i> (Brown Falcon)  |             |                   |                                    |
| 35. | 25622   | <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)              |             |                   |                                    |
| 36. | 25623   | <i>Falco longipennis</i> (Australian Hobby)                                 |             |                   |                                    |
| 37. | 25624   | <i>Falco peregrinus</i> (Peregrine Falcon)                                  |             | S                 |                                    |
| 38. | 24401   | <i>Geopelia cuneata</i> (Diamond Dove)                                      |             |                   |                                    |
| 39. | 24443   | <i>Grallina cyanoleuca</i> (Magpie-lark)                                    |             |                   |                                    |
| 40. | 47965   | <i>Hieraaetus morphnoides</i> (Little Eagle)                                |             |                   |                                    |
| 41. | 24491   | <i>Hirundo neoxena</i> (Welcome Swallow)                                    |             |                   |                                    |
| 42. | 33917   | <i>Idiosoma nigrum</i> (Shield-backed Trapdoor Spider)                      |             | T                 |                                    |
| 43. | 42411   | <i>Lerista timida</i>   |             |                   |                                    |
| 44. | 41417   | <i>Liopholis striata</i> (Night Skink)                                      |             |                   |                                    |
| 45. | 25651   | <i>Malurus lamberti</i> (Variegated Fairy-wren)                             |             |                   |                                    |
| 46. | 25652   | <i>Malurus leucopterus</i> (White-winged Fairy-wren)                        |             |                   |                                    |
| 47. | 25654   | <i>Malurus splendens</i> (Splendid Fairy-wren)                              |             |                   |                                    |
| 48. | 24583   | <i>Manorina flavigula</i> (Yellow-throated Miner)                           |             |                   |                                    |
| 49. | 47997   | <i>Melanodryas cucullata</i> (Hooded Robin)                                 |             |                   |                                    |
| 50. | 24736   | <i>Melopsittacus undulatus</i> (Budgerigar)                                 |             |                   |                                    |
| 51. | 25425   | <i>Neobatrachus kunapalari</i> (Kunapalari Frog)                            |             |                   |                                    |
| 52. | 25427   | <i>Neobatrachus sutor</i> (Shoemaker Frog)                                  |             |                   |                                    |

| Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|---------|--|-------------|-------------------|------------------------------------|
| 53.     | <i>Neopsephotus bourkii</i>                                    |             |                   |                                    |
| 54.     | 24742 <i>Nymphicus hollandicus</i> (Cockatiel)                 |             |                   |                                    |
| 55.     | 24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)                |             |                   |                                    |
| 56.     | 24618 <i>Oreoica gutturalis</i> (Crested Bellbird)             |             |                   |                                    |
| 57.     | 24085 <i>Oryctolagus cuniculus</i> (Rabbit)                    | Y           |                   |                                    |
| 58.     | 25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)        |             |                   |                                    |
| 59.     | 48060 <i>Petrochelidon ariel</i> (Fairy Martin)                |             |                   |                                    |
| 60.     | 48061 <i>Petrochelidon nigricans</i> (Tree Martin)             |             |                   |                                    |
| 61.     | 24659 <i>Petroica goodenovii</i> (Red-capped Robin)            |             |                   |                                    |
| 62.     | 24409 <i>Phaps chalcoptera</i> (Common Bronzewing)             |             |                   |                                    |
| 63.     | 24683 <i>Pomatostomus superciliosus</i> (White-browed Babbler) |             |                   |                                    |
| 64.     | 25706 <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)    |             |                   |                                    |
| 65.     | 24278 <i>Pyrrholaemus brunneus</i> (Redthroat)                 |             |                   |                                    |
| 66.     | 25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)             |             |                   |                                    |
| 67.     | 24982 <i>Rhynchoedura ornata</i> (Western Beaked Gecko)        |             |                   |                                    |
| 68.     | 30948 <i>Smicromis brevirostris</i> (Weebill)                  |             |                   |                                    |
| 69.     | 24108 <i>Sminthopsis crassicaudata</i> (Fat-tailed Dunnart)    |             |                   |                                    |
| 70.     | <i>Storena sinuosa</i>   |             |                   |                                    |
| 71.     | 24946 <i>Strophurus strophurus</i>                             |             |                   |                                    |
| 72.     | 30870 <i>Taeniopygia guttata</i> (Zebra Finch)                 |             |                   |                                    |
| 73.     | 24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)      |             |                   |                                    |
| 74.     | 42351 <i>Todiramphus pyrrhopygius</i> (Red-backed Kingfisher)  |             |                   |                                    |
| 75.     | 24851 <i>Turnix velox</i> (Little Button-quail)                |             |                   |                                    |
| 76.     | 24386 <i>Vanellus tricolor</i> (Banded Lapwing)                |             |                   |                                    |
| 77.     | 25211 <i>Varanus caudolineatus</i>                             |             |                   |                                    |

**Conservation Codes**

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

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

# NatureMap Species Report

Created By Guest user on 28/05/2019

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 117° 51' 15" E, 28° 17' 31" S  
**Buffer** 20km

|     | Name ID | Species Name   | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|--|-------------|-------------------|------------------------------------|
| 1.  | 24559   | <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)           |             |                   |                                    |
| 2.  | 24260   | <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill) |             |                   |                                    |
| 3.  | 24261   | <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)               |             |                   |                                    |
| 4.  | 24264   | <i>Acanthiza robustirostris</i> (Slaty-backed Thornbill)             |             |                   |                                    |
| 5.  | 24265   | <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)             |             |                   |                                    |
| 6.  | 25536   | <i>Accipiter fasciatus</i> (Brown Goshawk)                           |             |                   |                                    |
| 7.  | 25544   | <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)              |             |                   |                                    |
| 8.  | 24312   | <i>Anas gracilis</i> (Grey Teal)                                     |             |                   |                                    |
| 9.  | 24315   | <i>Anas rhynchotis</i> (Australasian Shoveler)                       |             |                   |                                    |
| 10. | 24316   | <i>Anas superciliosa</i> (Pacific Black Duck)                        |             |                   |                                    |
| 11. | 25528   | <i>Aphelocephala leucopsis</i> (Southern Whiteface)                  |             |                   |                                    |
| 12. | 24285   | <i>Aquila audax</i> (Wedge-tailed Eagle)                             |             |                   |                                    |
| 13. | 25566   | <i>Artamus cinereus</i> (Black-faced Woodswallow)                    |             |                   |                                    |
| 14. | 24355   | <i>Artamus minor</i> (Little Woodswallow)                            |             |                   |                                    |
| 15. |         | <i>Barnardius zonarius</i>   |             |                   |                                    |
| 16. | 24319   | <i>Biziura lobata</i> (Musk Duck)                                    |             |                   |                                    |
| 17. | 24359   | <i>Burhinus grallarius</i> (Bush Stone-curlew)                       |             |                   |                                    |
| 18. | 25716   | <i>Cacatua sanguinea</i> (Little Corella)                            |             |                   |                                    |
| 19. | 42307   | <i>Cacomantis pallidus</i> (Pallid Cuckoo)                           |             |                   |                                    |
| 20. | 25717   | <i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)           |             |                   |                                    |
| 21. | 24321   | <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)           |             |                   |                                    |
| 22. | 47909   | <i>Cheramoeca leucosterna</i> (White-backed Swallow)                 |             |                   |                                    |
| 23. | 25580   | <i>Cinclosoma castaneothorax</i> (Chestnut-breasted Quail-thrush)    |             |                   |                                    |
| 24. | 25675   | <i>Colluricincla harmonica</i> (Grey Shrike-thrush)                  |             |                   |                                    |
| 25. | 24361   | <i>Coracina maxima</i> (Ground Cuckoo-shrike)                        |             |                   |                                    |
| 26. | 25568   | <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)          |             |                   |                                    |
| 27. | 24416   | <i>Corvus bennetti</i> (Little Crow)                                 |             |                   |                                    |
| 28. | 25592   | <i>Corvus coronoides</i> (Australian Raven)                          |             |                   |                                    |
| 29. | 25593   | <i>Corvus orru</i> (Torresian Crow)                                  |             |                   |                                    |
| 30. | 24420   | <i>Cracticus nigrogularis</i> (Pied Butcherbird)                     |             |                   |                                    |
| 31. | 25595   | <i>Cracticus tibicen</i> (Australian Magpie)                         |             |                   |                                    |
| 32. | 25596   | <i>Cracticus torquatus</i> (Grey Butcherbird)                        |             |                   |                                    |
| 33. | 24322   | <i>Cygnus atratus</i> (Black Swan)                                   |             |                   |                                    |
| 34. | 25607   | <i>Dicaeum hirundinaceum</i> (Mistletoebird)                         |             |                   |                                    |
| 35. | 24940   | <i>Diplodactylus pulcher</i>   |             |                   |                                    |
| 36. | 24470   | <i>Dromaius novaehollandiae</i> (Emu)                                |             |                   |                                    |
| 37. | 25092   | <i>Egernia depressa</i> (Southern Pygmy Spiny-tailed Skink)          |             |                   |                                    |
| 38. |         | <i>Eolophus roseicapillus</i>  |             |                   |                                    |
| 39. | 24570   | <i>Epthianura tricolor</i> (Crimson Chat)                            |             |                   |                                    |
| 40. | 25621   | <i>Falco berigora</i> (Brown Falcon)                                 |             |                   |                                    |
| 41. | 25622   | <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)       |             |                   |                                    |
| 42. | 25727   | <i>Fulica atra</i> (Eurasian Coot)                                   |             |                   |                                    |
| 43. | 24401   | <i>Geopelia cuneata</i> (Diamond Dove)                               |             |                   |                                    |
| 44. | 25530   | <i>Gerygone fusca</i> (Western Gerygone)                             |             |                   |                                    |
| 45. | 24443   | <i>Grallina cyanoleuca</i> (Magpie-lark)                             |             |                   |                                    |
| 46. | 24295   | <i>Haliastur sphenurus</i> (Whistling Kite)                          |             |                   |                                    |
| 47. | 24297   | <i>Hamirostra melanosternon</i> (Black-breasted Buzzard)             |             |                   |                                    |
| 48. | 24961   | <i>Heteronotia binoei</i> (Bynoe's Gecko)                            |             |                   |                                    |
| 49. | 47965   | <i>Hieraaetus morphnoides</i> (Little Eagle)                         |             |                   |                                    |
| 50. | 24491   | <i>Hirundo neoxena</i> (Welcome Swallow)                             |             |                   |                                    |
| 51. | 25137   | <i>Lerista gerrardii</i>   |             |                   |                                    |
| 52. |         | <i>Lophocinidia isura</i>  |             |                   |                                    |



|     | Name ID | Species Name  | Naturalised | Conservation Code | <sup>1</sup> Endemic To Query Area |
|-----|---------|---|-------------|-------------------|------------------------------------|
| 53. | 42415   | <i>Lucasium squarrosum</i>  |             |                   |                                    |
| 54. | 24326   | <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)                          |             |                   |                                    |
| 55. | 25651   | <i>Malurus lamberti</i> (Variegated Fairy-wren)                               |             |                   |                                    |
| 56. | 25652   | <i>Malurus leucopterus</i> (White-winged Fairy-wren)                          |             |                   |                                    |
| 57. | 25654   | <i>Malurus splendens</i> (Splendid Fairy-wren)                                |             |                   |                                    |
| 58. | 24583   | <i>Manorina flavigula</i> (Yellow-throated Miner)                             |             |                   |                                    |
| 59. | 24736   | <i>Melopsittacus undulatus</i> (Budgerigar)                                   |             |                   |                                    |
| 60. | 42303   | <i>Neobatrachus sudellae</i> (Desert Trilling Frog)                           |             |                   |                                    |
| 61. | 25427   | <i>Neobatrachus sutor</i> (Shoemaker Frog)                                    |             |                   |                                    |
| 62. | 25428   | <i>Neobatrachus wilmorei</i> (Plonking Frog)                                  |             |                   |                                    |
| 63. |         | <i>Neopsephotus bourkii</i>   |             |                   |                                    |
| 64. | 24742   | <i>Nymphicus hollandicus</i> (Cockatiel)                                      |             |                   |                                    |
| 65. | 24407   | <i>Ocyphaps lophotes</i> (Crested Pigeon)                                     |             |                   |                                    |
| 66. | 24618   | <i>Oreoica gutturalis</i> (Crested Bellbird)                                  |             |                   |                                    |
| 67. | 24328   | <i>Oxyura australis</i> (Blue-billed Duck)                                    |             | P4                |                                    |
| 68. | 24619   | <i>Pachycephala inornata</i> (Gilbert's Whistler)                             |             |                   |                                    |
| 69. | 25680   | <i>Pachycephala rufiventris</i> (Rufous Whistler)                             |             |                   |                                    |
| 70. | 25682   | <i>Pardalotus striatus</i> (Striated Pardalote)                               |             |                   |                                    |
| 71. | 48061   | <i>Petrochelidon nigricans</i> (Tree Martin)                                  |             |                   |                                    |
| 72. | 24659   | <i>Petroica goodenovii</i> (Red-capped Robin)                                 |             |                   |                                    |
| 73. | 24409   | <i>Phaps chalcoptera</i> (Common Bronzewing)                                  |             |                   |                                    |
| 74. | 24748   | <i>Platycercus varius</i> (Mulga Parrot)                                      |             |                   |                                    |
| 75. | 25703   | <i>Podargus strigoides</i> (Tawny Frogmouth)                                  |             |                   |                                    |
| 76. | 24681   | <i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)                      |             |                   |                                    |
| 77. | 24683   | <i>Pomatostomus superciliosus</i> (White-browed Babbler)                      |             |                   |                                    |
| 78. | 25706   | <i>Pomatostomus temporalis</i> (Grey-crowned Babbler)                         |             |                   |                                    |
| 79. | 24390   | <i>Psophodes occidentalis</i> (Western Wedgebill, Chiming Wedgebill)          |             |                   |                                    |
| 80. |         | <i>Ptilonorhynchus guttatus</i>   |             |                   |                                    |
| 81. | 42344   | <i>Purnella albifrons</i> (White-fronted Honeyeater)                          |             |                   |                                    |
| 82. | 24278   | <i>Pyrrholaemus brunneus</i> (Redthroat)                                      |             |                   |                                    |
| 83. | 48096   | <i>Rhipidura albiscapa</i> (Grey Fantail)                                     |             |                   |                                    |
| 84. | 25614   | <i>Rhipidura leucophrys</i> (Willie Wagtail)                                  |             |                   |                                    |
| 85. | 24982   | <i>Rhynchoedura ornata</i> (Western Beaked Gecko)                             |             |                   |                                    |
| 86. | 30948   | <i>Smicrornis brevirostris</i> (Weebill)                                      |             |                   |                                    |
| 87. | 25269   | <i>Suta fasciata</i> (Rosen's Snake)  |             |                   |                                    |
| 88. | 25705   | <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe) |             |                   |                                    |
| 89. | 24331   | <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)               |             |                   |                                    |
| 90. | 30870   | <i>Taeniopygia guttata</i> (Zebra Finch)                                      |             |                   |                                    |
| 91. | 30871   | <i>Taeniopygia guttata</i> subsp. <i>castanotis</i> (Zebra Finch)             |             |                   |                                    |
| 92. | 24851   | <i>Turnix velox</i> (Little Button-quail)                                     |             |                   |                                    |
| 93. | 24386   | <i>Vanellus tricolor</i> (Banded Lapwing)                                     |             |                   |                                    |
| 94. | 25211   | <i>Varanus caudolineatus</i>  |             |                   |                                    |

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# Birdata Species List

|   |  |  |  |
|---|--|--|--|
| <b>Emu</b><br>Dromaius novaehollandiae<br>158 (14.50%)                    | <b>Hoary-headed Grebe</b><br>Poliiocephalus<br>poliocephalus<br>94 (8.62%) | <b>Black-tailed Native-hen</b><br>Tribonyx ventralis<br>57 (5.23%)         | <b>Common Sandpiper</b><br>Actitis hypoleucos<br>3 (0.28%)                 |
| <b>Blue-billed Duck</b><br>Oxyura australis<br>2 (0.18%)                  | <b>Great Crested Grebe</b><br>Podiceps cristatus<br>4 (0.37%)              | <b>Eurasian Coot</b><br>Fulica atra<br>52 (4.77%)                          | <b>Common Greenshank</b><br>Tringa nebularia<br>21 (1.93%)                 |
| <b>Pink-eared Duck</b><br>Malacorhynchus<br>membranaceus<br>60 (5.50%)    | <b>Rock Dove</b><br>Columba livia<br>3 (0.28%)                             | <b>Bush Stone-curlew</b><br>Burhinus grallarius<br>20 (1.83%)              | <b>Wood Sandpiper</b><br>Tringa glareola<br>8 (0.73%)                      |
| <b>Black Swan</b><br>Cygnus atratus<br>78 (7.16%)                         | <b>Laughing Dove</b><br>Streptopelia senegalensis<br>8 (0.73%)             | <b>Banded Stilt</b><br>Cladorhynchus<br>leucocephalus<br>15 (1.38%)        | <b>Marsh Sandpiper</b><br>Tringa stagnatilis<br>4 (0.37%)                  |
| <b>Australian Shelduck</b><br>Tadorna tadornoides<br>88 (8.07%)           | <b>Spinifex Pigeon</b><br>Geophaps plumifera<br>1 (0.09%)                  | <b>Red-necked Avocet</b><br>Recurvirostra<br>novaehollandiae<br>37 (3.39%) | <b>Little Button-quail</b><br>Turnix velox<br>16 (1.47%)                   |
| <b>Hardhead</b><br>Aythya australis<br>43 (3.94%)                         | <b>Common Bronzewing</b><br>Phaps chalcoptera<br>104 (9.54%)               | <b>Black-winged Stilt</b><br>Himantopus leucocephalus<br>97 (8.90%)        | <b>Silver Gull</b><br>Chroicocephalus<br>novaehollandiae<br>19 (1.74%)     |
| <b>Australasian Shoveler</b><br>Spatula rhynchotis<br>23 (2.11%)          | <b>Crested Pigeon</b><br>Ocyphaps lophotes<br>389 (35.69%)                 | <b>Red-capped Plover</b><br>Charadrius ruficapillus<br>42 (3.85%)          | <b>Australian Gull-billed Tern</b><br>Gelocheidon macrotarsa<br>18 (1.65%) |
| <b>Pacific Black Duck</b><br>Anas superciliosa<br>68 (6.24%)              | <b>Diamond Dove</b><br>Geopelia cuneata<br>98 (8.99%)                      | <b>Hooded Plover</b><br>Thinornis cucullatus<br>3 (0.28%)                  | <b>Caspian Tern</b><br>Hydroprogne caspia<br>1 (0.09%)                     |
| <b>Grey Teal</b><br>Anas gracilis<br>135 (12.39%)                         | <b>Peaceful Dove</b><br>Geopelia placida<br>4 (0.37%)                      | <b>Black-fronted Dotterel</b><br>Elseymornis melanops<br>123 (11.28%)      | <b>Whiskered Tern</b><br>Chlidonias hybrida<br>17 (1.56%)                  |
| <b>Chestnut Teal</b><br>Anas castanea<br>2 (0.18%)                        | <b>Horsfield's Bronze-Cuckoo</b><br>Chalcites basalus<br>52 (4.77%)        | <b>Banded Lapwing</b><br>Vanellus tricolor<br>24 (2.20%)                   | <b>White-winged Black Tern</b><br>Chlidonias leucopterus<br>3 (0.28%)      |
| <b>Freckled Duck</b><br>Stictonetta naevosa<br>4 (0.37%)                  | <b>Black-eared Cuckoo</b><br>Chalcites osculans<br>34 (3.12%)              | <b>Red-kneed Dotterel</b><br>Erythronyctes alba<br>46 (4.22%)              | <b>Australian Pelican</b><br>Pelecanus conspicillatus<br>16 (1.47%)        |
| <b>Musk Duck</b><br>Biziura lobata<br>83 (7.61%)                          | <b>Pallid Cuckoo</b><br>Heteroscenes pallidus<br>62 (5.69%)                | <b>Inland Dotterel</b><br>Charadrius australis<br>3 (0.28%)                | <b>White-necked Heron</b><br>Ardea pacifica<br>74 (6.79%)                  |
| <b>Australian Wood Duck</b><br>Chenonetta jubata<br>52 (4.77%)            | <b>Australian Bustard</b><br>Ardeotis australis<br>2 (0.18%)               | <b>Bar-tailed Godwit</b><br>Limosa lapponica<br>2 (0.18%)                  | <b>Great Egret</b><br>Ardea alba<br>27 (2.48%)                             |
| <b>Malleefowl</b><br>Leipoa ocellata<br>1 (0.09%)                         | <b>Tawny Frogmouth</b><br>Podargus strigoides<br>6 (0.55%)                 | <b>Sharp-tailed Sandpiper</b><br>Calidris acuminata<br>7 (0.64%)           | <b>White-faced Heron</b><br>Egretta novaehollandiae<br>88 (8.07%)          |
| <b>Stubble Quail</b><br>Coturnix pectoralis<br>7 (0.64%)                  | <b>Spotted Nightjar</b><br>Eurostopodus argus<br>10 (0.92%)                | <b>Curlew Sandpiper</b><br>Calidris ferruginea<br>2 (0.18%)                | <b>Australian White Ibis</b><br>Threskiornis moluccus<br>24 (2.20%)        |
| <b>Brown Quail</b><br>Synoicus ypsilophora<br>1 (0.09%)                   | <b>Australian Owlet-nightjar</b><br>Aegotheles cristatus<br>32 (2.94%)     | <b>Red-necked Stint</b><br>Calidris ruficollis<br>2 (0.18%)                | <b>Straw-necked Ibis</b><br>Threskiornis spinicollis<br>66 (6.06%)         |
| <b>Australasian Grebe</b><br>Tachybaptus<br>novaehollandiae<br>68 (6.24%) | <b>Australian Spotted Crake</b><br>Porzana fluminea<br>3 (0.28%)           | <b>Pectoral Sandpiper</b><br>Calidris melanotos<br>1 (0.09%)               | <b>Yellow-billed Spoonbill</b><br>Platalea flavipes<br>41 (3.76%)          |

|  |  |  |   |
|--|--|--|---|
| <b>Royal Spoonbill</b><br><i>Platalea regia</i><br>2 (0.18%)                     | <b>Rainbow Bee-eater</b><br><i>Merops ornatus</i><br>19 (1.74%)                  | <b>Variegated Fairy-wren</b><br><i>Malurus lamberti</i><br>82 (7.52%)              | <b>Red-browed Pardalote</b><br><i>Pardalotus rubricatus</i><br>1 (0.09%)            |
| <b>Glossy Ibis</b><br><i>Plegadis falcinellus</i><br>4 (0.37%)                   | <b>Sacred Kingfisher</b><br><i>Todiramphus sanctus</i><br>13 (1.19%)             | <b>Splendid Fairy-wren</b><br><i>Malurus splendens</i><br>173 (15.87%)             | <b>Striated Pardalote</b><br><i>Pardalotus striatus</i><br>14 (1.28%)               |
| <b>Little Pied Cormorant</b><br><i>Microcarbo melanoleucos</i><br>22 (2.02%)     | <b>Red-backed Kingfisher</b><br><i>Todiramphus pyrrhopygius</i><br>32 (2.94%)    | <b>White-winged Fairy-wren</b><br><i>Malurus leucopterus</i><br>69 (6.33%)         | <b>Western Gerygone</b><br><i>Gerygone fusca</i><br>61 (5.60%)                      |
| <b>Great Cormorant</b><br><i>Phalacrocorax carbo</i><br>4 (0.37%)                | <b>Nankeen Kestrel</b><br><i>Falco cenchroides</i><br>167 (15.32%)               | <b>Black Honeyeater</b><br><i>Sugomel niger</i><br>13 (1.19%)                      | <b>Weebill</b><br><i>Smicrornis brevirostris</i><br>17 (1.56%)                      |
| <b>Little Black Cormorant</b><br><i>Phalacrocorax sulcirostris</i><br>25 (2.29%) | <b>Australian Hobby</b><br><i>Falco longipennis</i><br>28 (2.57%)                | <b>Brown Honeyeater</b><br><i>Lichmera indistincta</i><br>44 (4.04%)               | <b>Redthroat</b><br><i>Pyrrholaemus brunneus</i><br>61 (5.60%)                      |
| <b>Australasian Darter</b><br><i>Anhinga novaehollandiae</i><br>9 (0.83%)        | <b>Brown Falcon</b><br><i>Falco berigora</i><br>108 (9.91%)                      | <b>Pied Honeyeater</b><br><i>Certhionyx variegatus</i><br>75 (6.88%)               | <b>Rufous Fieldwren</b><br><i>Calamanthus campestris</i><br>5 (0.46%)               |
| <b>Black-shouldered Kite</b><br><i>Elanus axillaris</i><br>15 (1.38%)            | <b>Black Falcon</b><br><i>Falco subniger</i><br>1 (0.09%)                        | <b>Grey Honeyeater</b><br><i>Conopophila whitei</i><br>6 (0.55%)                   | <b>Southern Whiteface</b><br><i>Aphelocephala leucopsis</i><br>214 (19.63%)         |
| <b>Black-breasted Buzzard</b><br><i>Hamirostra melanosternon</i><br>15 (1.38%)   | <b>Peregrine Falcon</b><br><i>Falco peregrinus</i><br>14 (1.28%)                 | <b>Crimson Chat</b><br><i>Epthianura tricolor</i><br>75 (6.88%)                    | <b>Banded Whiteface</b><br><i>Aphelocephala nigricincta</i><br>11 (1.01%)           |
| <b>Square-tailed Kite</b><br><i>Lophoictinia isura</i><br>1 (0.09%)              | <b>Cockatiel</b><br><i>Nymphicus hollandicus</i><br>53 (4.86%)                   | <b>Orange Chat</b><br><i>Epthianura aurifrons</i><br>24 (2.20%)                    | <b>Yellow-rumped Thornbill</b><br><i>Acanthiza chrysorrhoa</i><br>165 (15.14%)      |
| <b>Wedge-tailed Eagle</b><br><i>Aquila audax</i><br>206 (18.90%)                 | <b>Red-tailed Black-Cockatoo</b><br><i>Calyptorhynchus banksii</i><br>30 (2.75%) | <b>White-fronted Chat</b><br><i>Epthianura albifrons</i><br>7 (0.64%)              | <b>Inland Thornbill</b><br><i>Acanthiza apicalis</i><br>100 (9.17%)                 |
| <b>Little Eagle</b><br><i>Hieraaetus morphnoides</i><br>17 (1.56%)               | <b>Galah</b><br><i>Eolophus roseicapilla</i><br>214 (19.63%)                     | <b>Spiny-cheeked Honeyeater</b><br><i>Acanthagenys rufogularis</i><br>506 (46.42%) | <b>Slaty-backed Thornbill</b><br><i>Acanthiza robustirostris</i><br>94 (8.62%)      |
| <b>Swamp Harrier</b><br><i>Circus approximans</i><br>6 (0.55%)                   | <b>Little Corella</b><br><i>Cacatua sanguinea</i><br>8 (0.73%)                   | <b>Singing Honeyeater</b><br><i>Gavicalis virescens</i><br>550 (50.46%)            | <b>Slender-billed Thornbill</b><br><i>Acanthiza iredalei</i><br>2 (0.18%)           |
| <b>Spotted Harrier</b><br><i>Circus assimilis</i><br>7 (0.64%)                   | <b>Mulga Parrot</b><br><i>Psephotellus varius</i><br>194 (17.80%)                | <b>Grey-headed Honeyeater</b><br><i>Ptilotula keartlandi</i><br>2 (0.18%)          | <b>Chestnut-rumped Thornbill</b><br><i>Acanthiza uropygialis</i><br>270 (24.77%)    |
| <b>Brown Goshawk</b><br><i>Accipiter fasciatus</i><br>30 (2.75%)                 | <b>Australian Ringneck</b><br><i>Barnardius zonarius</i><br>133 (12.20%)         | <b>Yellow-plumed Honeyeater</b><br><i>Ptilotula ornata</i><br>1 (0.09%)            | <b>Grey-crowned Babbler</b><br><i>Pomatostomus temporalis</i><br>164 (15.05%)       |
| <b>Collared Sparrowhawk</b><br><i>Accipiter cirrocephalus</i><br>20 (1.83%)      | <b>Bourke's Parrot</b><br><i>Neopsephotus bourkii</i><br>79 (7.25%)              | <b>Grey-fronted Honeyeater</b><br><i>Ptilotula plumula</i><br>1 (0.09%)            | <b>White-browed Babbler</b><br><i>Pomatostomus superciliosus</i><br>160 (14.68%)    |
| <b>Whistling Kite</b><br><i>Haliastur sphenurus</i><br>191 (17.52%)              | <b>Elegant Parrot</b><br><i>Neophema elegans</i><br>2 (0.18%)                    | <b>White-plumed Honeyeater</b><br><i>Ptilotula penicillata</i><br>247 (22.66%)     | <b>Varied Sittella</b><br><i>Daphoenositta chrysoptera</i><br>13 (1.19%)            |
| <b>Black Kite</b><br><i>Milvus migrans</i><br>15 (1.38%)                         | <b>Budgerigar</b><br><i>Melopsittacus undulatus</i><br>121 (11.10%)              | <b>White-fronted Honeyeater</b><br><i>Purnella albifrons</i><br>87 (7.98%)         | <b>Ground Cuckoo-shrike</b><br><i>Coracina maxima</i><br>20 (1.83%)                 |
| <b>Barn Owl</b><br><i>Tyto alba</i><br>2 (0.18%)                                 | <b>Western Bowerbird</b><br><i>Ptilonorhynchus guttatus</i><br>154 (14.13%)      | <b>Yellow-throated Miner</b><br><i>Manorina flavigula</i><br>312 (28.62%)          | <b>Black-faced Cuckoo-shrike</b><br><i>Coracina novaehollandiae</i><br>157 (14.40%) |
| <b>Southern Boobook</b><br><i>Ninox boobook</i><br>5 (0.46%)                     | <b>White-browed Treecreeper</b><br><i>Climacteris affinis</i><br>19 (1.74%)      |  |   |

**White-winged Triller**  
*Lalage tricolor*  
 74 (6.79%)

**Chestnut Quail-thrush**  
*Cinclosoma castanotus*  
 1 (0.09%)

**Chestnut-breasted Quail-thrush**  
*Cinclosoma castaneothorax*  
 66 (6.06%)

**Gilbert's Whistler**  
*Pachycephala inornata*  
 1 (0.09%)

**Rufous Whistler**  
*Pachycephala rufiventris*  
 246 (22.57%)

**Grey Shrike-thrush**  
*Colluricincla harmonica*  
 214 (19.63%)

**Crested Bellbird**  
*Oreoica gutturalis*  
 474 (43.49%)

**Chiming Wedgebill**  
*Psophodes occidentalis*  
 82 (7.52%)

**Grey Currawong**  
*Strepera versicolor*  
 1 (0.09%)

**Australian Magpie**  
*Gymnorhina tibicen*  
 190 (17.43%)

**Pied Butcherbird**  
*Cracticus nigrogularis*  
 248 (22.75%)

**Grey Butcherbird**  
*Cracticus torquatus*  
 165 (15.14%)

**Masked Woodswallow**  
*Artamus personatus*  
 36 (3.30%)

**Dusky Woodswallow**  
*Artamus cyanopterus*  
 5 (0.46%)

**Black-faced Woodswallow**  
*Artamus cinereus*  
 233 (21.38%)

**Little Woodswallow**  
*Artamus minor*  
 36 (3.30%)

**Willie Wagtail**  
*Rhipidura leucophrys*  
 479 (43.94%)

**Grey Fantail**  
*Rhipidura fuliginosa*  
 37 (3.39%)

**Torresian Crow**  
*Corvus orru*  
 176 (16.15%)

**Little Crow**  
*Corvus bennetti*  
 217 (19.91%)

**Australian Raven**  
*Corvus coronoides*  
 20 (1.83%)

**Magpie-lark**  
*Grallina cyanoleuca*  
 363 (33.30%)

**Red-capped Robin**  
*Petroica goodenovii*  
 326 (29.91%)

**Jacky Winter**  
*Microeca fascians*  
 7 (0.64%)

**Hooded Robin**  
*Melanodryas cucullata*  
 81 (7.43%)

**Mistletoebird**  
*Dicaeum hirundinaceum*  
 41 (3.76%)

**Zebra Finch**  
*Taeniopygia guttata*  
 394 (36.15%)

**Australasian Pipit**  
*Anthus novaeseelandiae*  
 173 (15.87%)

**Brown Songlark**  
*Cincloramphus cruralis*  
 26 (2.39%)

**Rufous Songlark**  
*Cincloramphus mathewsi*  
 64 (5.87%)

**White-backed Swallow**  
*Cheramoeca leucosterna*  
 25 (2.29%)

**Fairy Martin**  
*Petrochelidon ariel*  
 45 (4.13%)

**Tree Martin**  
*Petrochelidon nigricans*  
 124 (11.38%)

**Welcome Swallow**  
*Hirundo neoxena*  
 302 (27.71%)

**Silveryeye**  
*Zosterops lateralis*  
 1 (0.09%)

**Corella spp**  
 1 (0.09%)

**Crow & Raven spp**  
 77 (7.06%)

**Fairy-wren spp**  
 2 (0.18%)

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## **Appendix D: Vegetation Classification and Condition Scales, and Fauna Habitat Condition Scale**



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Table D.1: Vegetation Classification System Specht (1970) as modified by Aplin (1979).

| Stratum                       | 70-100% cover                                       | 30-70% cover                                 | 10-30% cover                                      | 2-10% cover  | <2% cover                                  |
|-------------------------------|---|--|---|--|--|
| <b>Trees &gt; 30 m</b>        | Tall closed forest                                  | Tall open Forest                             | Tall woodland                                     | Tall open woodland                                     | Scattered tall trees                       |
| <b>Trees 10-30 m</b>          | Closed forest                                       | Open forest                                  | Woodland  | Open woodland  | Scattered trees                            |
| <b>Trees &lt; 10 m</b>        | Low closed forest                                   | Low open forest                              | Low woodland                                      | Low open woodland                                      | Scattered low trees                        |
| <b>Shrubs &gt; 2 m</b>        | Tall closed scrub                                   | Tall open scrub                              | Tall shrubland                                    | Tall open shrubland                                    | Scattered tall shrubs                      |
| <b>Shrubs 1-2 m</b>           | Closed heath  | Open heath                                   | Shrubland   | Open shrubland   | Scattered shrubs                           |
| <b>Shrubs &lt; 1 m</b>        | Low closed heath                                    | Low open heath                               | Low shrubland                                     | Low open shrubland                                     | Scattered low shrubs                       |
| <b>Hummock grasses</b>        | Closed hummock grassland                            | Hummock grassland                            | Open hummock grassland                            | Very open hummock grassland                            | Scattered hummock grasses                  |
| <b>Grasses, sedges, herbs</b> | Closed tussock grassland/<br>sedgeland/<br>herbland | Tussock grassland/<br>sedgeland/<br>herbland | Open tussock grassland/<br>sedgeland/<br>herbland | Very open tussock grassland/<br>sedgeland/<br>herbland | Scattered tussock grasses<br>/sedges/herbs |

Table D.2: Vegetation condition scale as adapted from Trudgen (1988) (Environmental Protection Authority 2016).

| Vegetation condition       | Condition description  |
|----------------------------|--|
| <b>Excellent</b>           | Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.  |
| <b>Very Good</b>           | Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.                                 |
| <b>Good</b>                | More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.  |
| <b>Poor</b>                | Still retains basic vegetation structure or ability to regenerate to it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.   |
| <b>Very Poor</b>           | Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species. |
| <b>Completely Degraded</b> | Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.                                       |

Table D.3: Fauna habitat condition scale (Thompson and Thompson 2010).

| Habitat condition                    | Condition description  |
|--------------------------------------|--|
| <b>High Quality Fauna Habitat</b>    | These areas closely approximate the vegetation mix and quality that would have been in the area prior to any human induced disturbance. The habitat has connectivity with other habitats and is likely to support the most natural vertebrate fauna assemblage.  |
| <b>Very Good Fauna Habitat</b>       | These areas show minimal signs of human induced disturbance (e.g. grazing, clearing, fragmentation, weeds) and retain almost all of the characteristics of the habitat had it not been disturbed. The habitat has connectivity with other habitats, and fauna assemblages in these areas are likely to be minimally effected by disturbance.   |
| <b>Good Fauna Habitat</b>            | These areas show signs of human induced disturbance (e.g. grazing, clearing, fragmentation, weeds) but generally retain many of the characteristics of the habitat had it not been disturbed. The habitat still retains some connectivity with other habitats but fauna assemblages in these areas are likely to be affected by disturbance. Fauna assemblages in these areas are likely to be similar to what might be expected in this habitat.  |
| <b>Disturbed Fauna Habitat</b>       | These areas show signs of human induced significant disturbance (e.g. mining, clearing, tracks and roads). Many of the trees, shrubs and undergrowth have died or have been cleared. These areas may be in the early succession and regeneration stages. Areas may show signs of significant grazing, contain an abundance of weeds or have been damaged by vehicles or machinery. Habitats are fragmented or have limited connectivity with other fauna habitats. Fauna assemblages in these areas are likely to differ significantly from what might be expected in the area had the disturbance not occurred. |
| <b>Highly Degraded Fauna Habitat</b> | These areas often have a significant human induced loss of vegetation, and / or a large number of vehicle tracks and / or have been completely cleared, and / or areas have been heavily grazed or farmed. There is limited or no fauna habitat connectivity. Fauna assemblages in these areas are likely to differ significantly from what existed prior to the disturbance, and are often depleted compared to what existed prior to the disturbance.  |

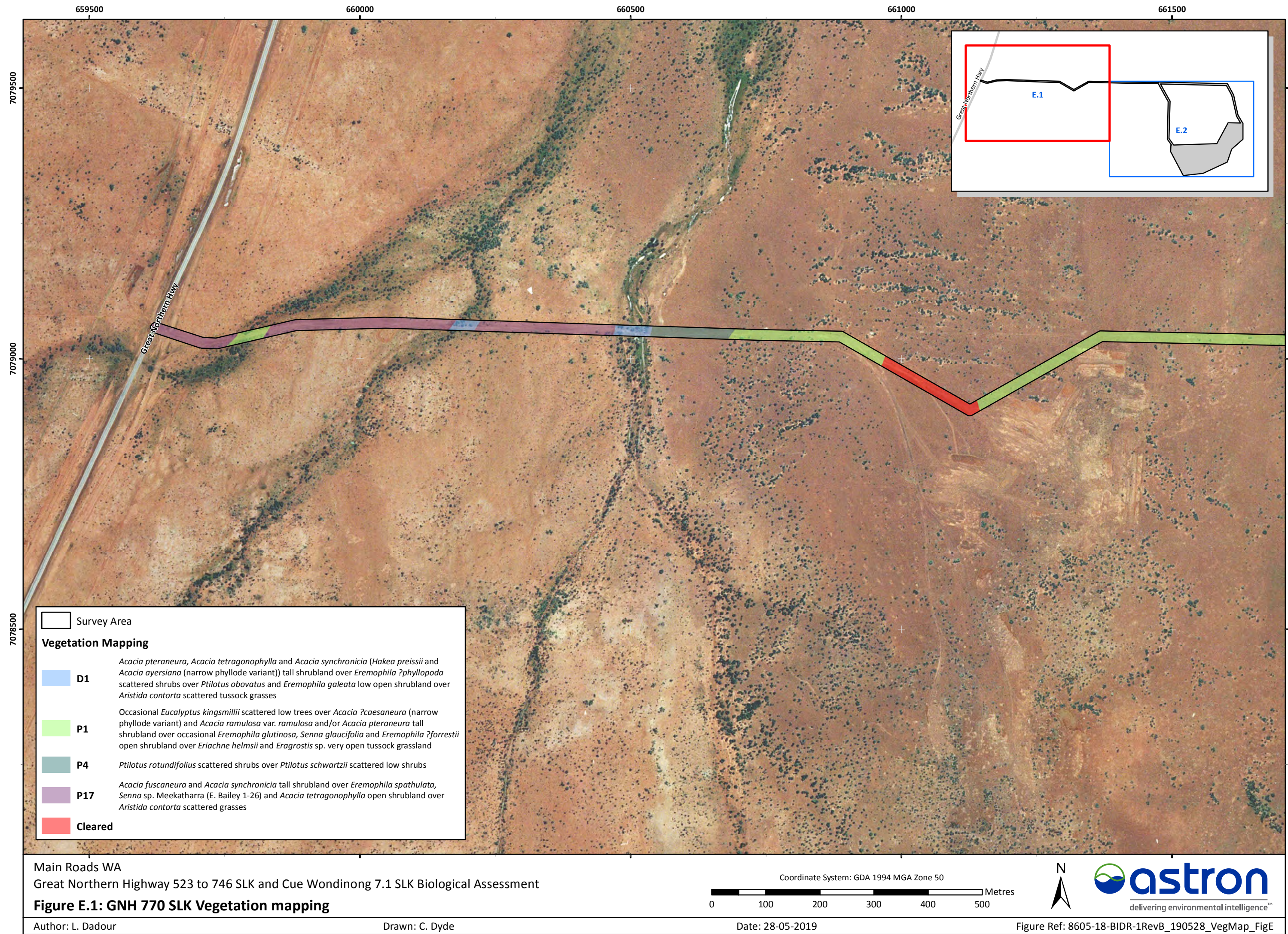
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## **Appendix E: Vegetation Type Mapping, Site Location and Conservation Significant Flora Locations**

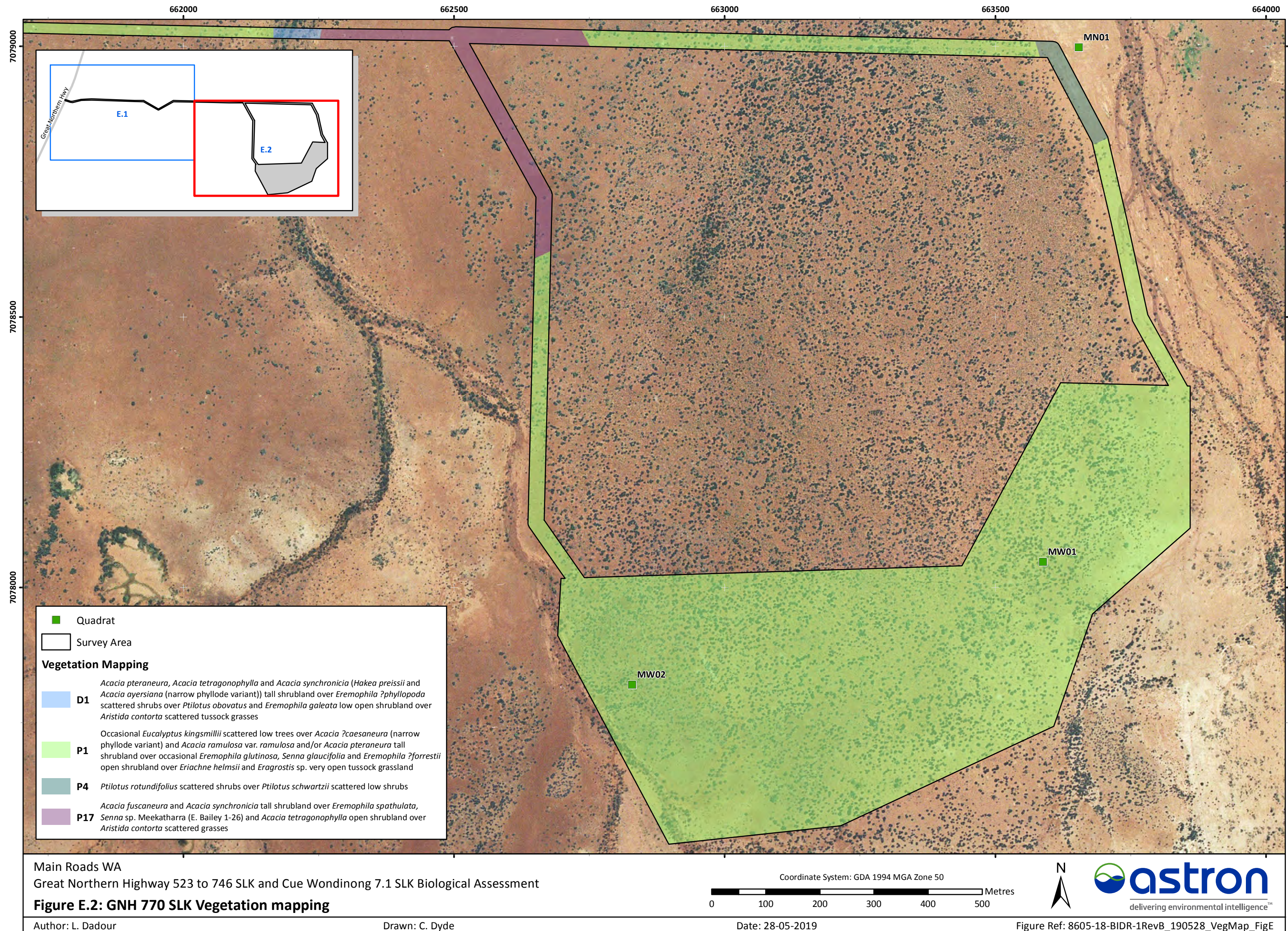


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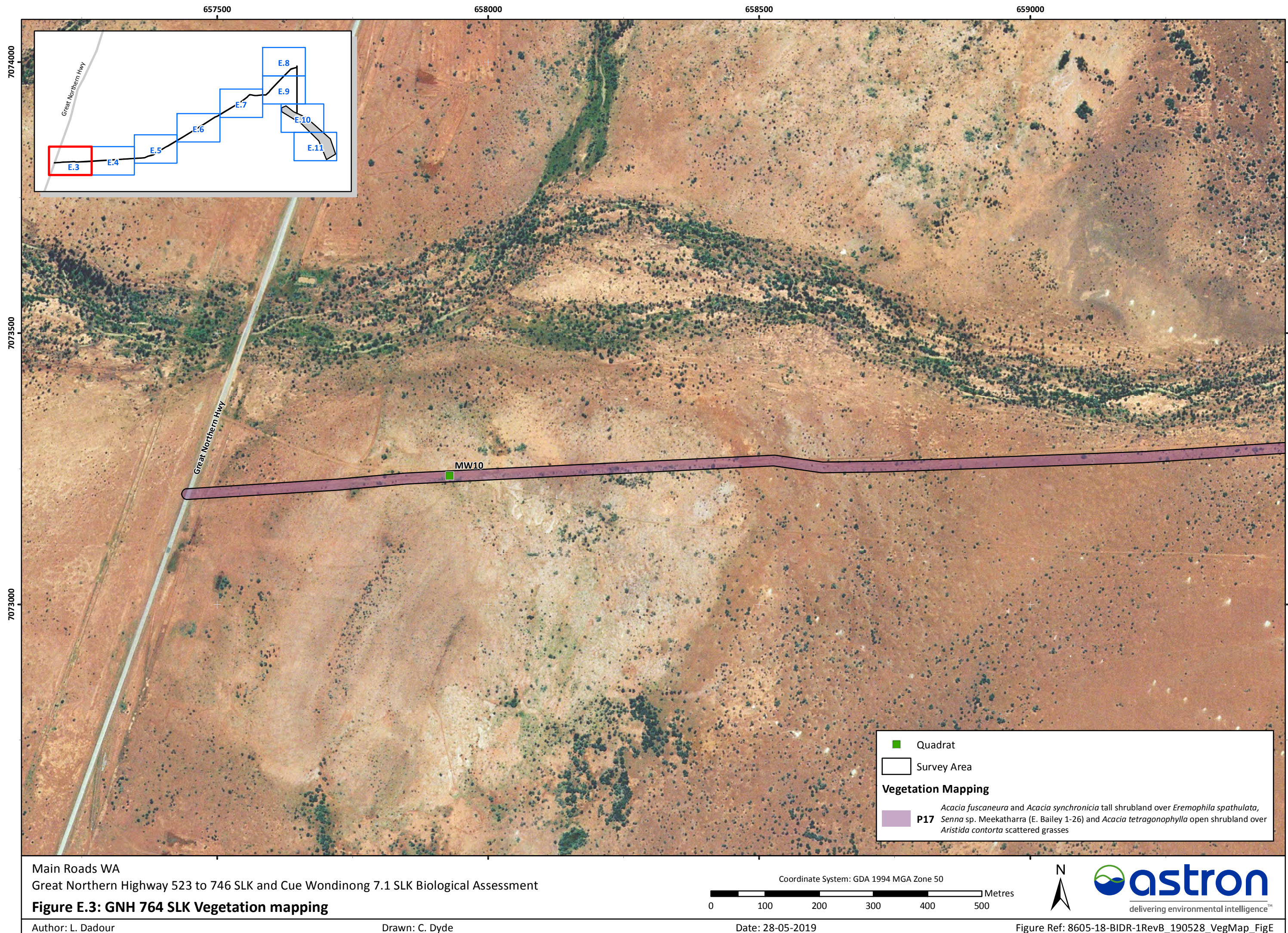




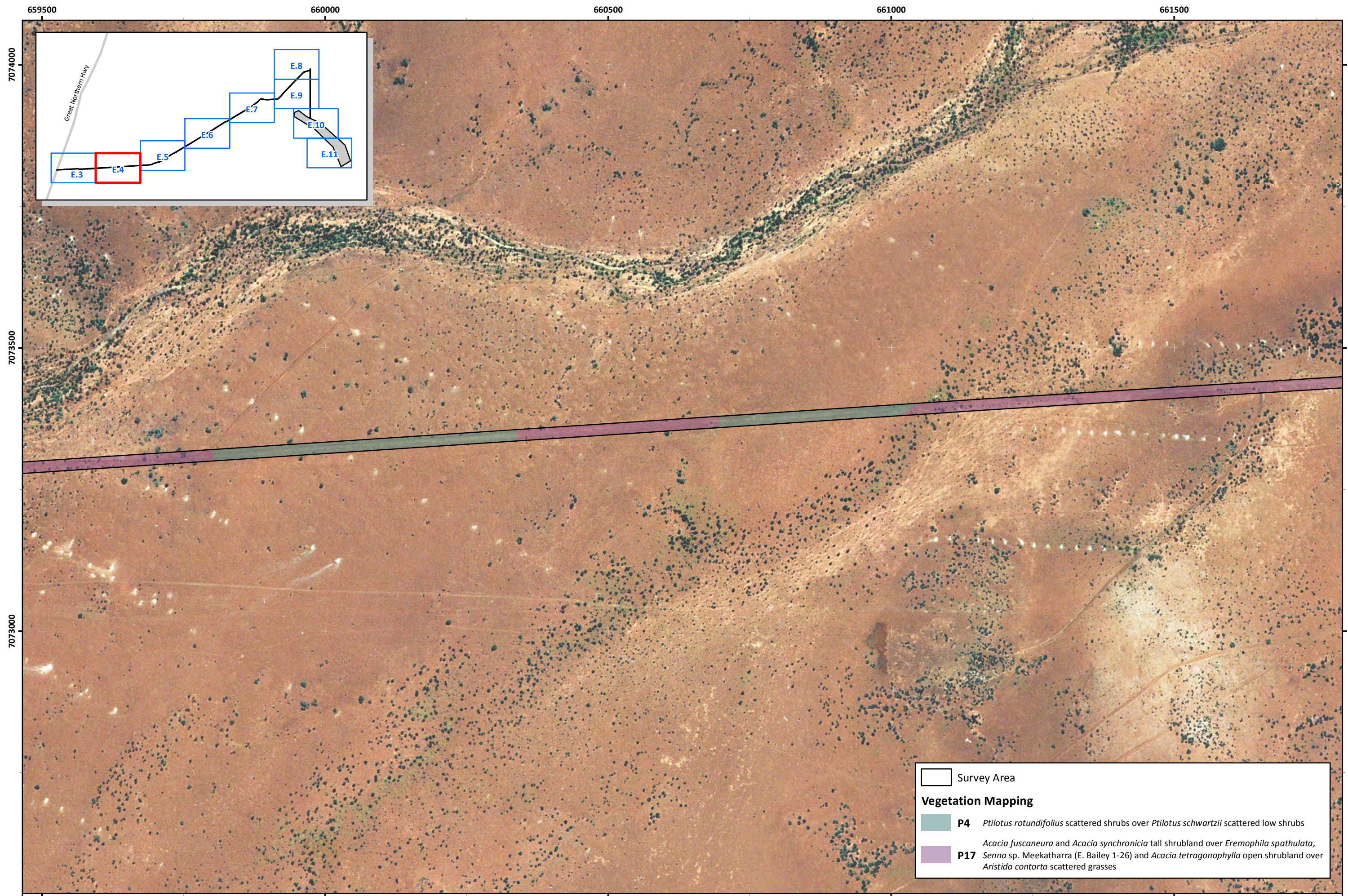












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**Figure E.4: GNH 764 SLK Vegetation mapping**

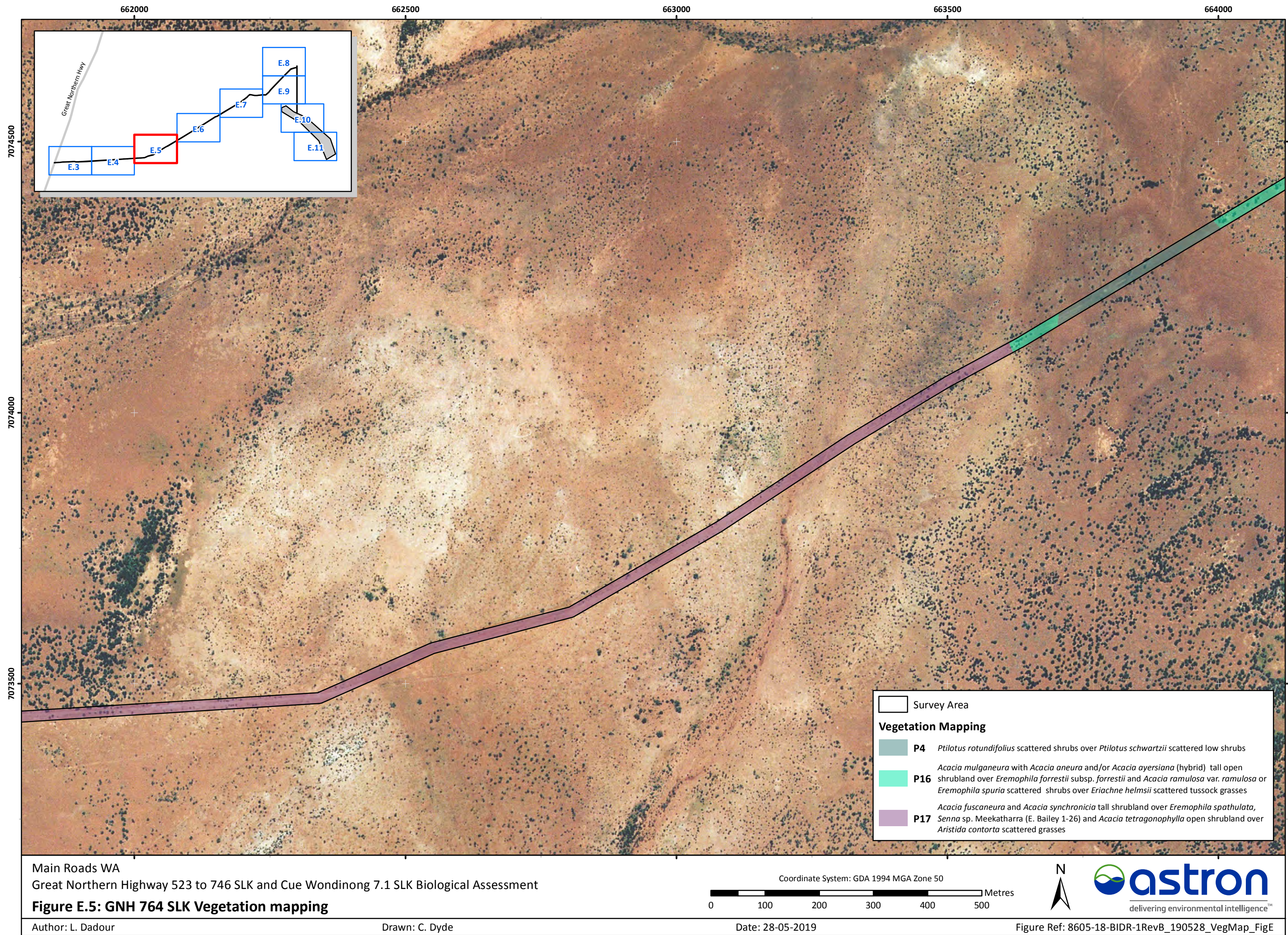
Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_VegMap\_FigE



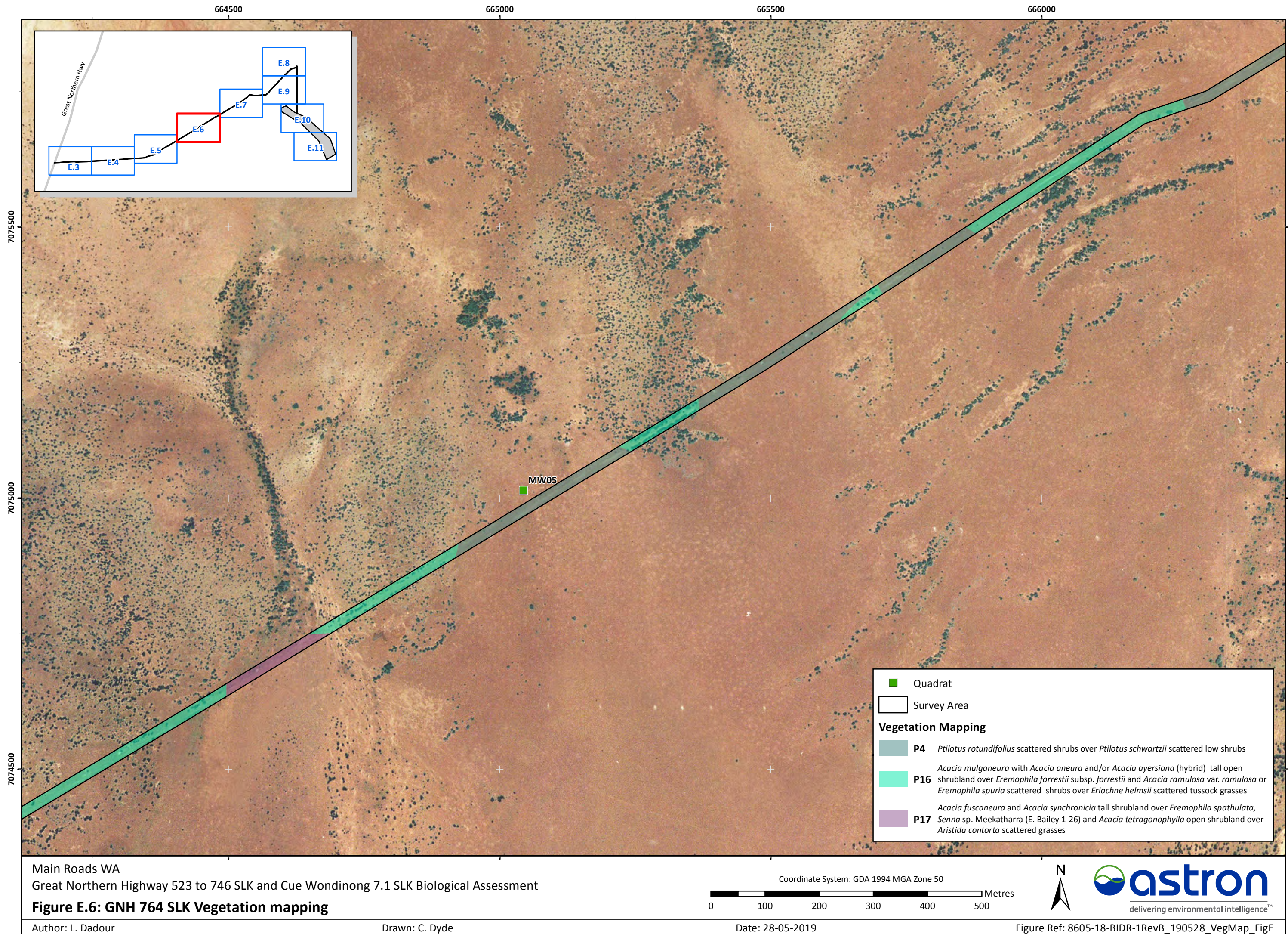


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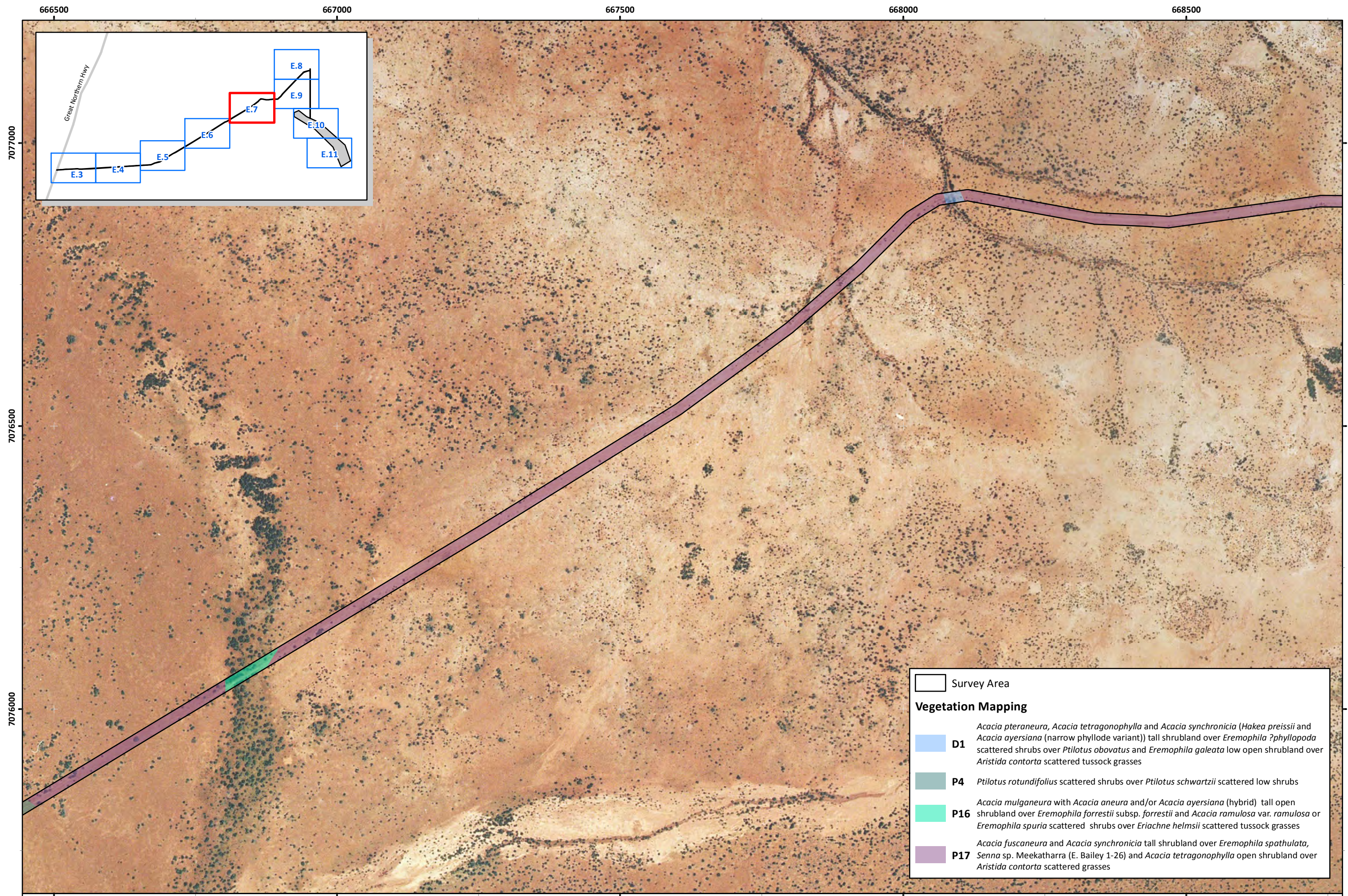
**Figure E.5: GNH 764 SLK Vegetation mapping**











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**Figure E.7: GNH 764 SLK Vegetation mapping**

Author: L. Dadour

Drawn: C. Dyde

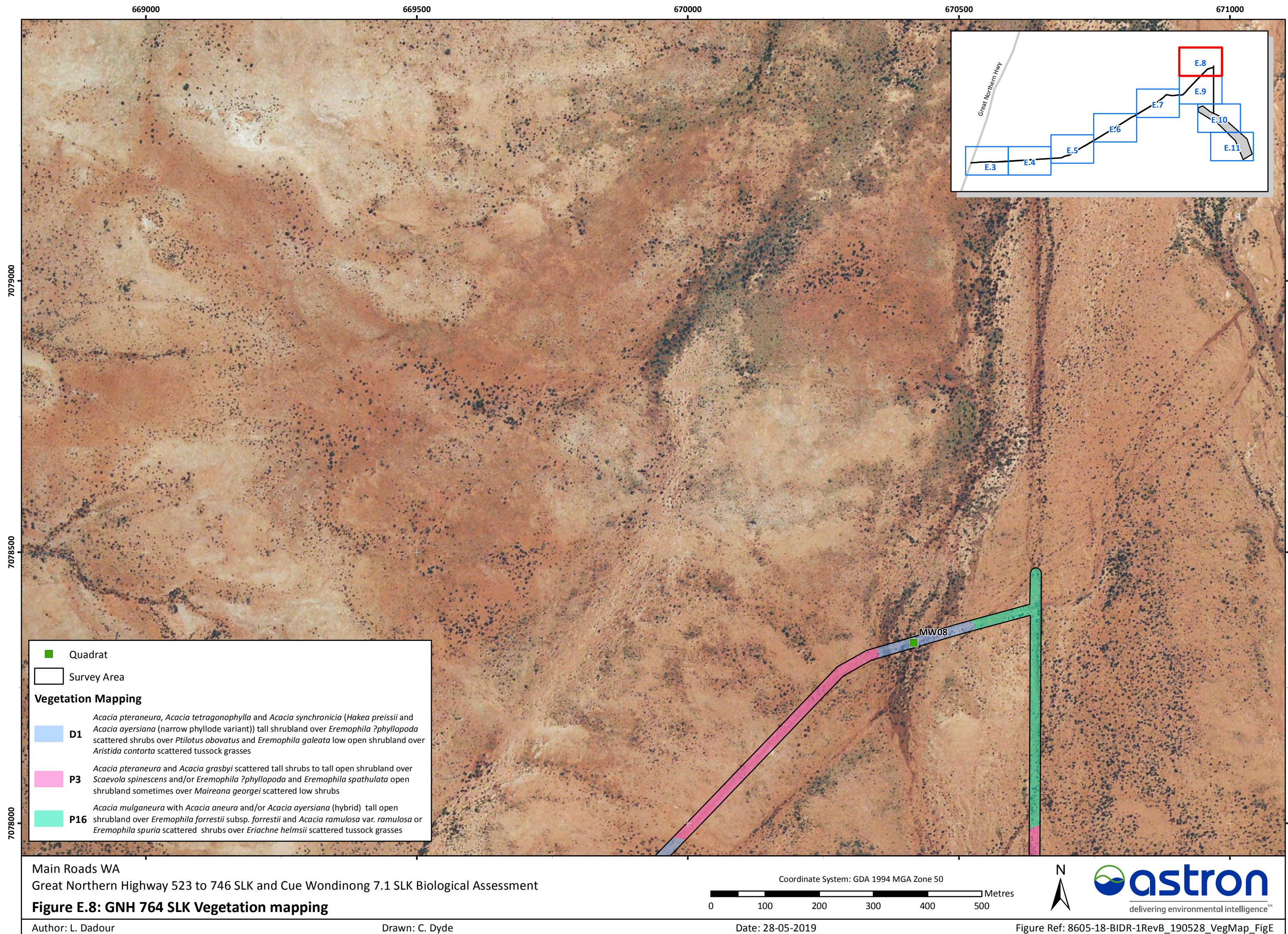
Date: 28-05-2019

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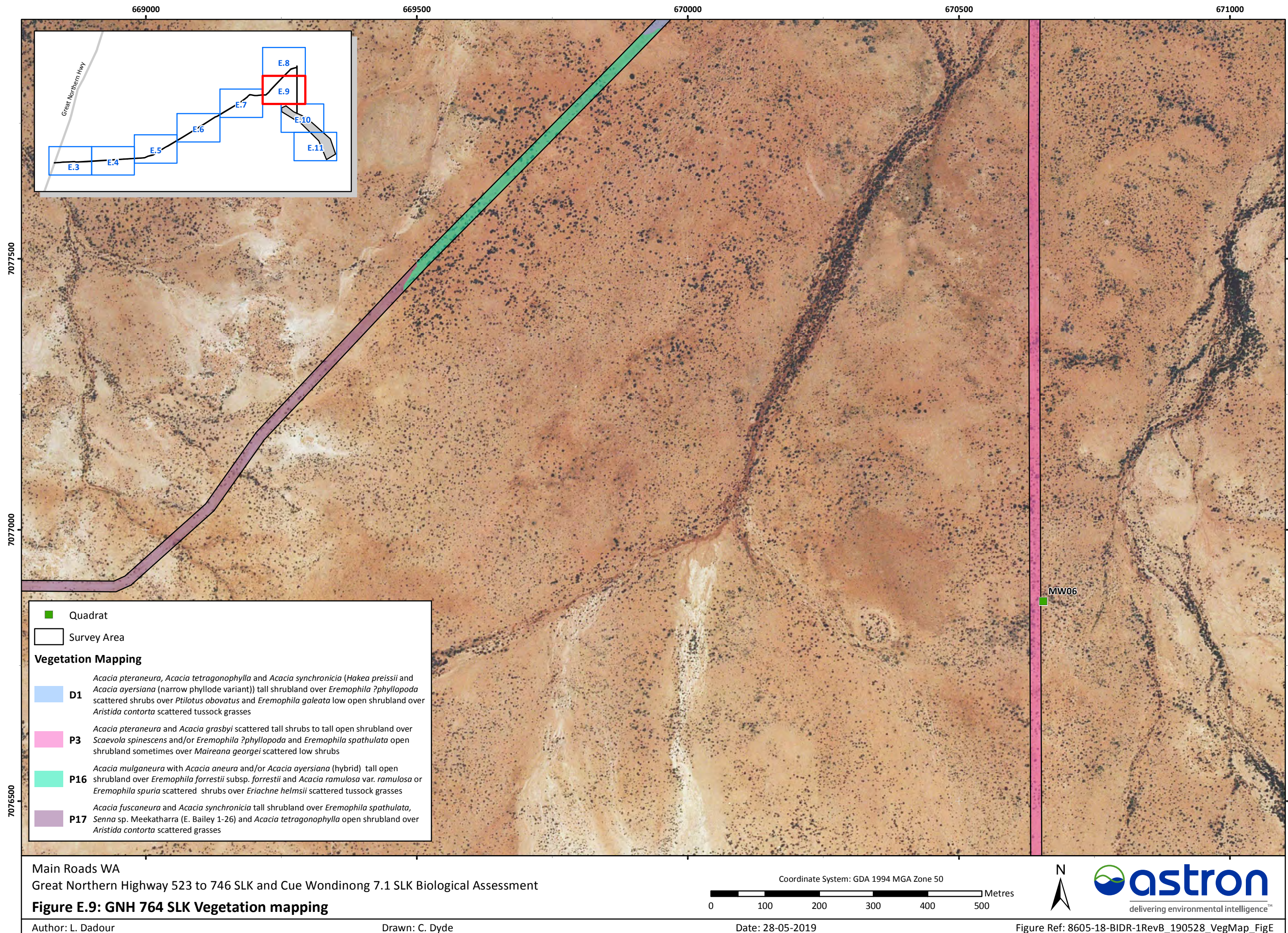


Figure Ref: 8605-18-BIDR-1RevB\_190528\_VegMap\_FigE

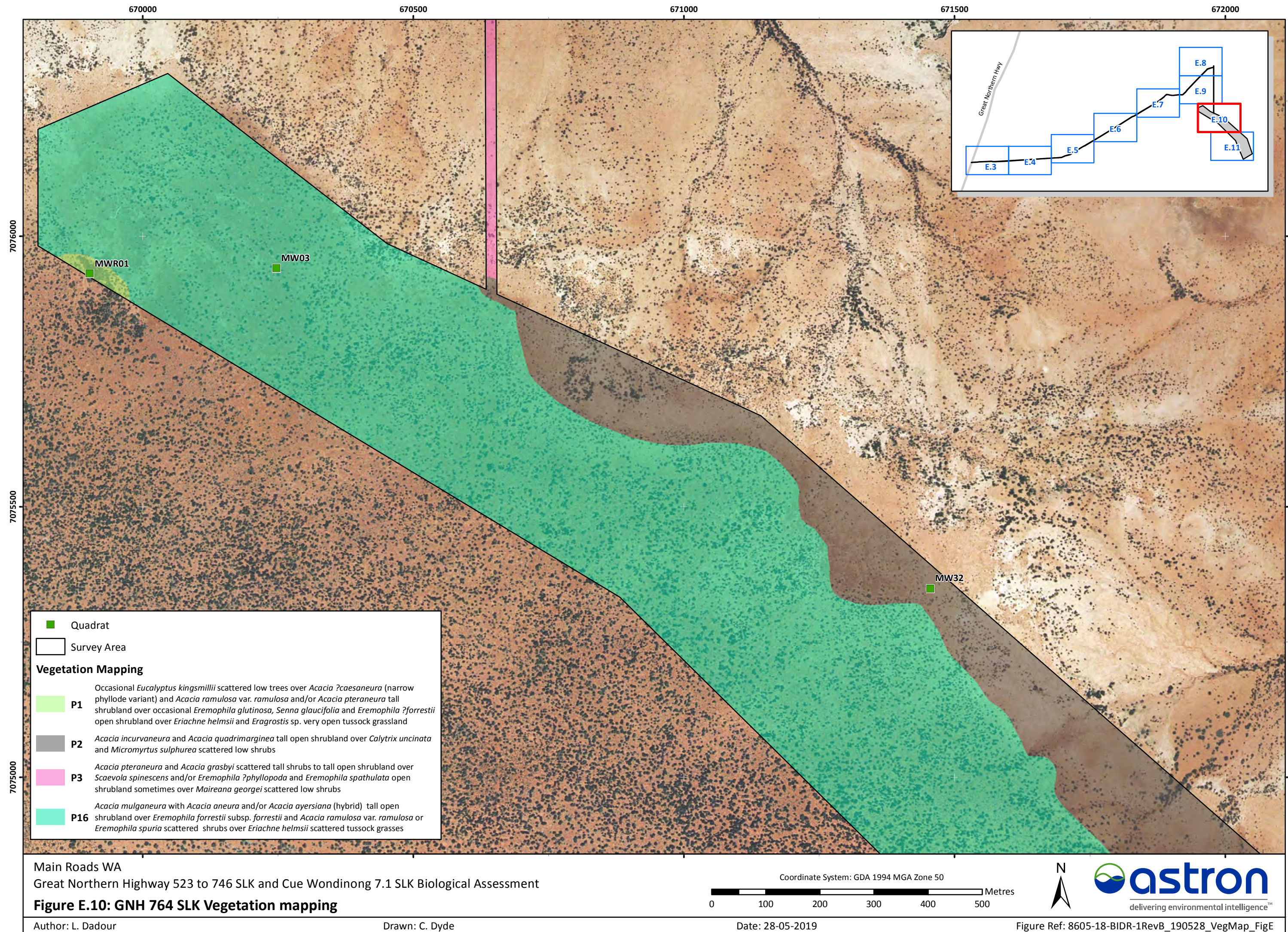




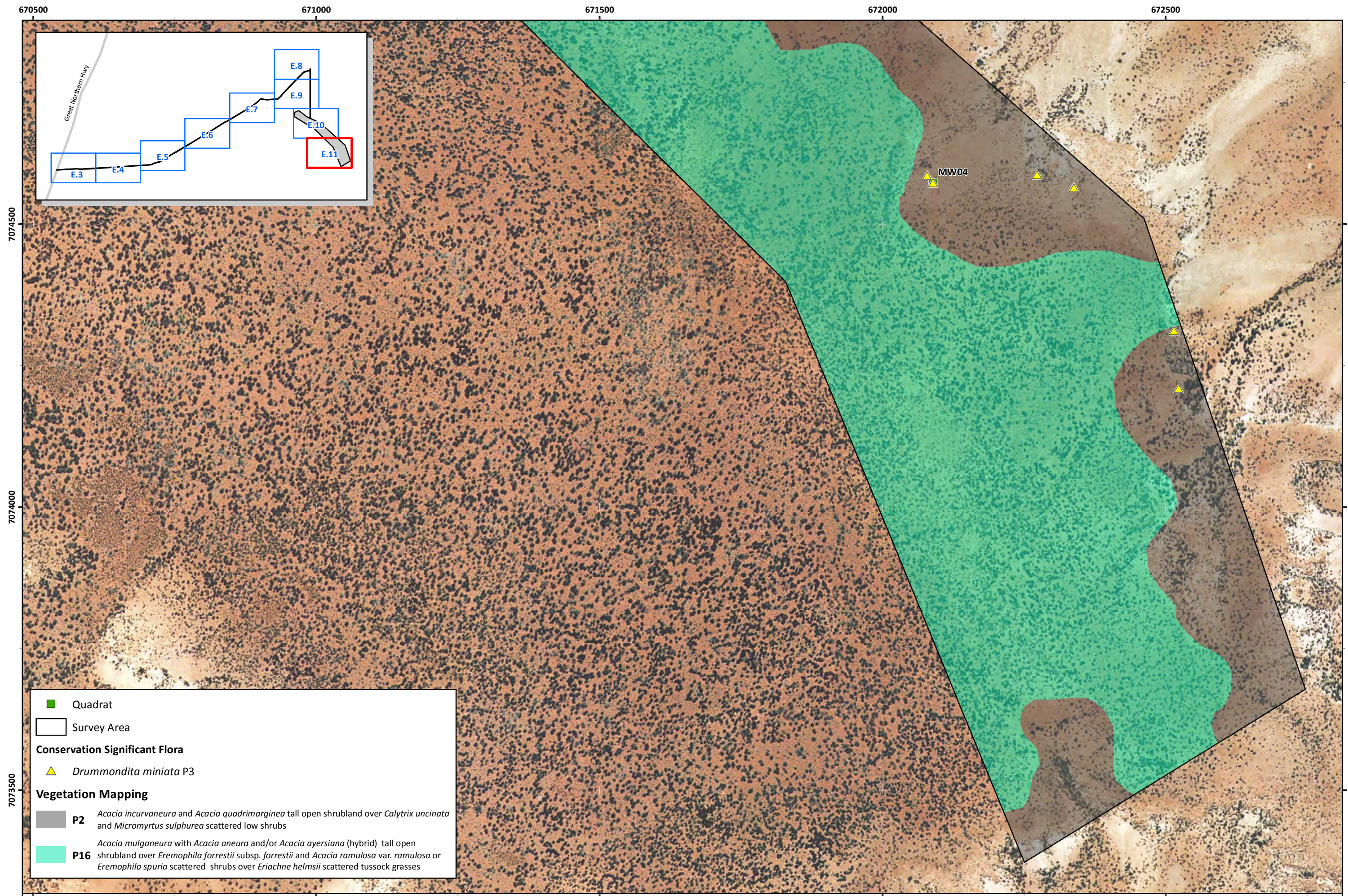












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**Figure E.11: GNH 764 SLK Vegetation mapping and Conservation Significant Flora**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

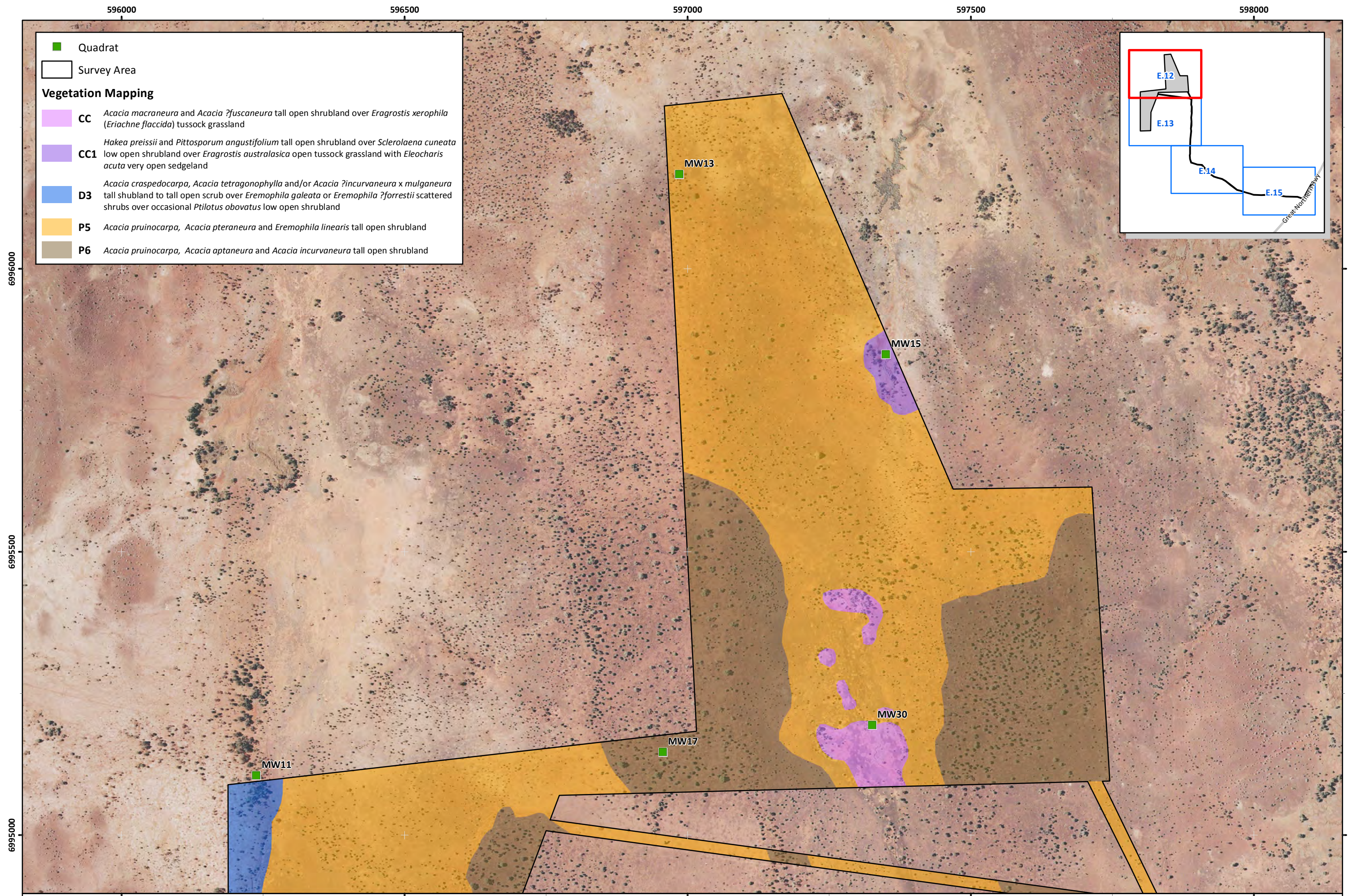
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Figure Ref: 8605-18-BIDR-1RevB\_190528\_VegMap\_FigE





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**Figure E.12: GNH 660 SLK Vegetation mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

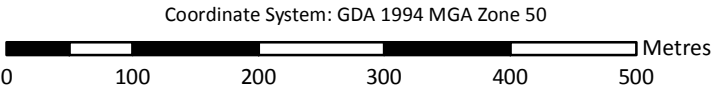
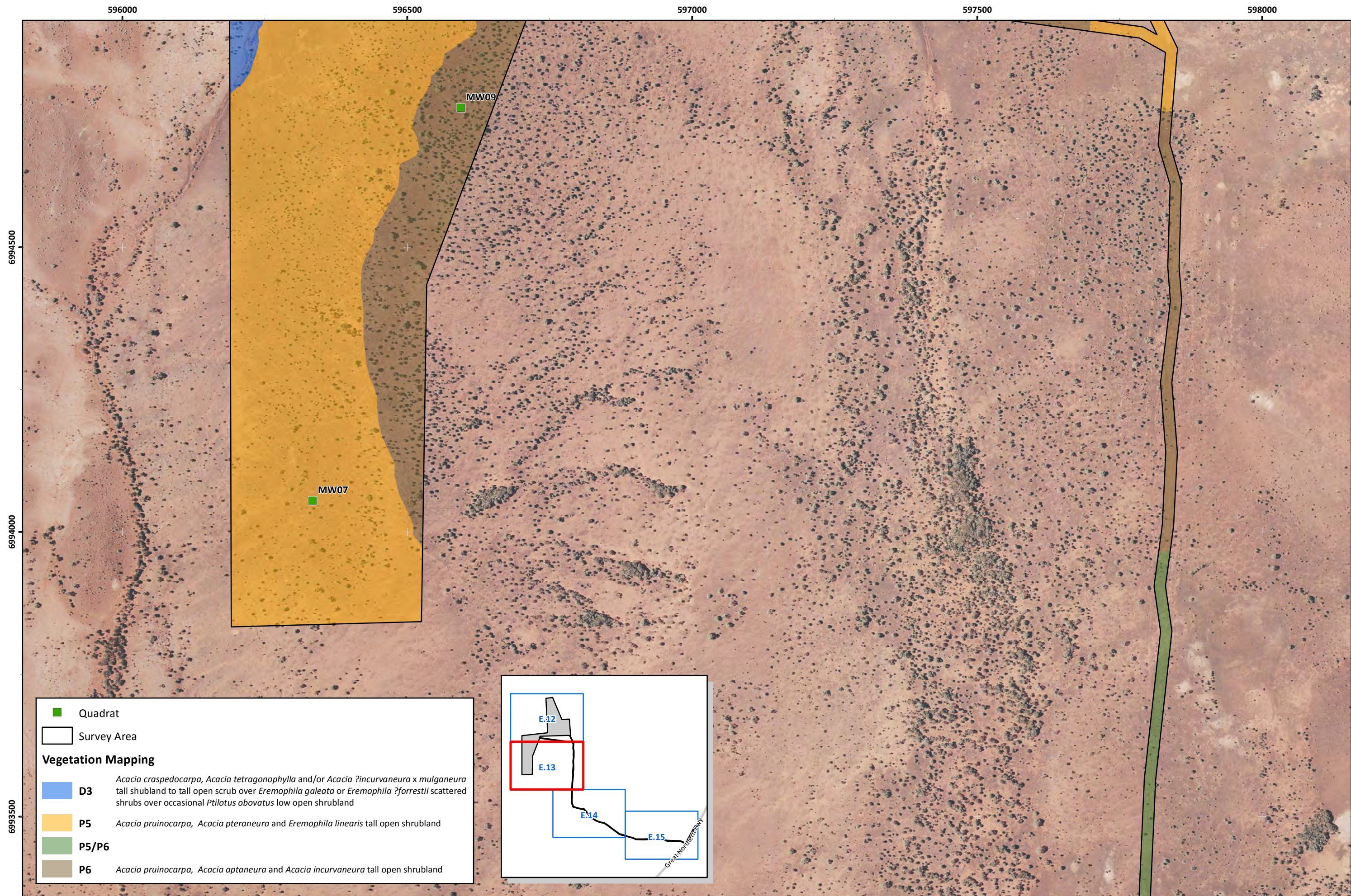


Figure Ref: 8605-18-BIDR-1RevB\_190528\_VegMap\_FigE





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**Figure E.13: GNH 660 SLK Vegetation mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

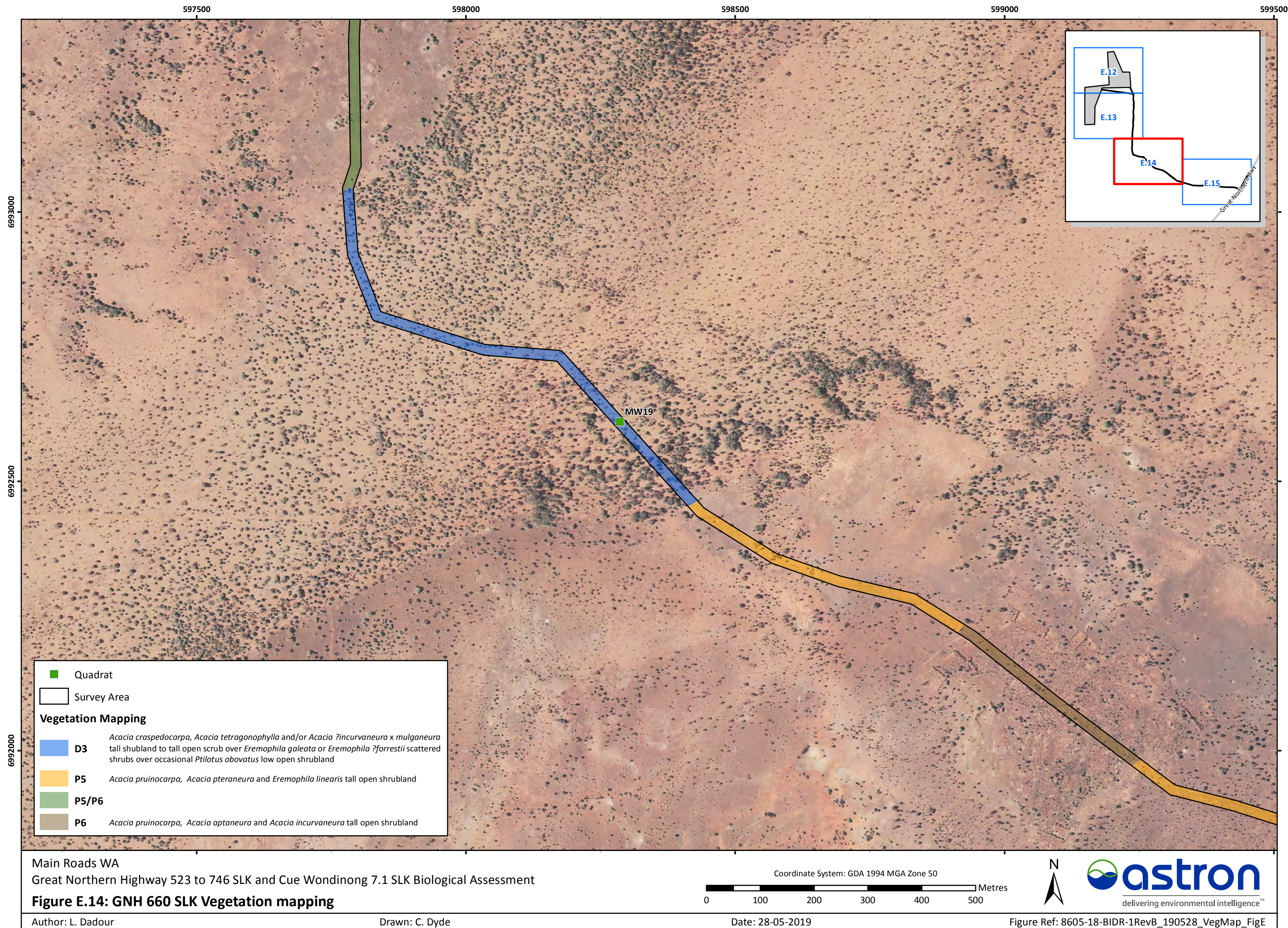
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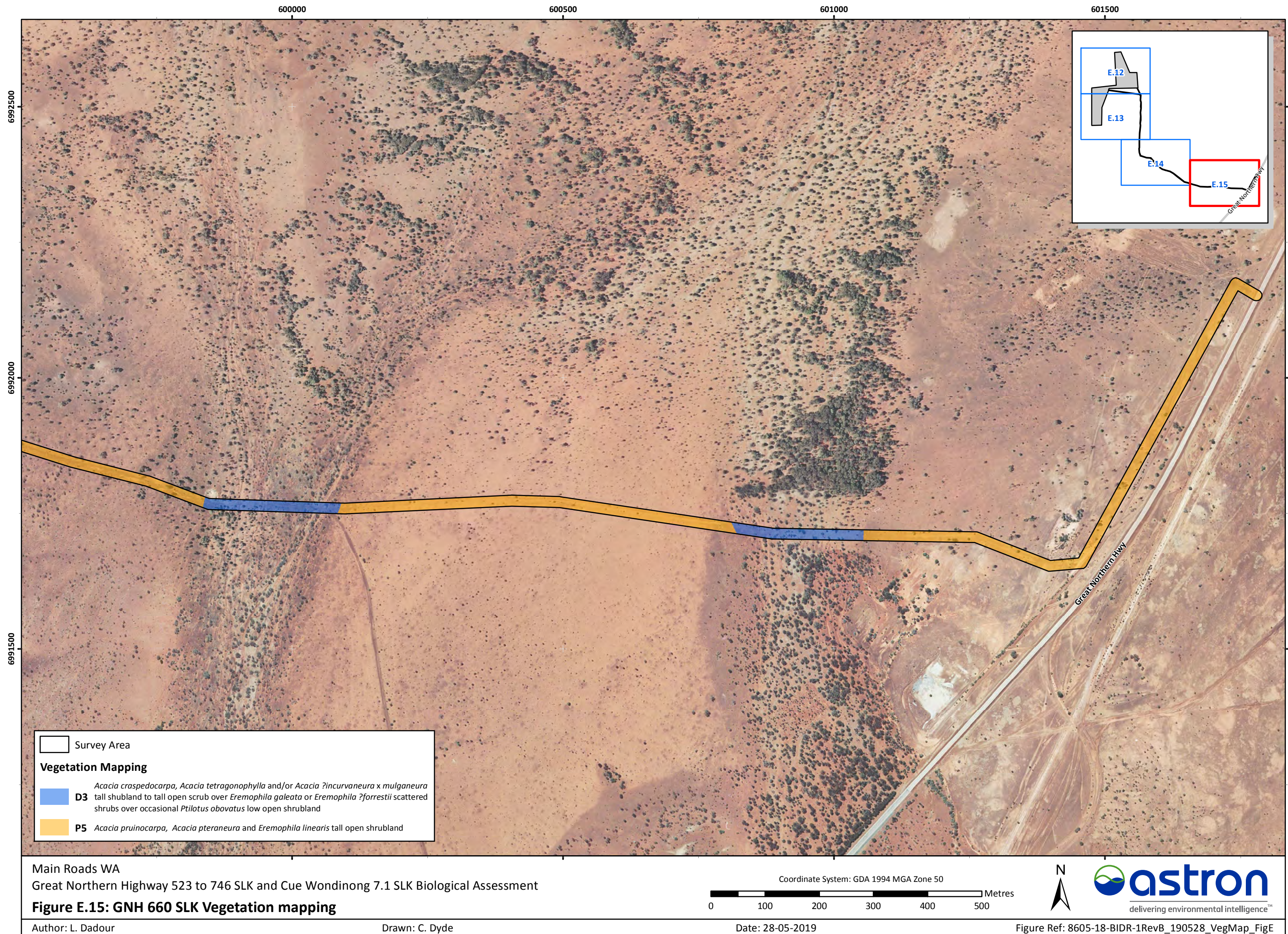
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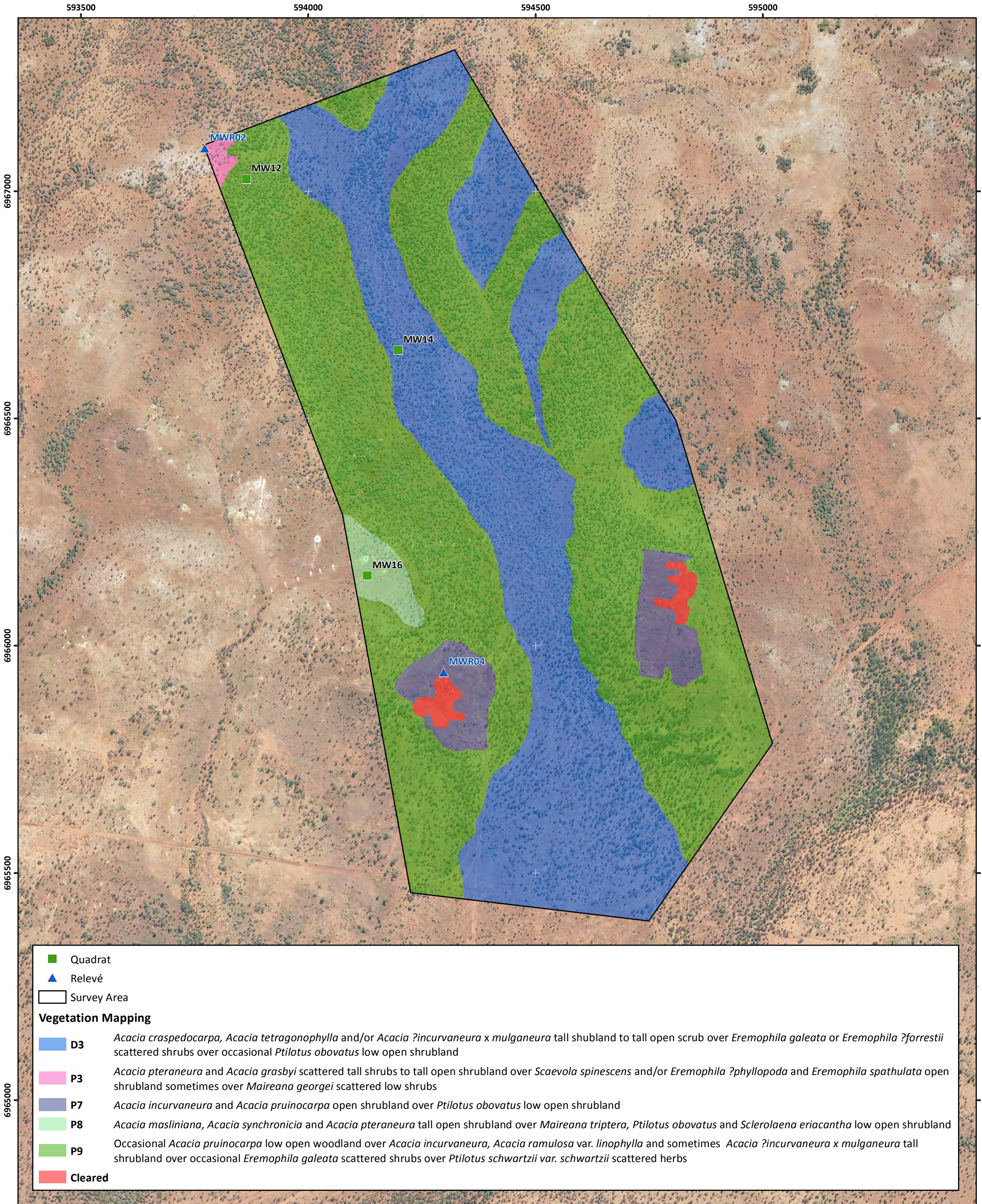












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Figure E.16: Cue Wondinong 7.1 SLK Vegetation mapping

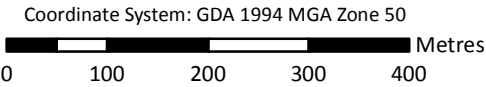


Author: L. Dadour

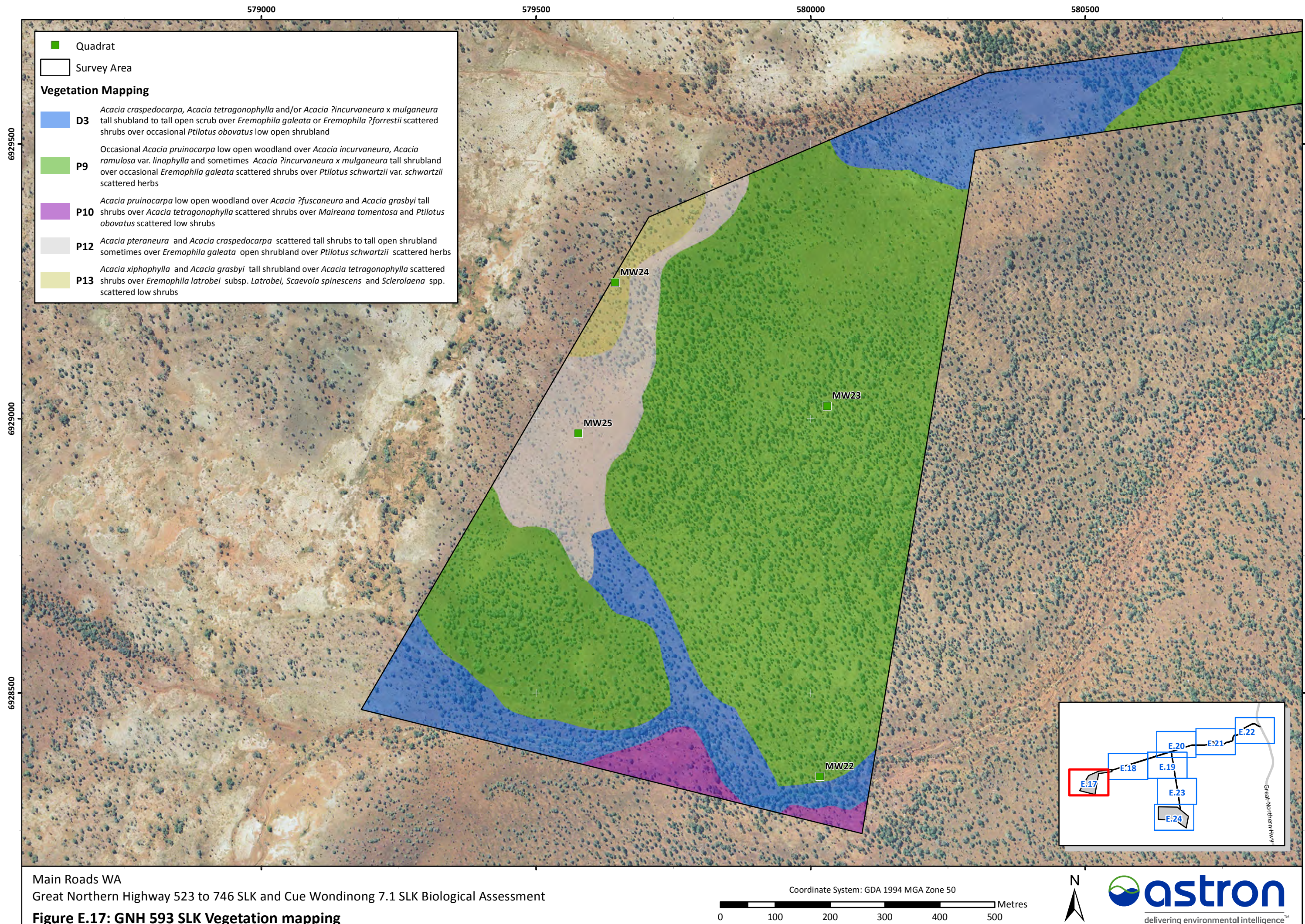
Date: 28-05-2019

Drawn: C. Dyde

Figure Ref: 8605-18-BIDR-1RevB\_190528\_VegMap\_FigE\_16







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**Figure E.17: GNH 593 SLK Vegetation mapping**

Author: L. Dadour

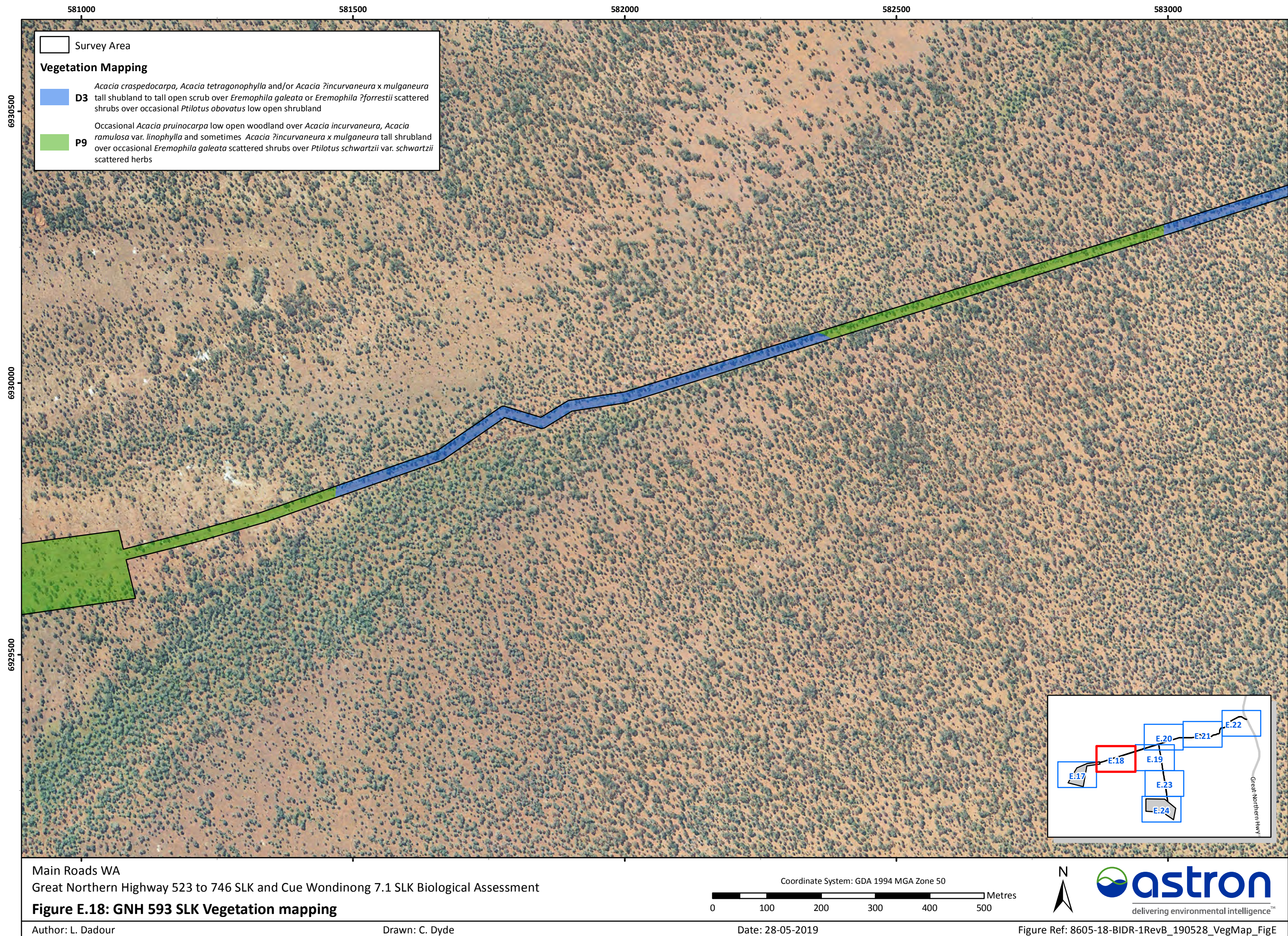
Drawn: C. Dyde

Date: 28-05-2019

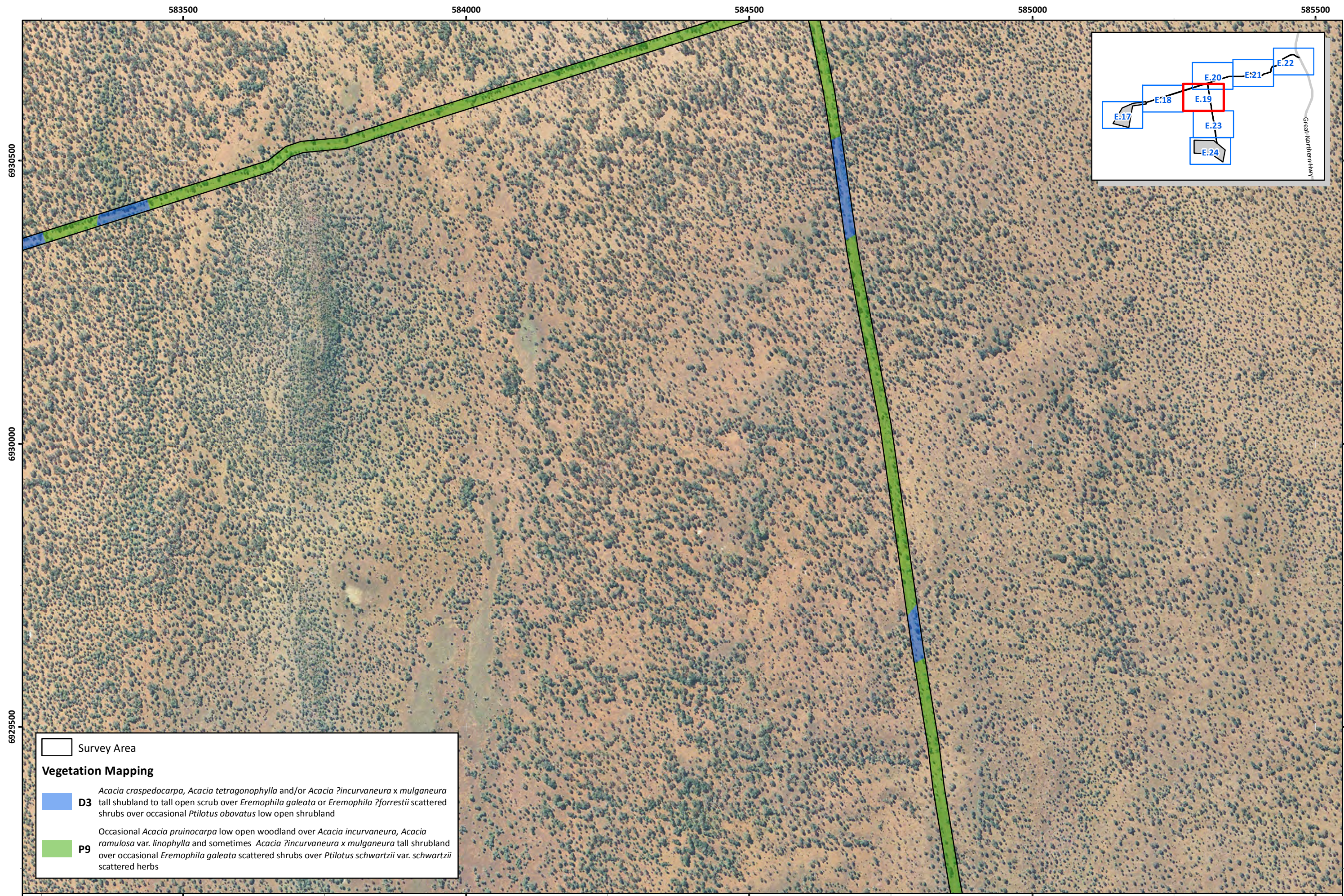
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Survey Area

**Vegetation Mapping**

**D3**

*Acacia craspedocarpa*, *Acacia tetragonophylla* and/or *Acacia ?incurvaneura x mulganeura* tall shubland to tall open scrub over *Eremophila galeata* or *Eremophila ?forrestii* scattered shrubs over occasional *Ptilotus obovatus* low open shrubland

**P9**

Occasional *Acacia pruinocarpa* low open woodland over *Acacia incurvaneura*, *Acacia ramulosa* var. *linophylla* and sometimes *Acacia ?incurvaneura x mulganeura* tall shrubland over occasional *Eremophila galeata* scattered shrubs over *Ptilotus schwartzii* var. *schwartzii* scattered herbs

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**Figure E.19: GNH 593 SLK Vegetation mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

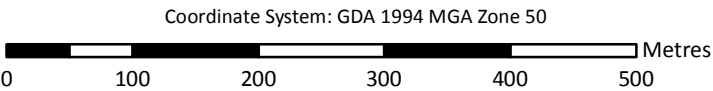
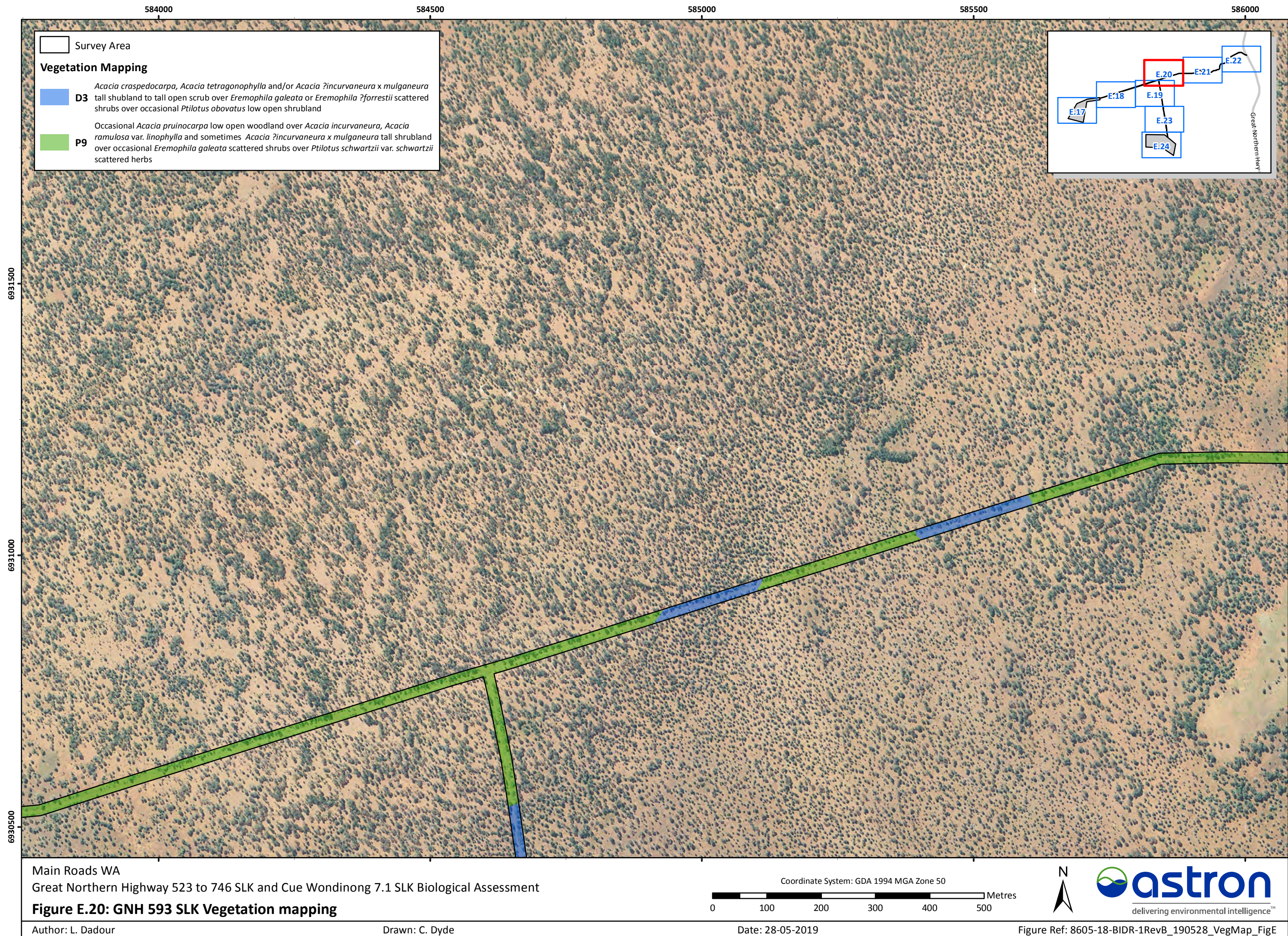
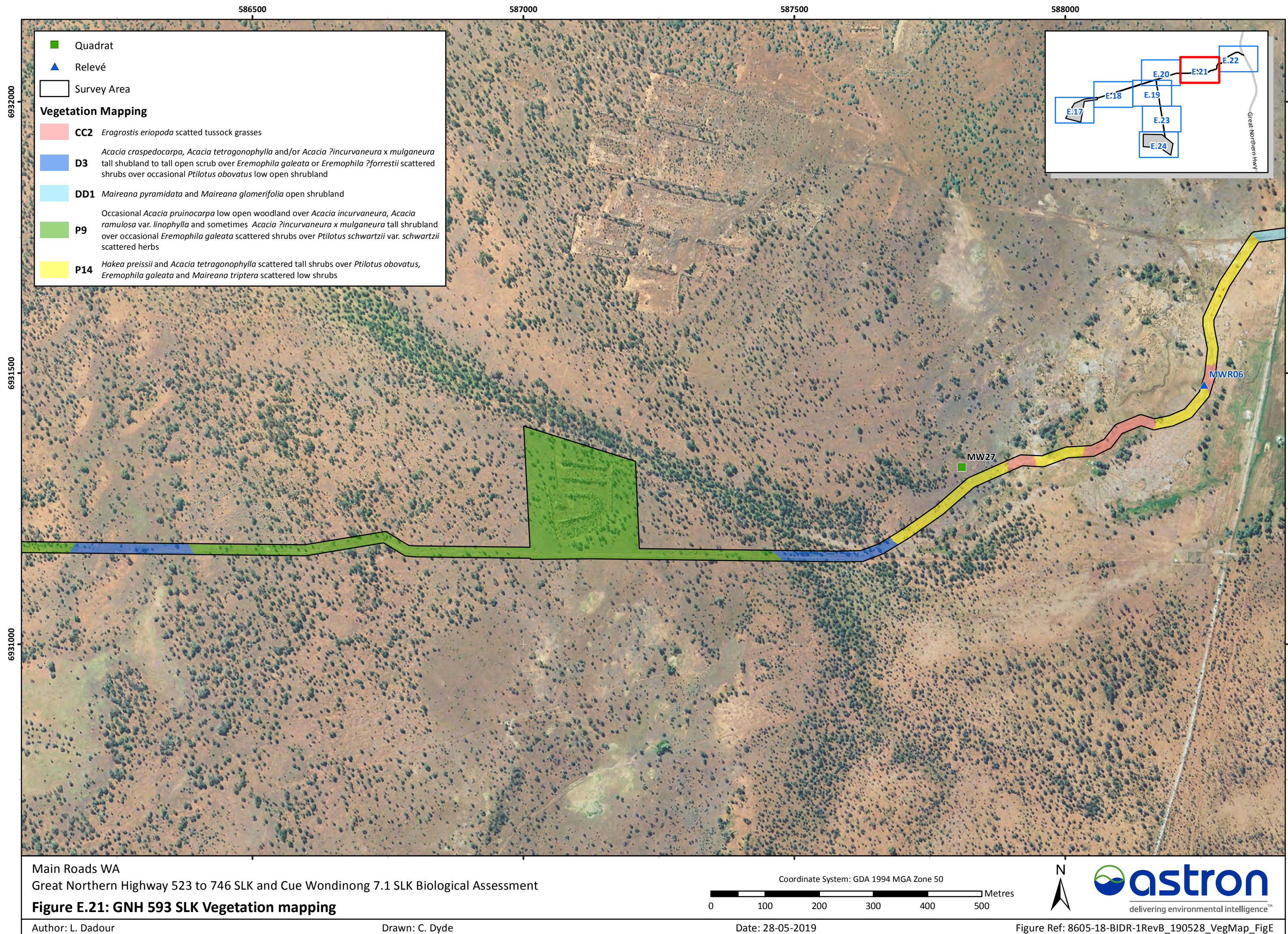


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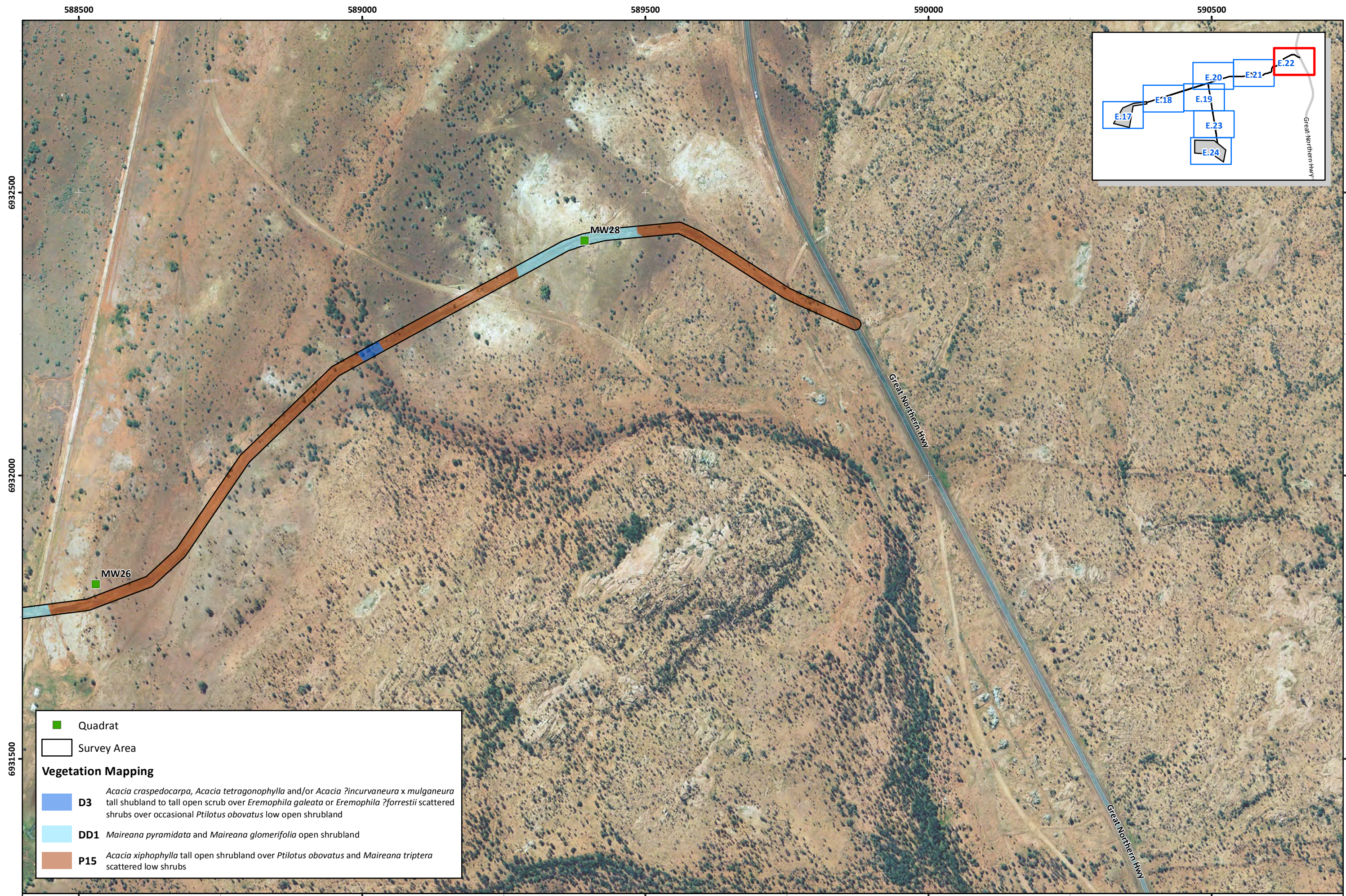












Quadrat

Survey Area

**Vegetation Mapping**

D3

*Acacia craspedocarpa*, *Acacia tetragonophylla* and/or *Acacia ?incurvaneura* x *mulganeura* tall shrubland to tall open scrub over *Eremophila galeata* or *Eremophila ?forrestii* scattered shrubs over occasional *Ptilotus obovatus* low open shrubland

DD1

*Maireana pyramidata* and *Maireana glomerifolia* open shrubland

P15

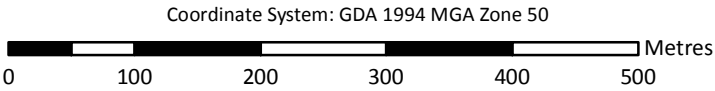
*Acacia xiphophylla* tall open shrubland over *Ptilotus obovatus* and *Maireana triptera* scattered low shrubs

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**Figure E.22: GNH 593 SLK Vegetation mapping**

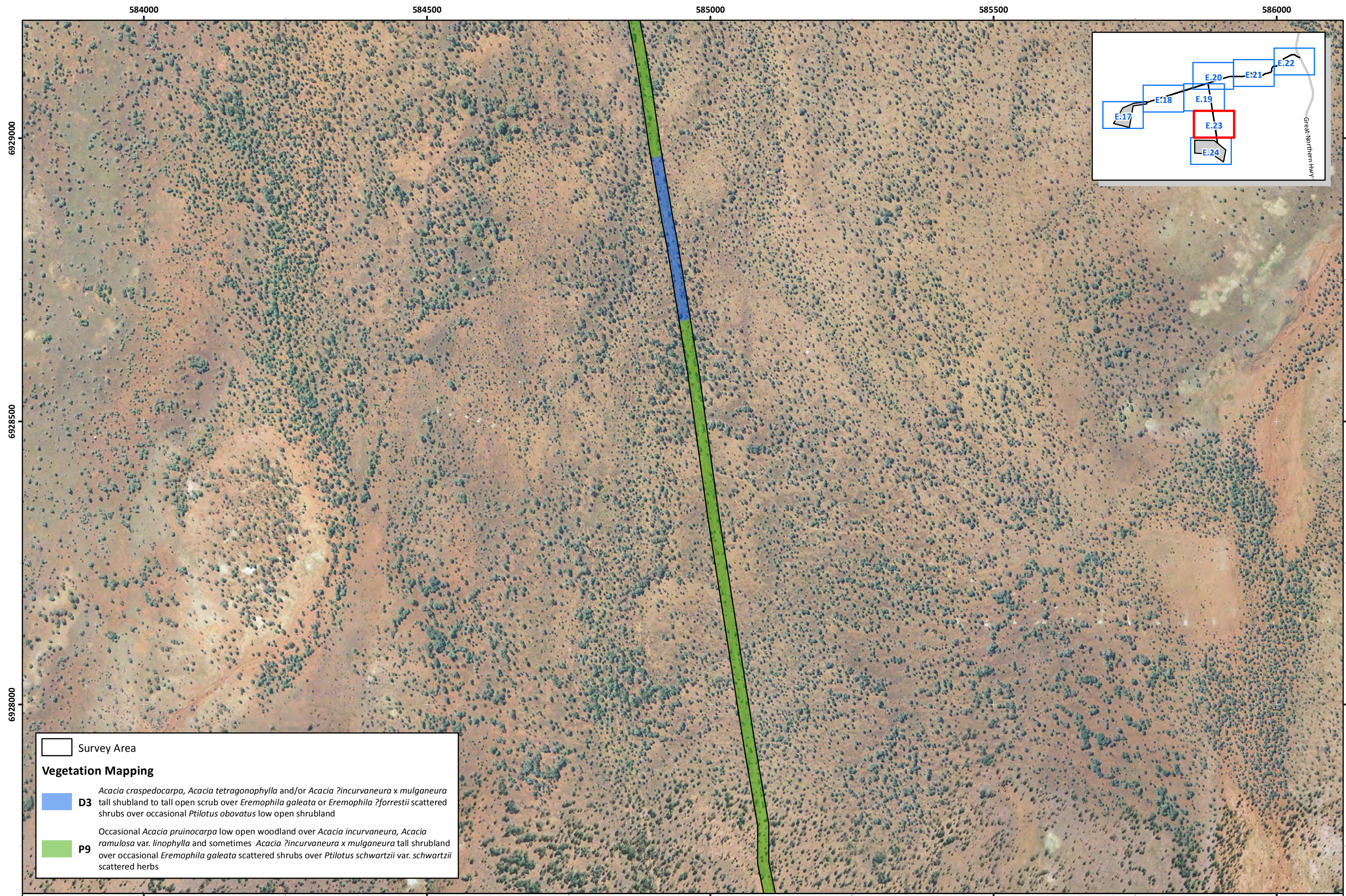
Author: L. Dadour

Drawn: C. Dyde



Date: 28-05-2019





Survey Area

**Vegetation Mapping**

D3

*Acacia craspedocarpa*, *Acacia tetragonophylla* and/or *Acacia ?incurvaneura x mulganeura* tall shubland to tall open scrub over *Eremophila galeata* or *Eremophila ?forrestii* scattered shrubs over occasional *Ptilotus obovatus* low open shrubland

P9

Occasional *Acacia pruinocarpa* low open woodland over *Acacia incurvaneura*, *Acacia ramulosa* var. *linophylla* and sometimes *Acacia ?incurvaneura x mulganeura* tall shrubland over occasional *Eremophila galeata* scattered shrubs over *Ptilotus schwartzii* var. *schwartzii* scattered herbs

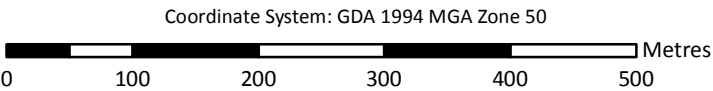
Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure E.23: GNH 593 SLK Vegetation mapping**

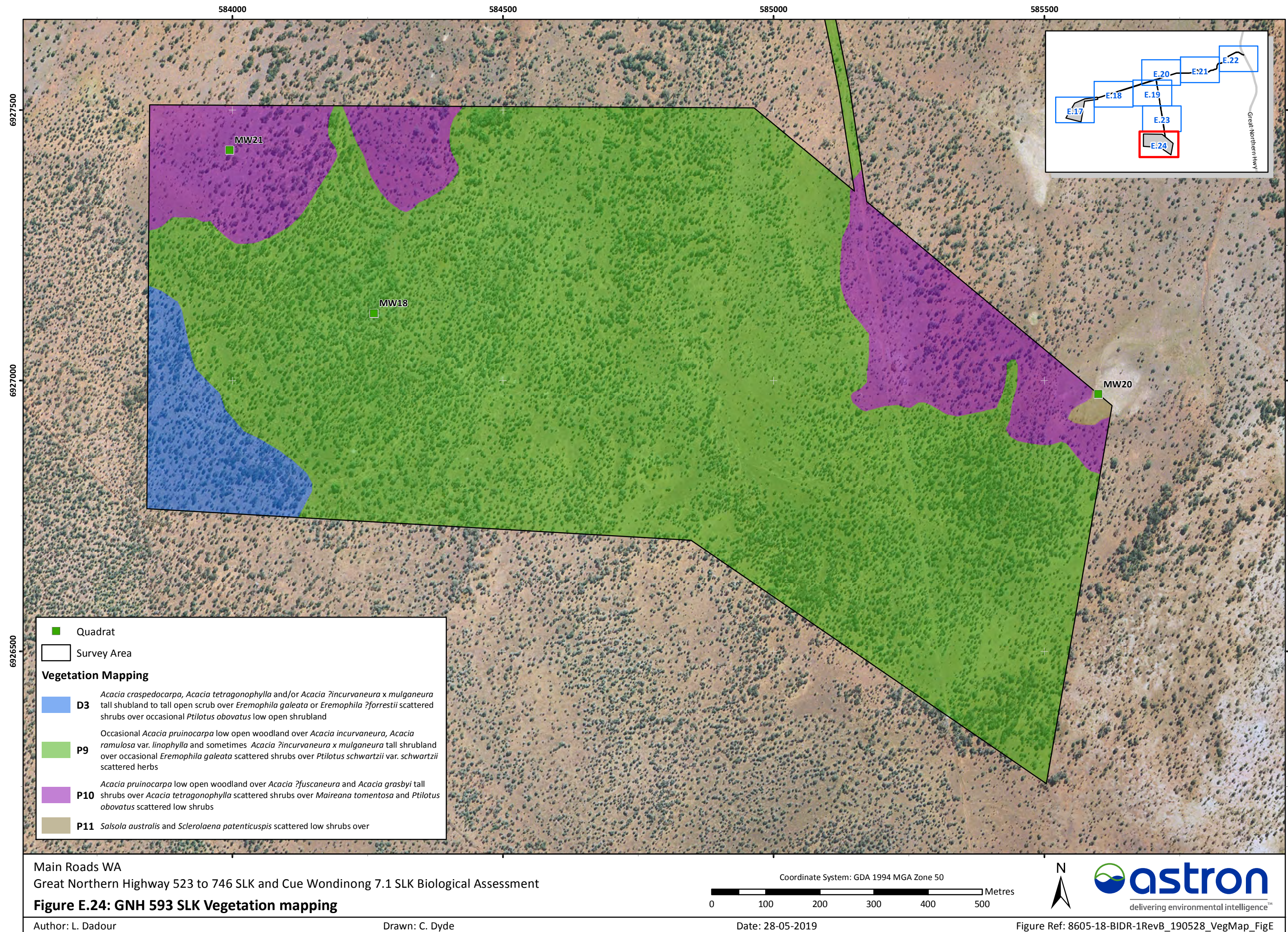
Author: L. Dadour

Drawn: C. Dyde

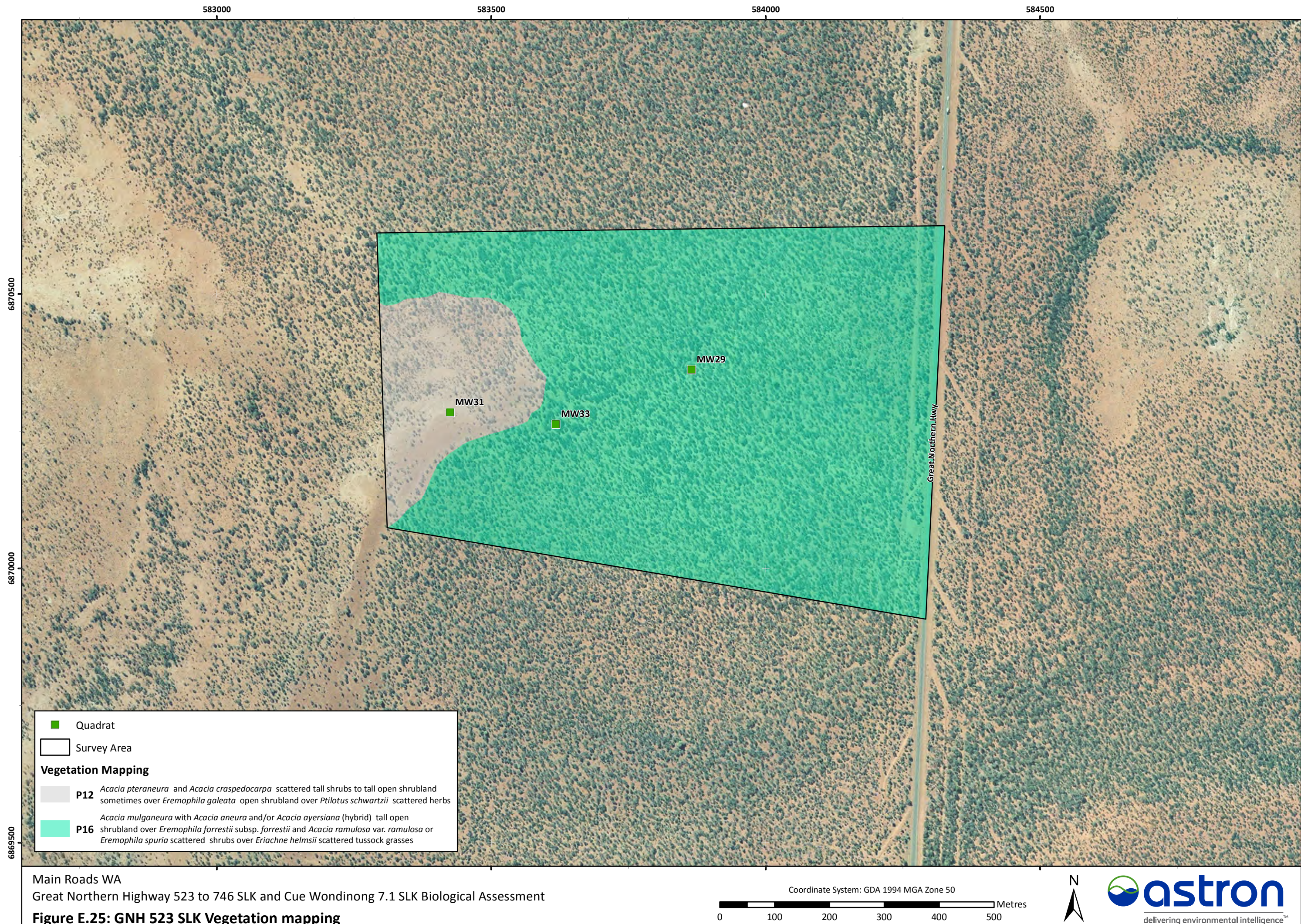
Date: 28-05-2019













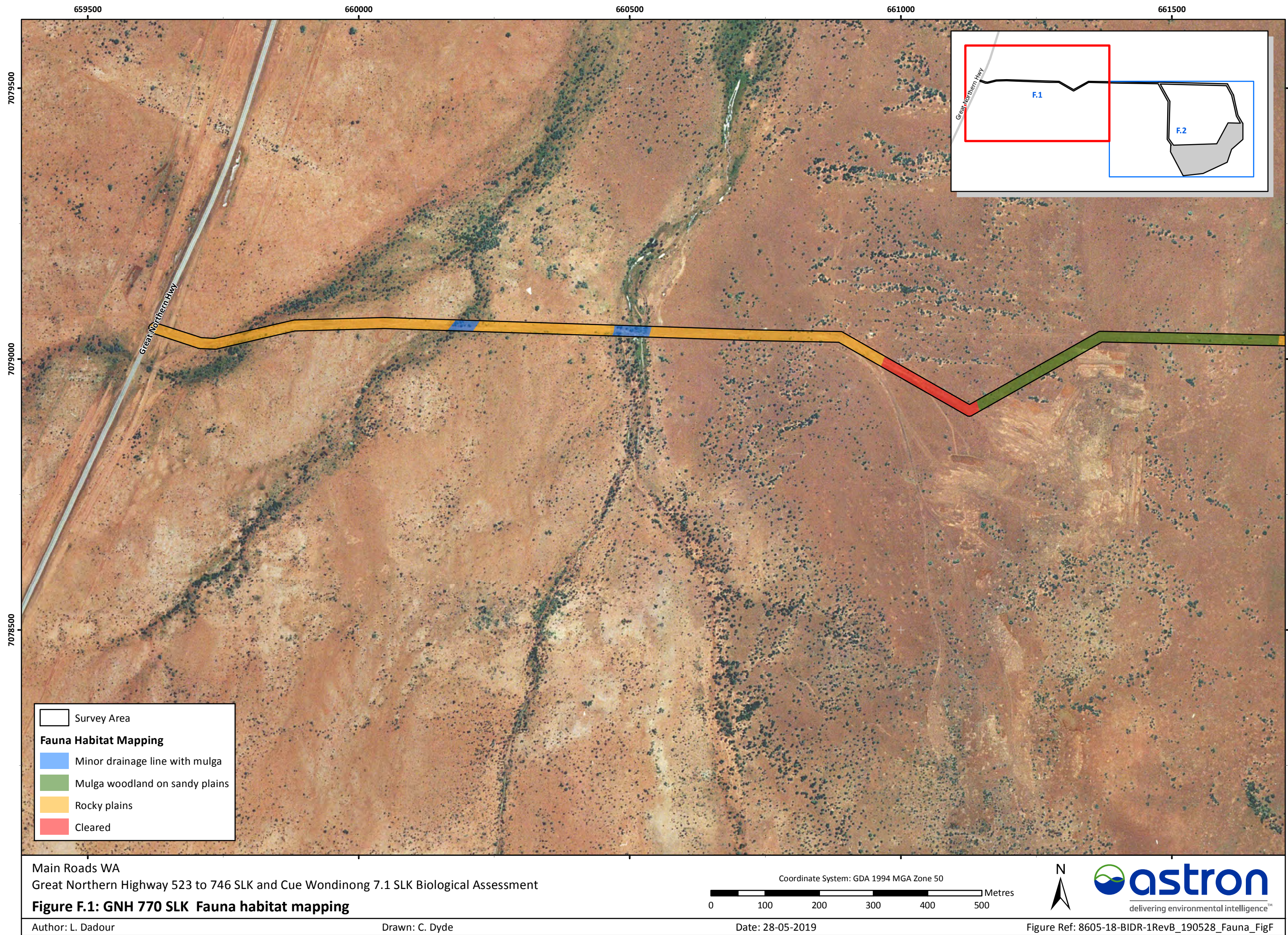
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## **Appendix F: Fauna Habitat Mapping and Site Locations**

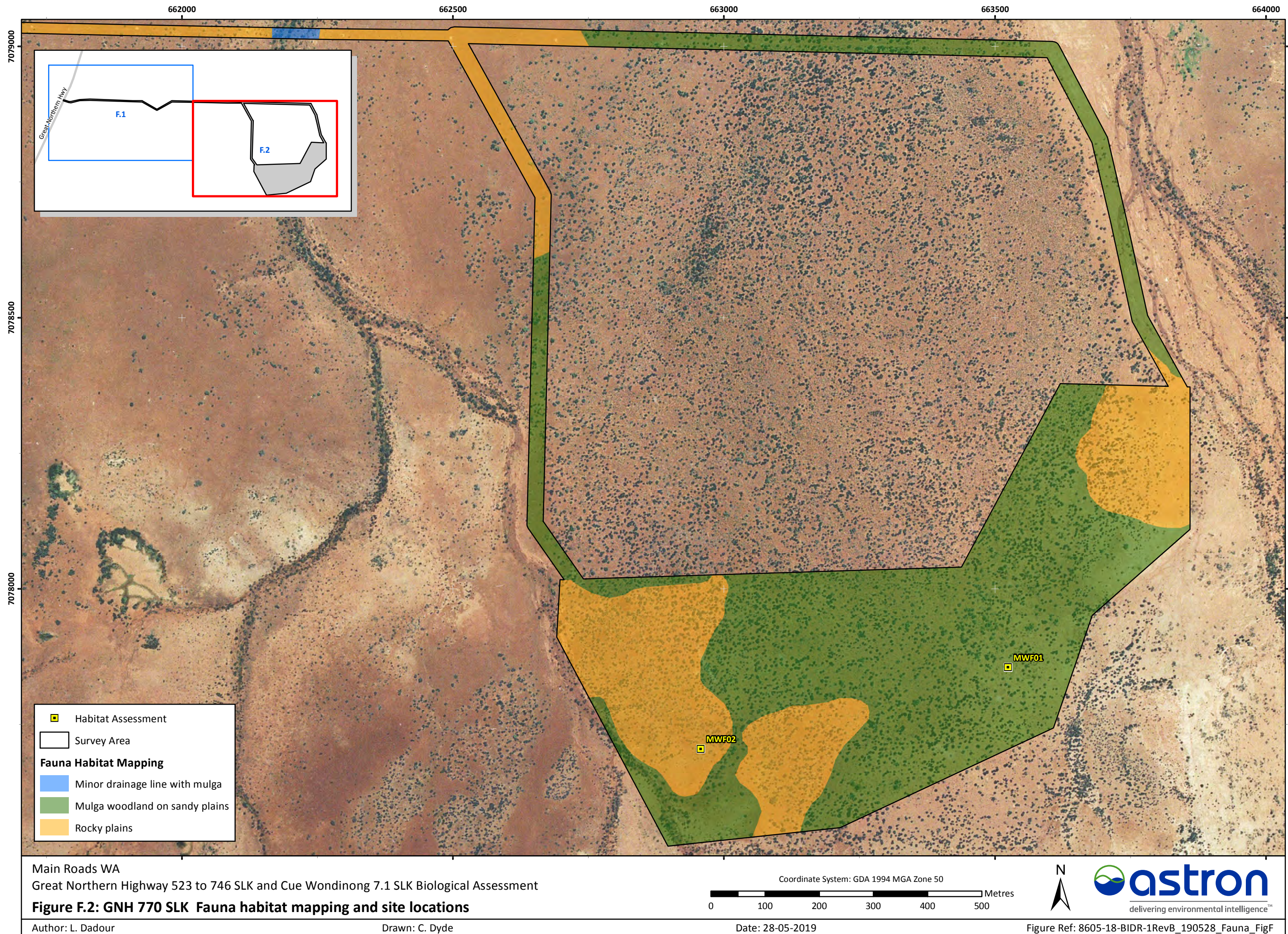


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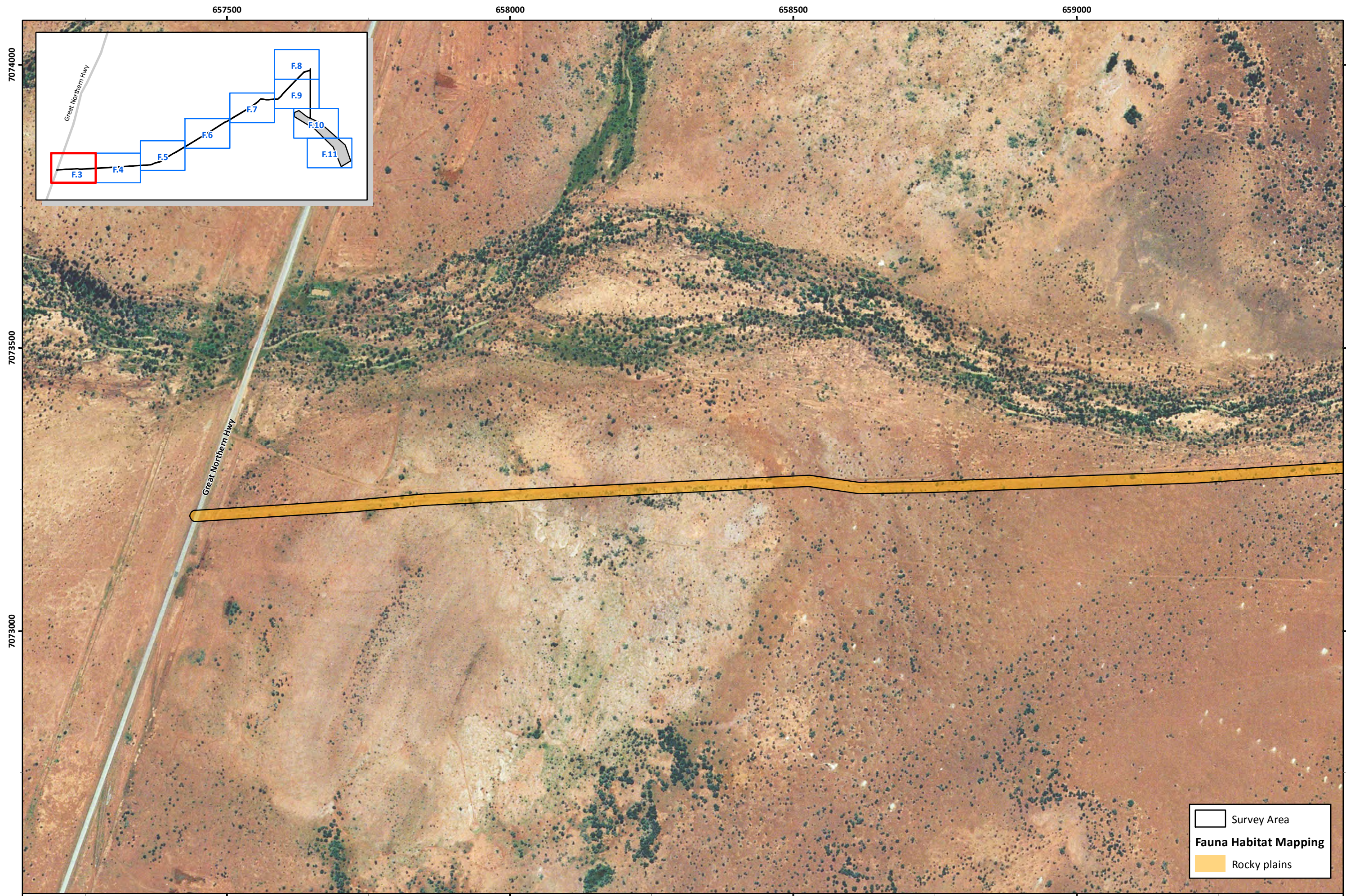












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**Figure F.3: GNH 764 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

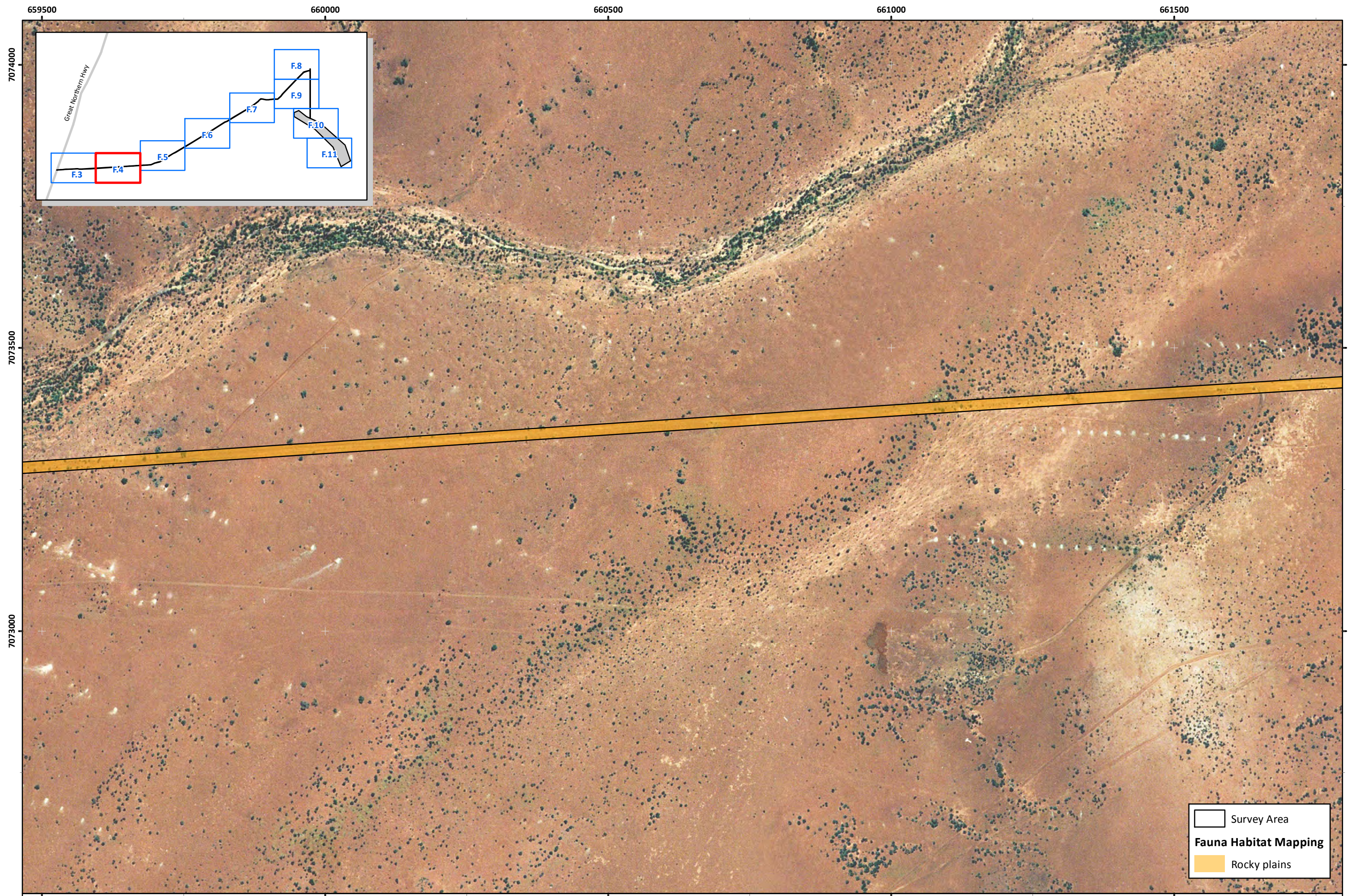
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.4: GNH 764 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

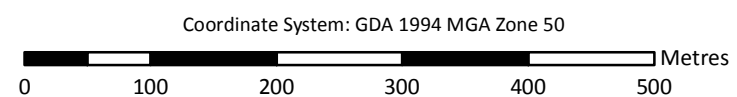
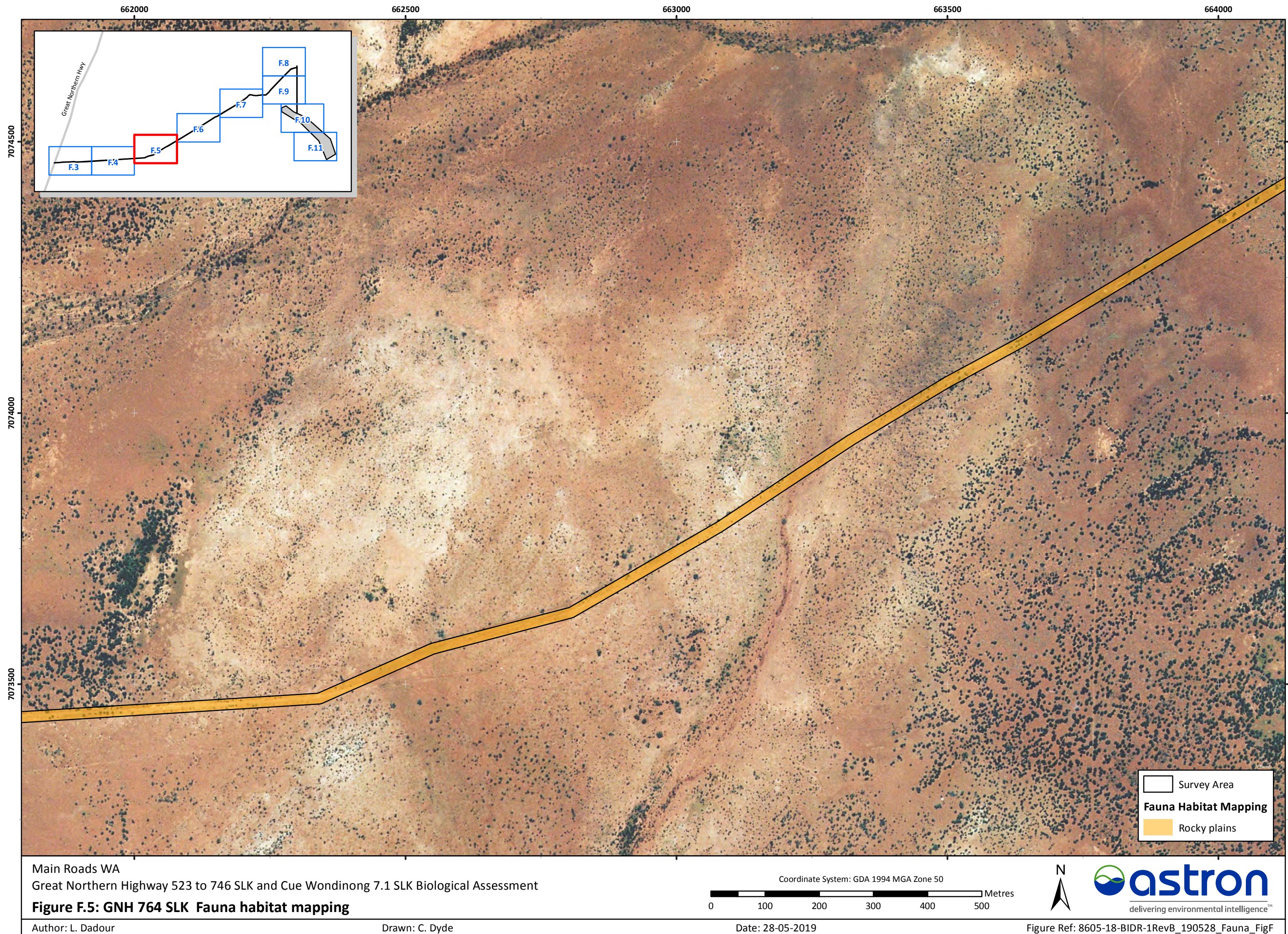
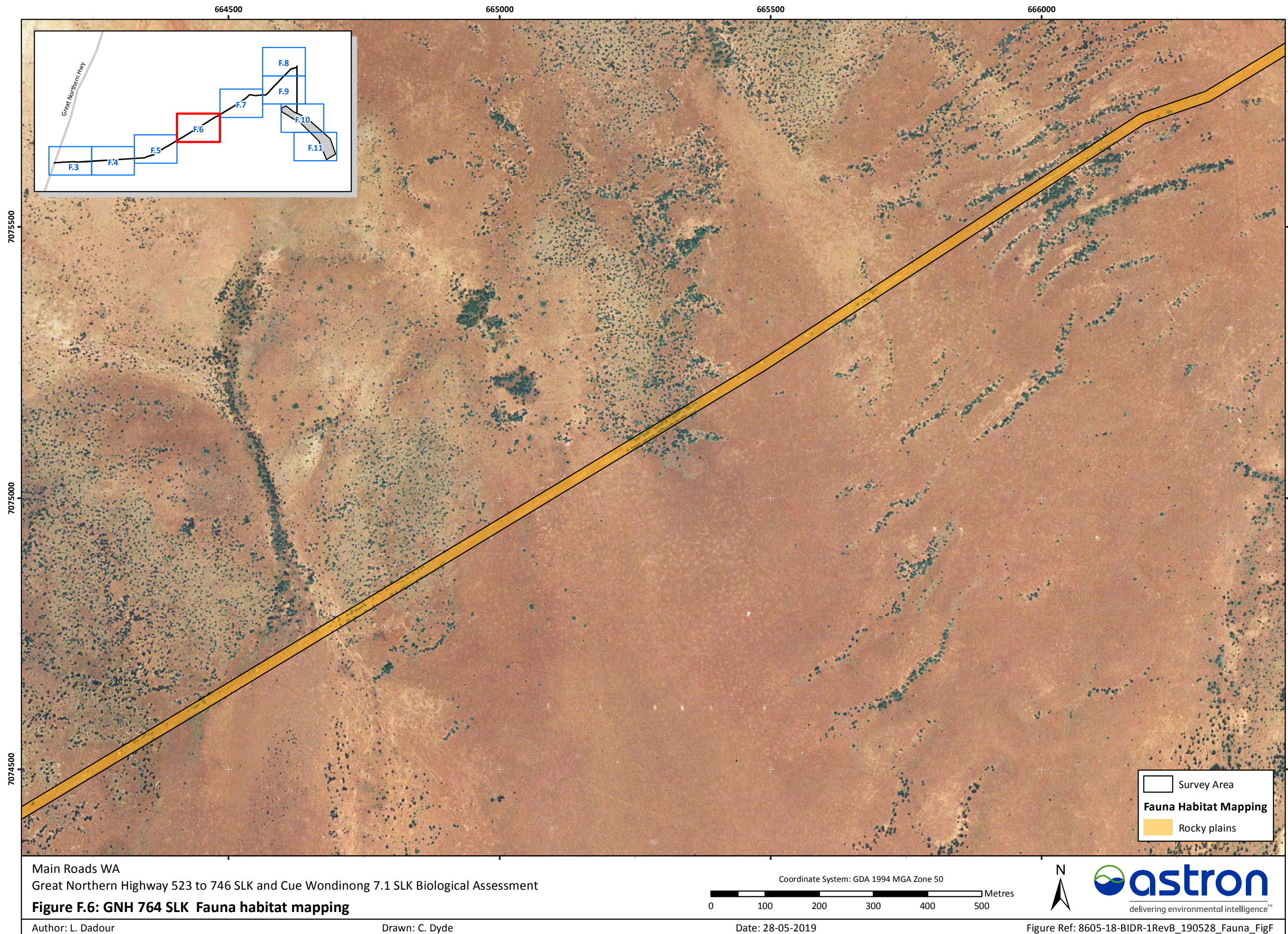


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF

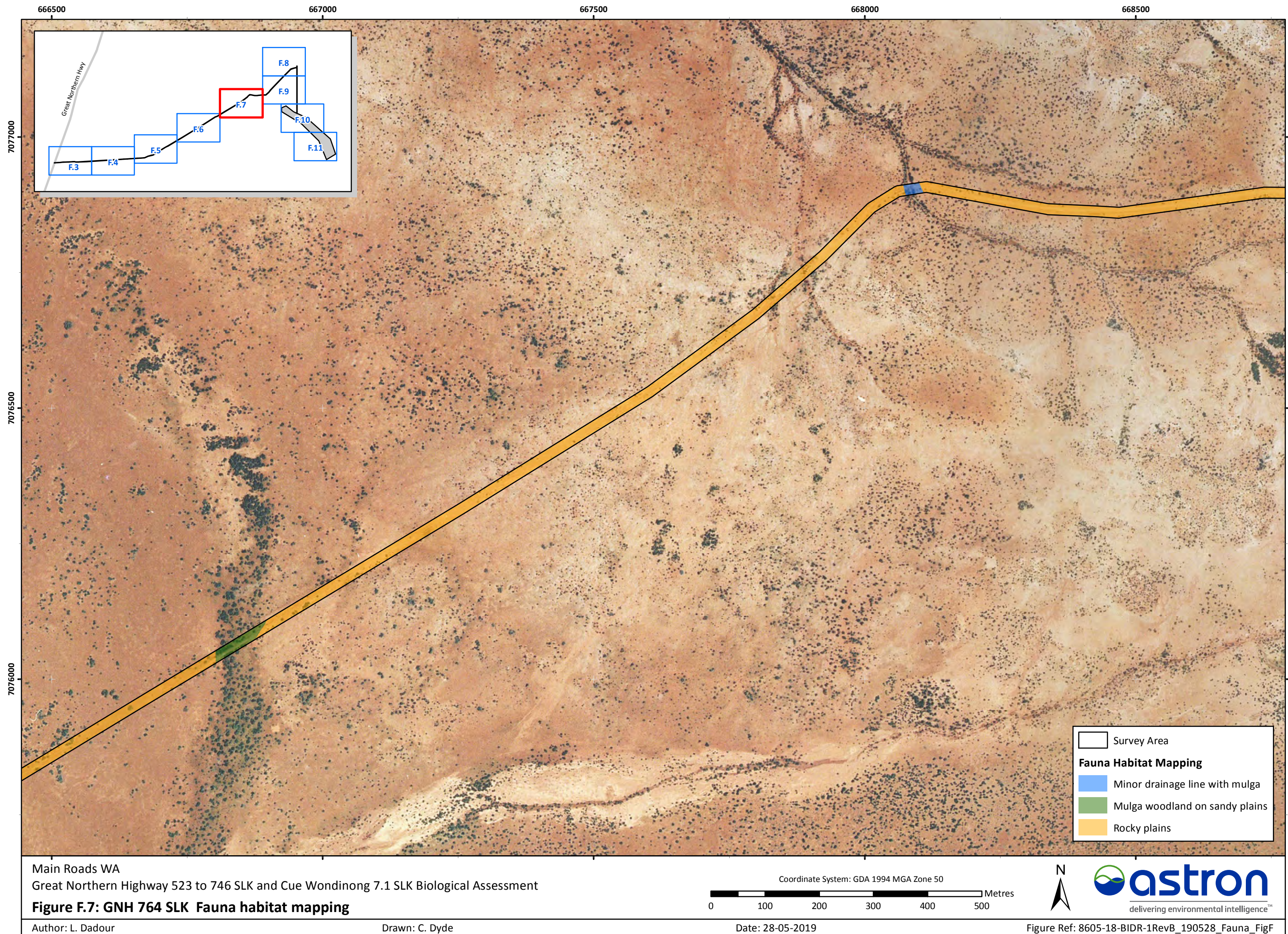




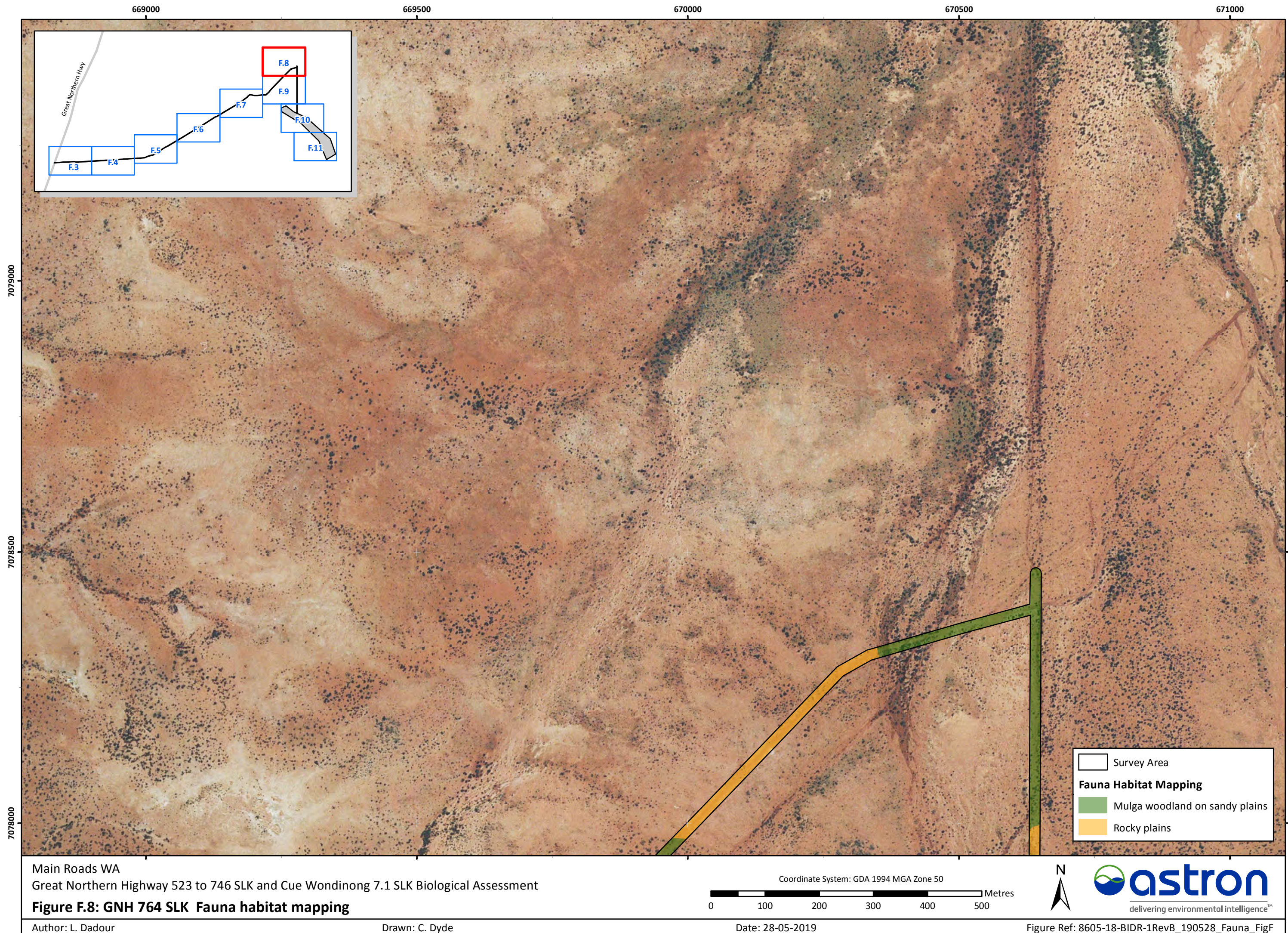




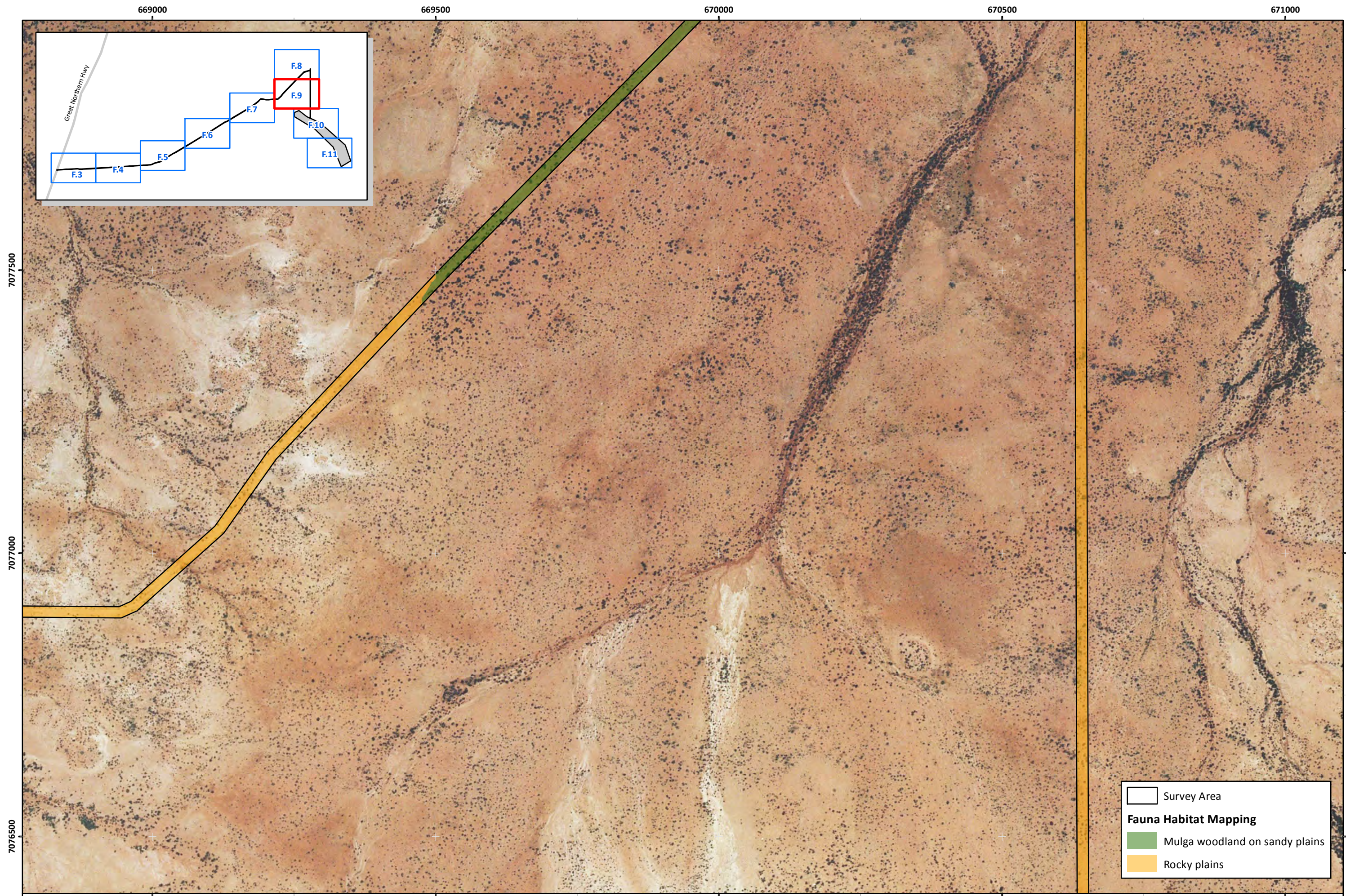












Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.9: GNH 764 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

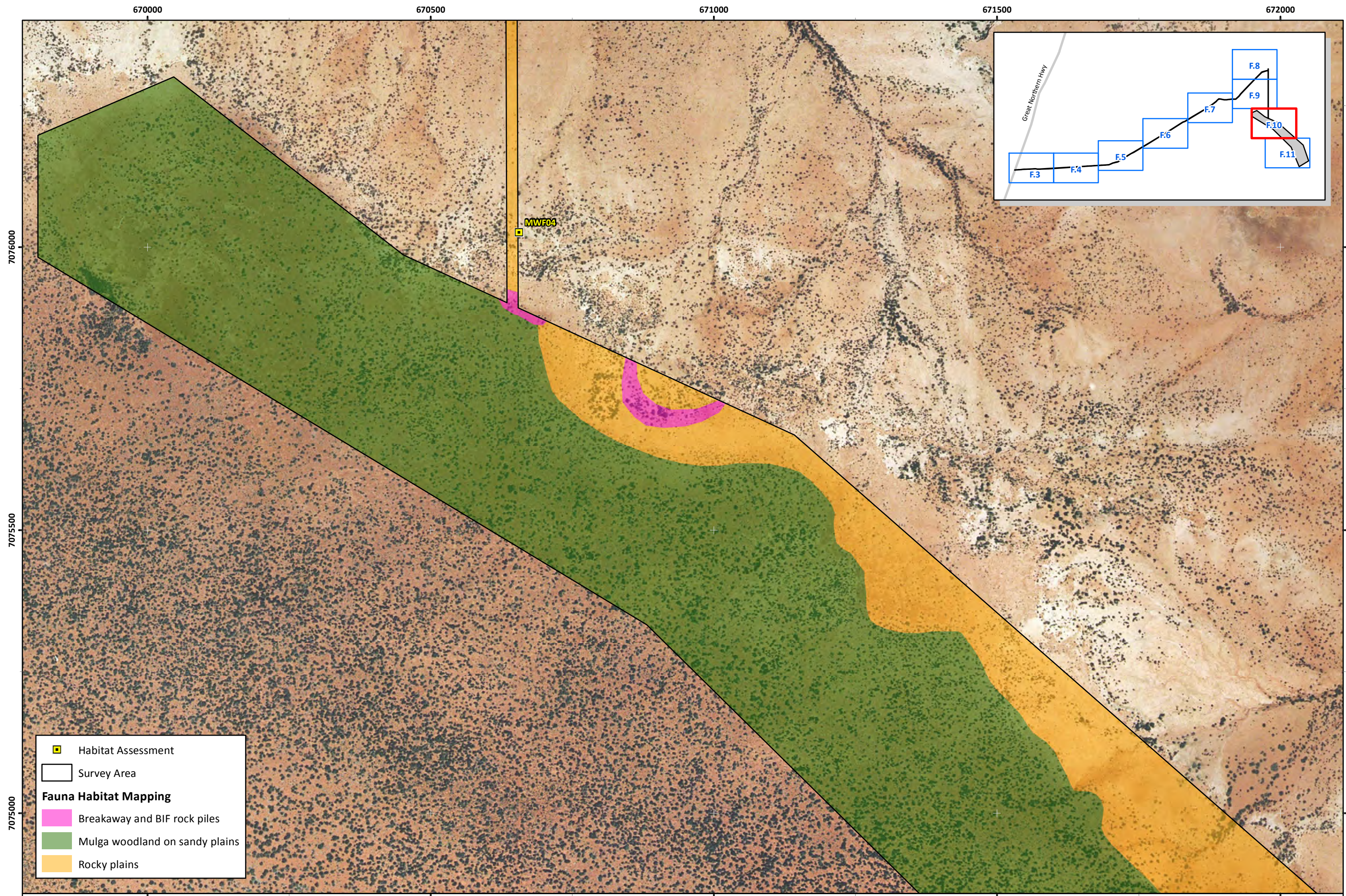
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Habitat Assessment

Survey Area

Fauna Habitat Mapping

Breakaway and BIF rock piles

Mulga woodland on sandy plains

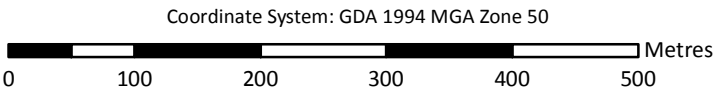
Rocky plains

Main Roads WA  
 Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.10: GNH 764 SLK Fauna habitat mapping and site locations**

Author: L. Dadour

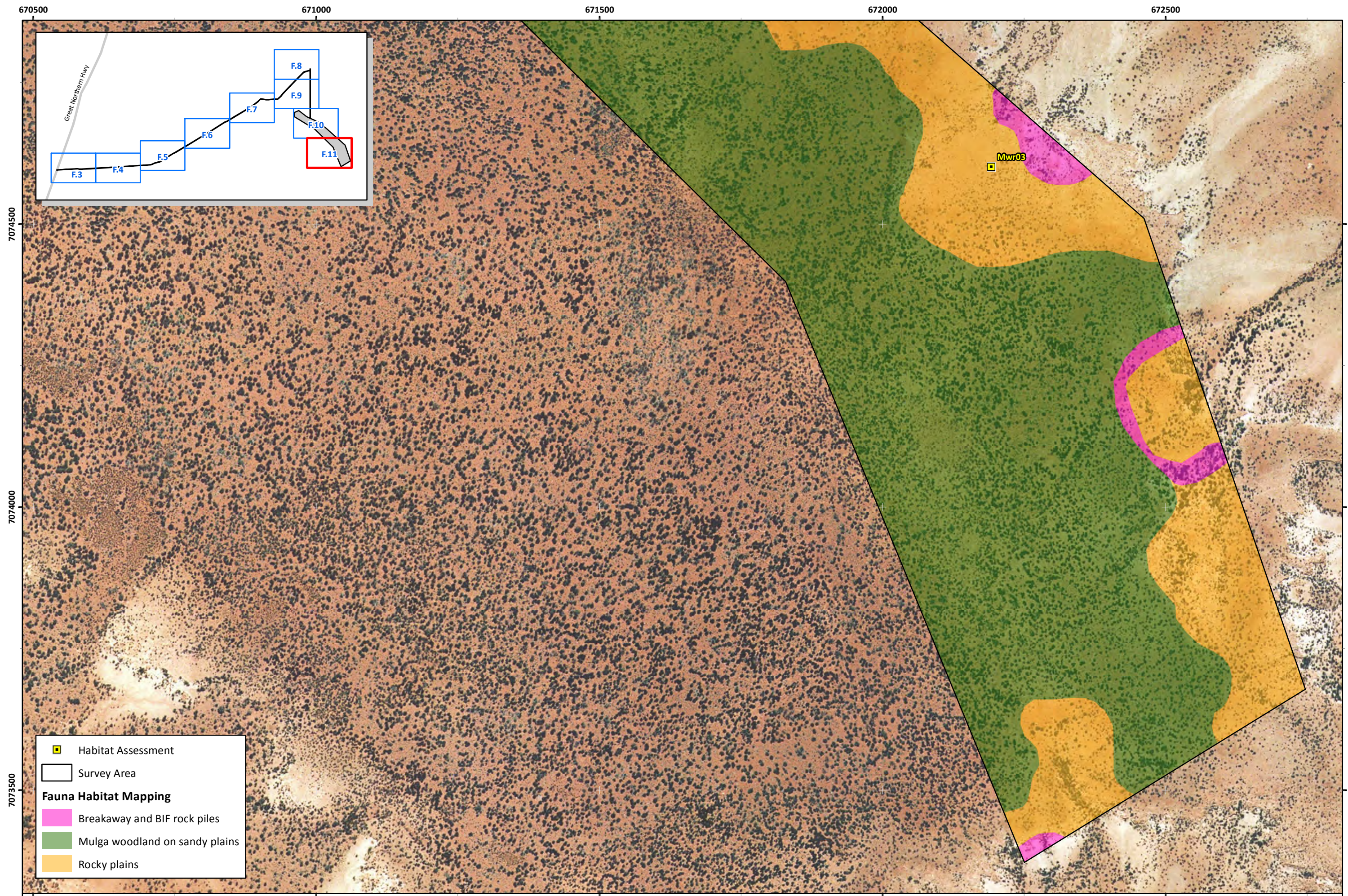
Drawn: C. Dyde



Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.11: GNH 764 SLK Fauna habitat mapping and site locations**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres



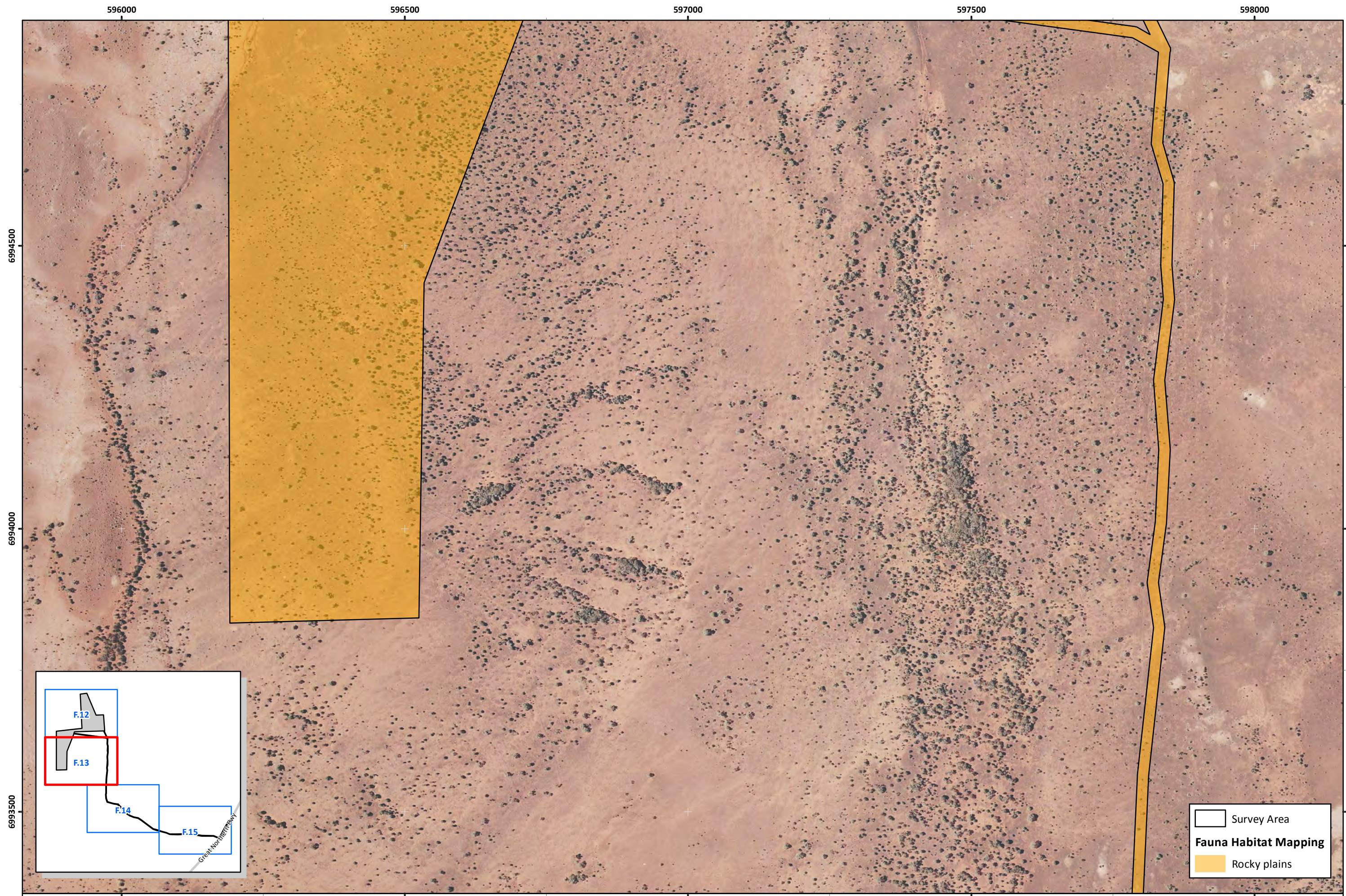
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**Figure F.13: GNH 660 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

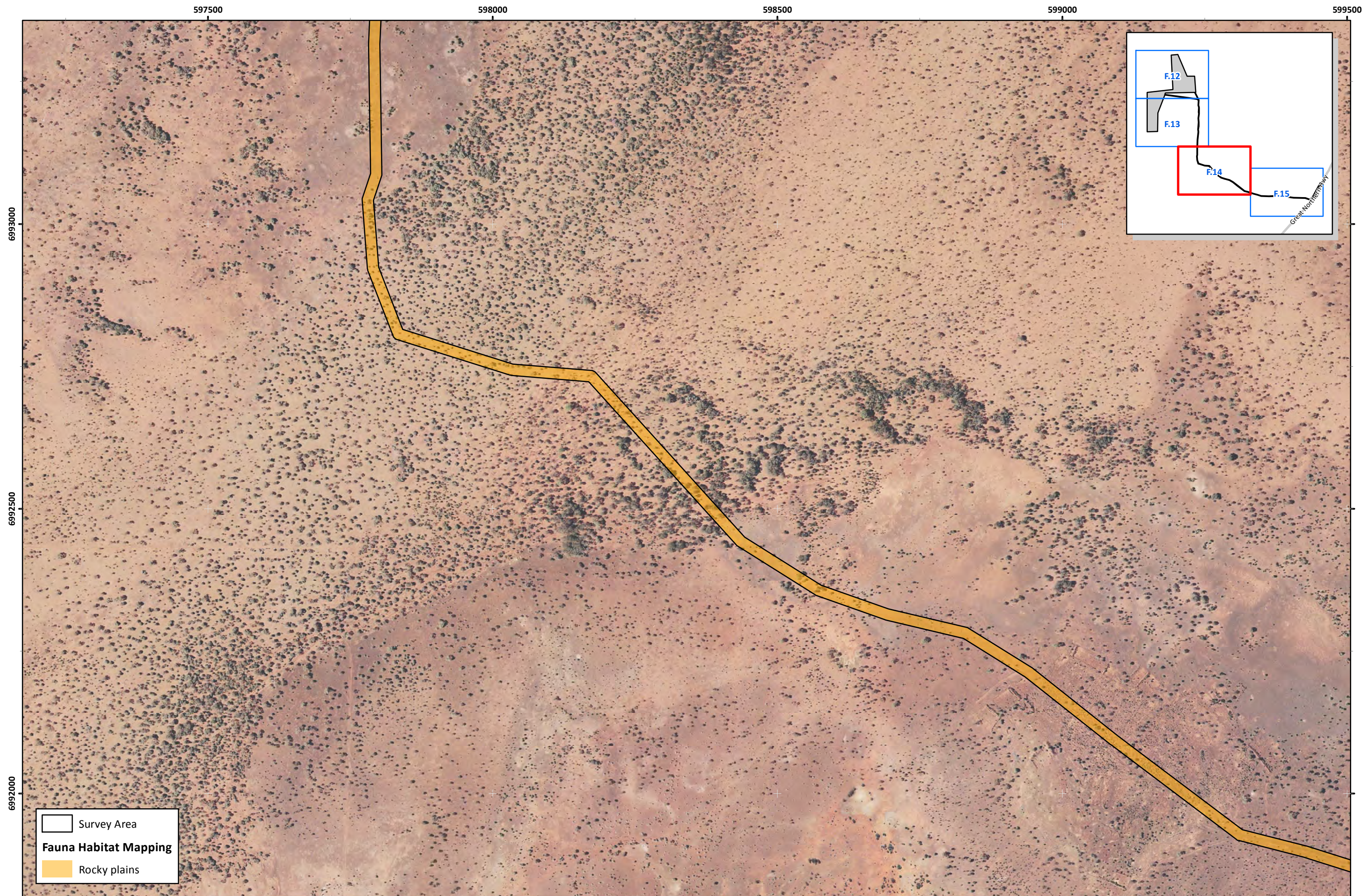
Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



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**Figure F.14: GNH 660 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



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Survey Area

**Fauna Habitat Mapping**

Rocky plains

Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.15: GNH 660 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Coordinate System: GDA 1994 MGA Zone 50

0

100

200

300

400

500

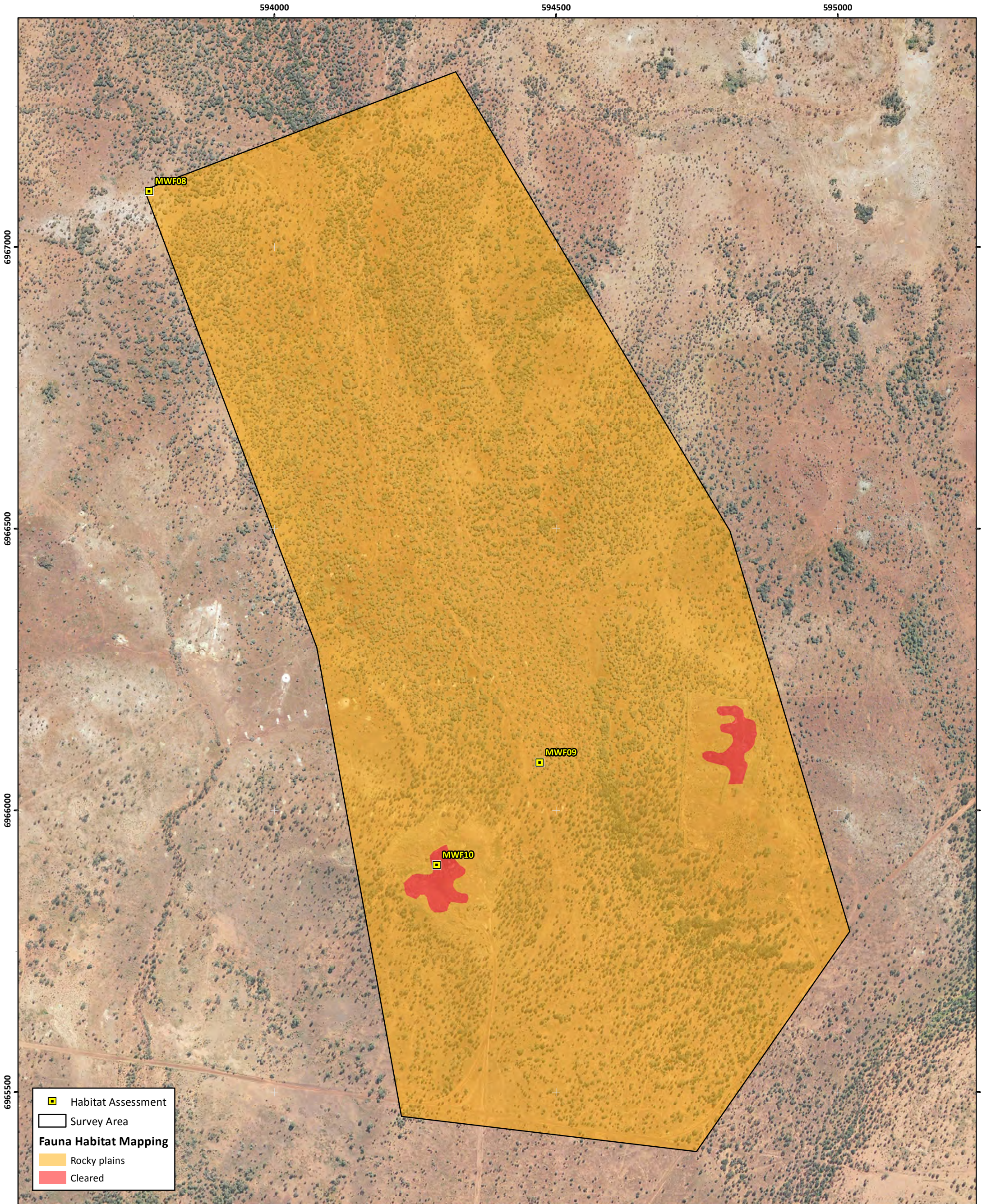
Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF

Date: 28-05-2019





Habitat Assessment

Survey Area

**Fauna Habitat Mapping**

Rocky plains

Cleared

Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment  
**Figure F.16: Cue Wondinong 7.1 SLK Fauna habitat mapping and site locations**

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Author: L. Dadour

Date: 28-05-2019

Drawn: C. Dyde

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF\_16

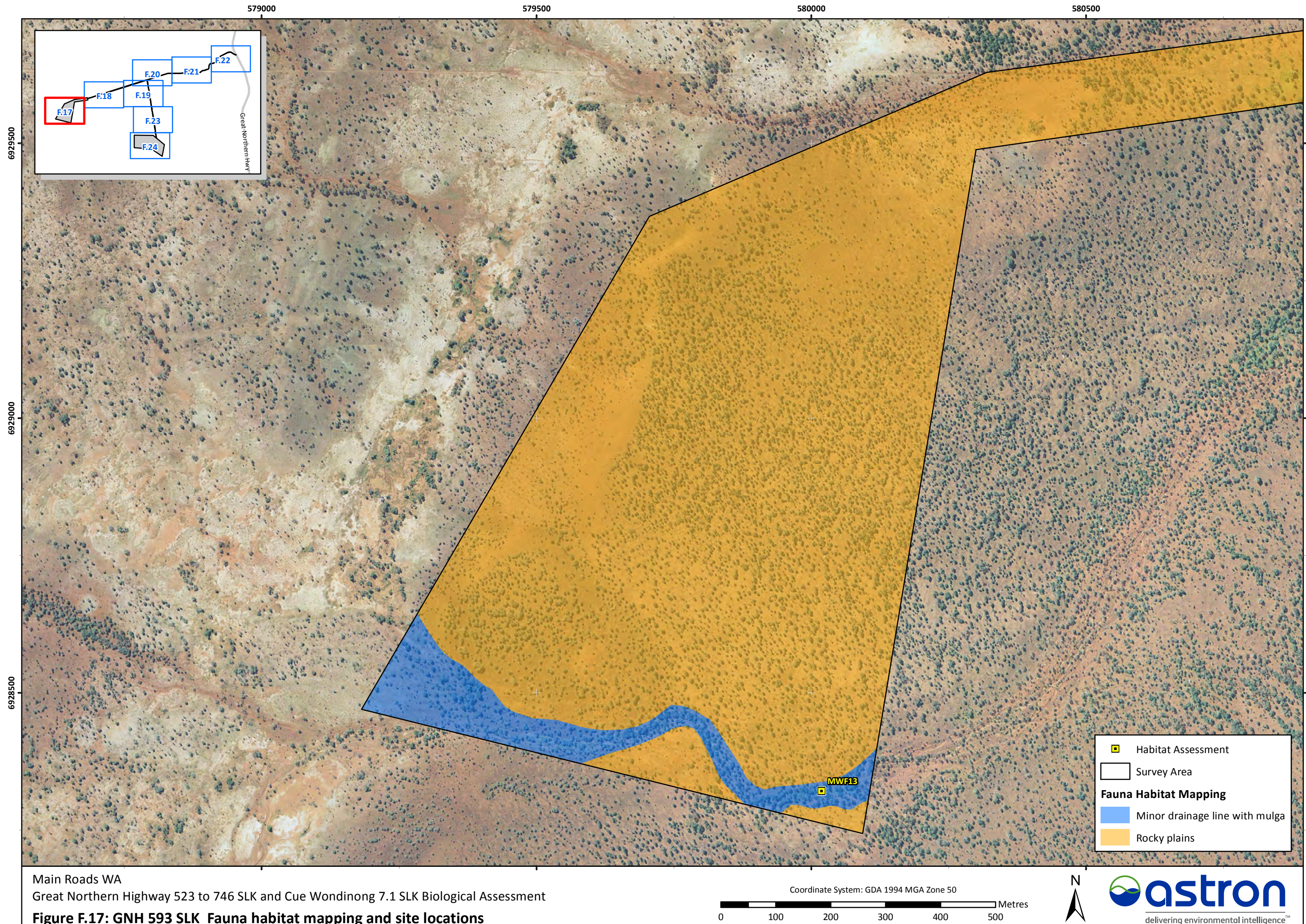
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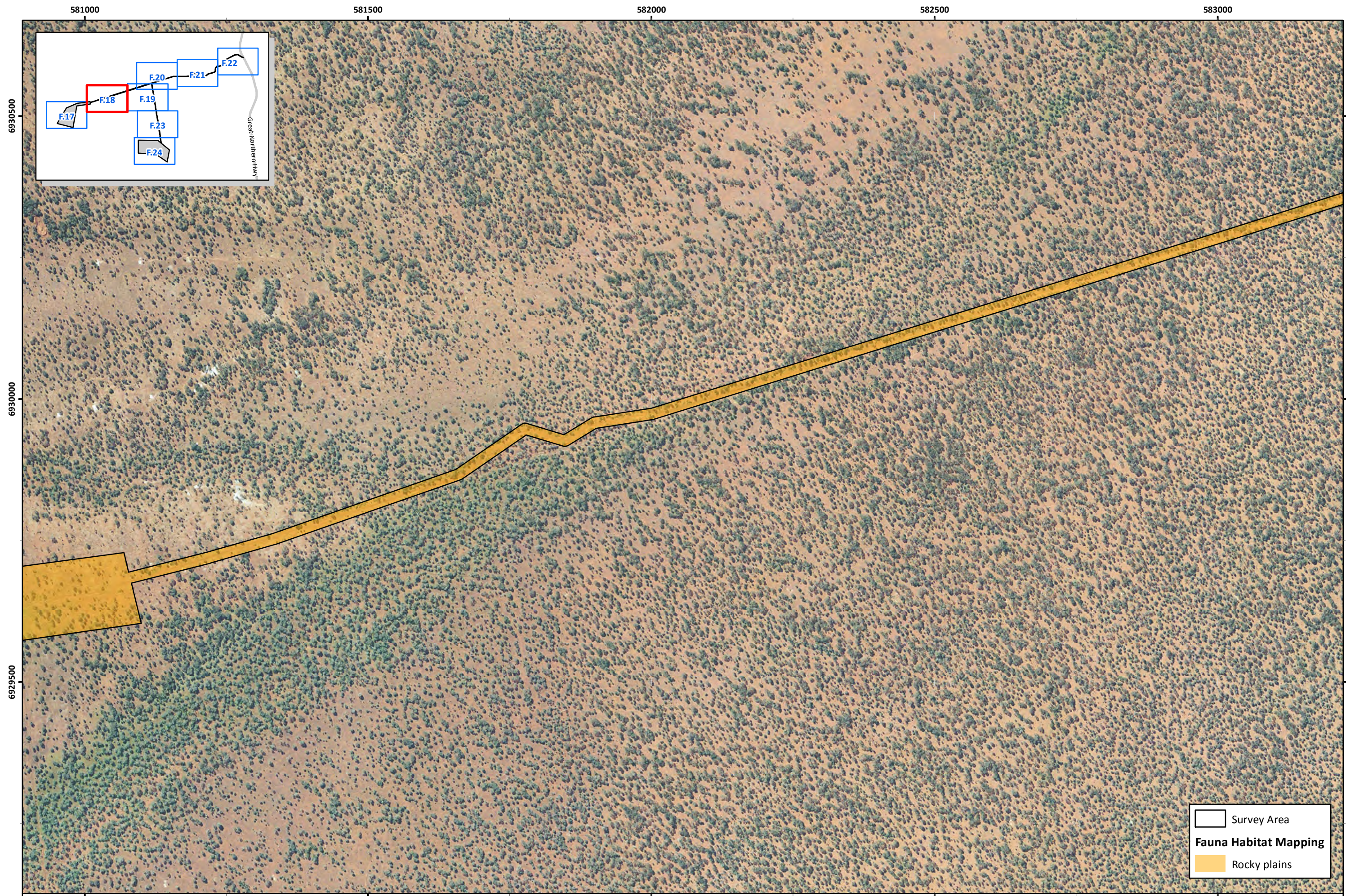
Metres











Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.18: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.19: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

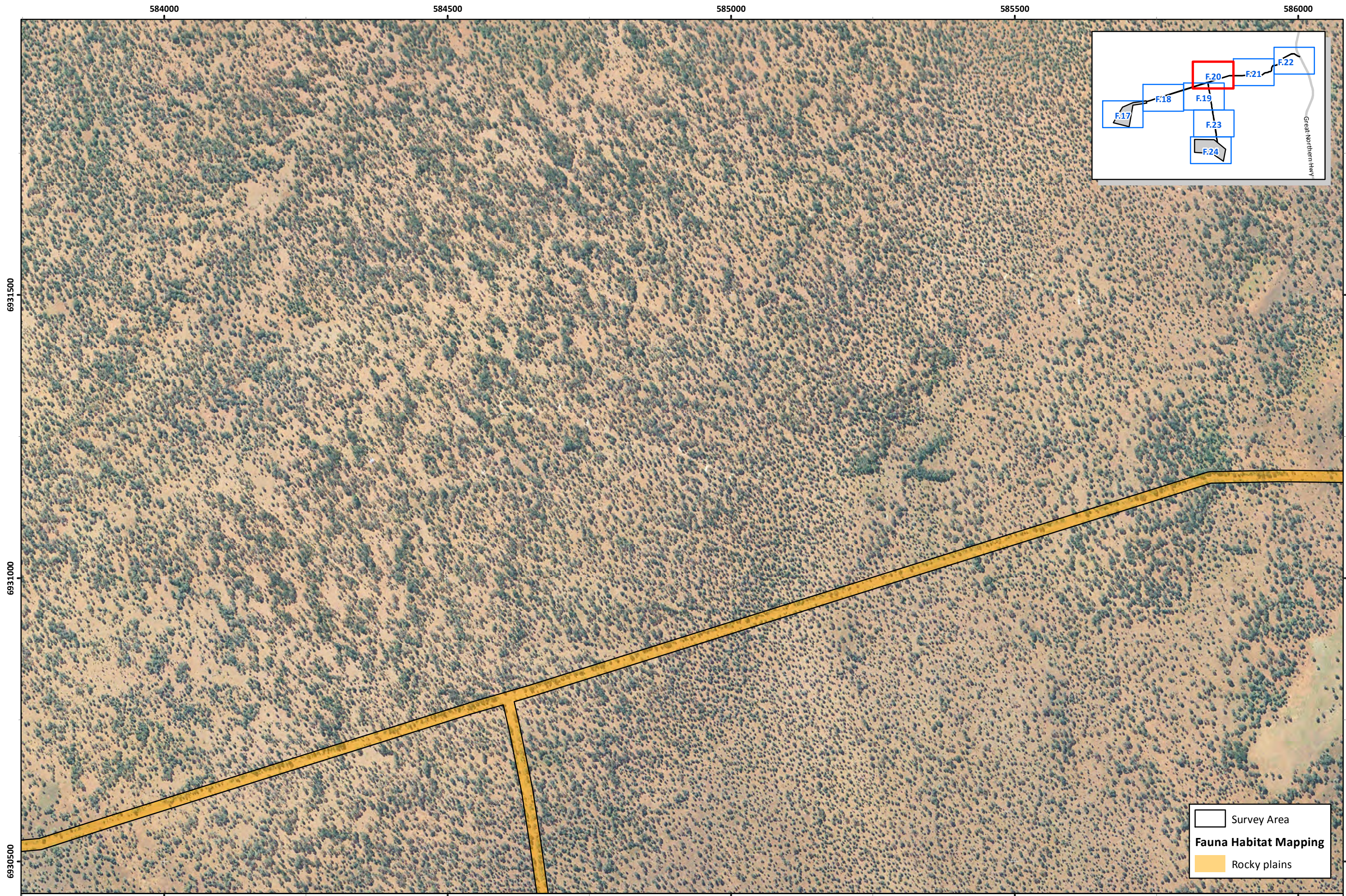
Drawn: C. Dyde

Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.20: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

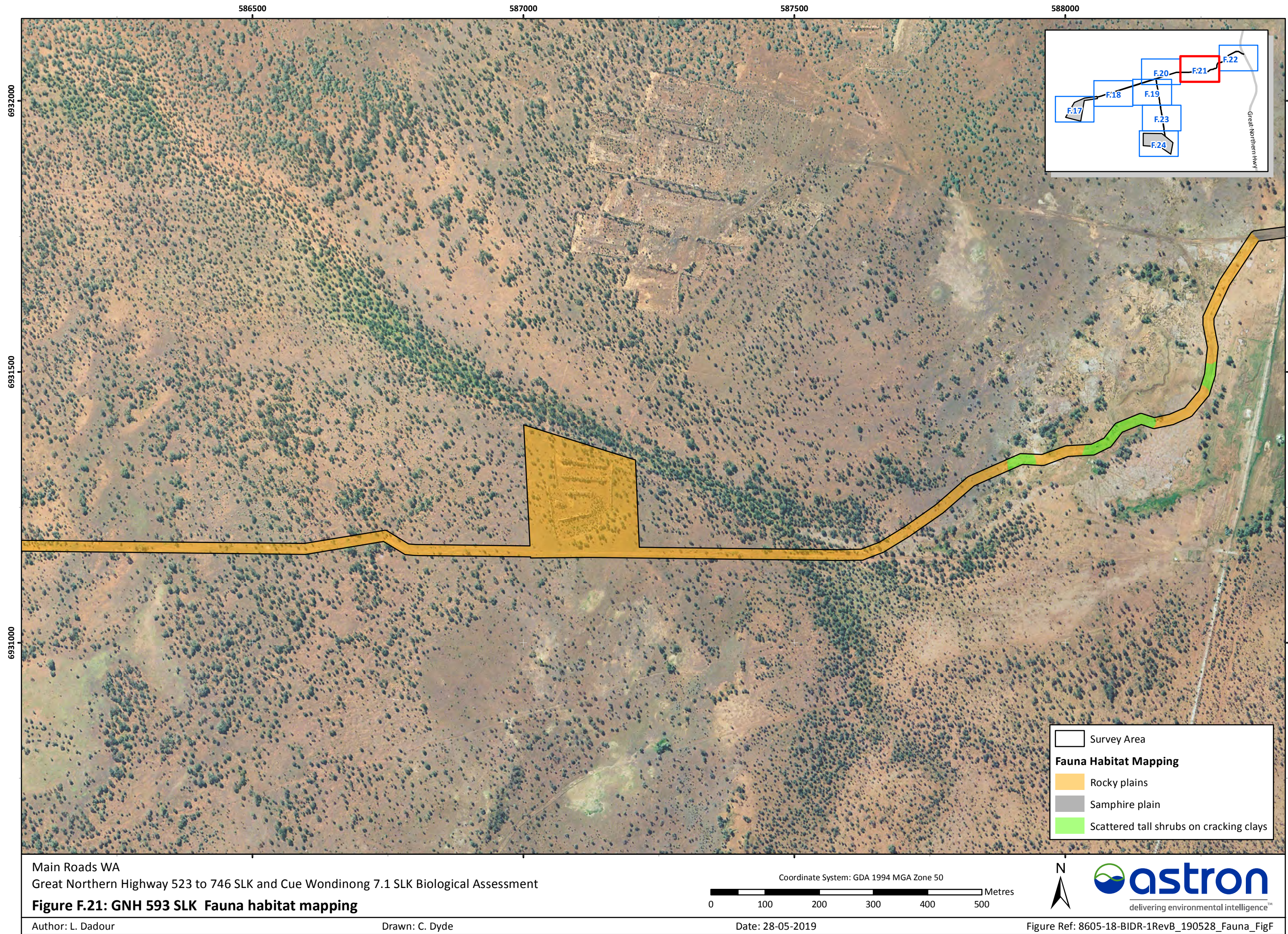
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Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.21: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

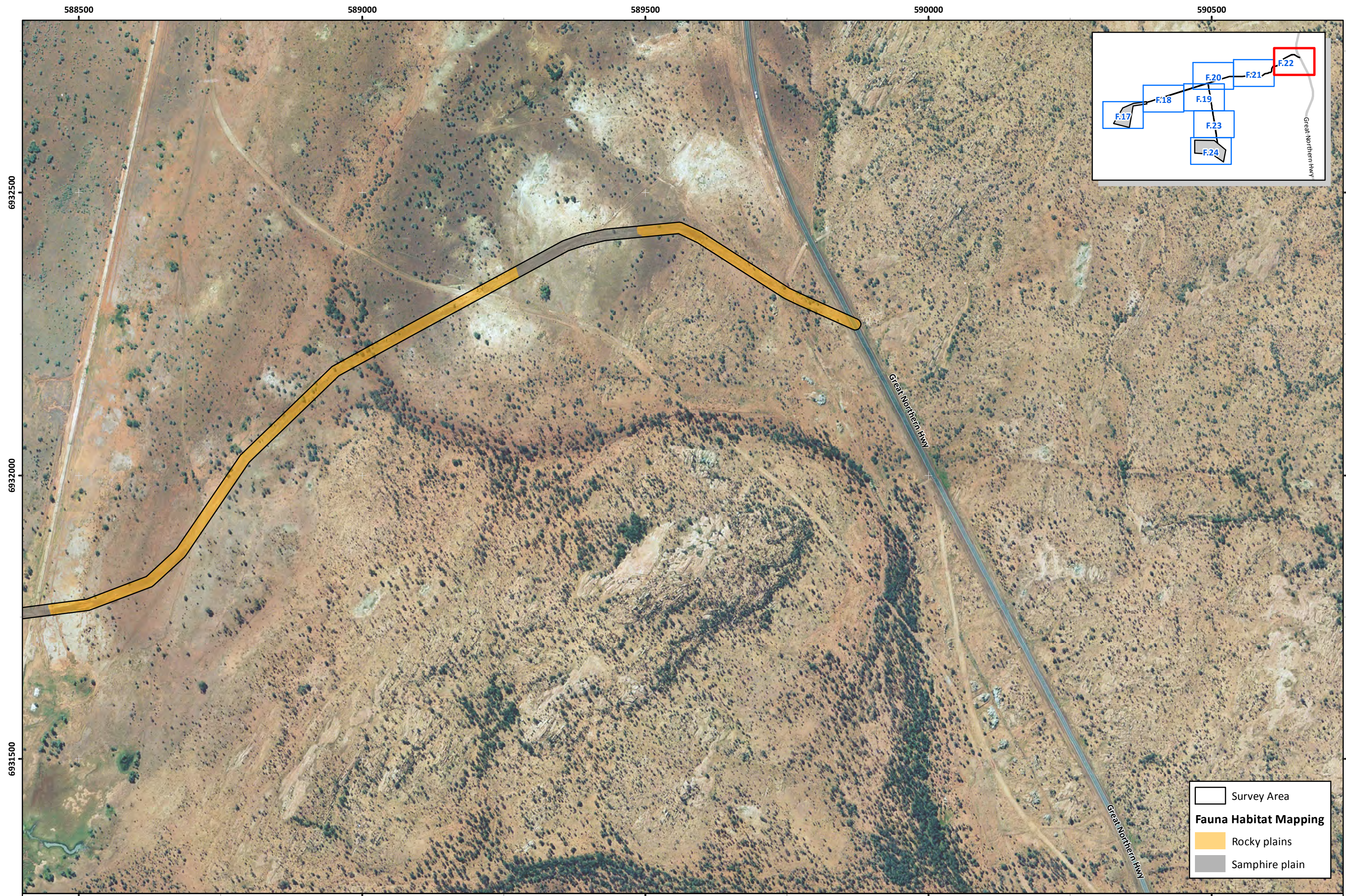
Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.22: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

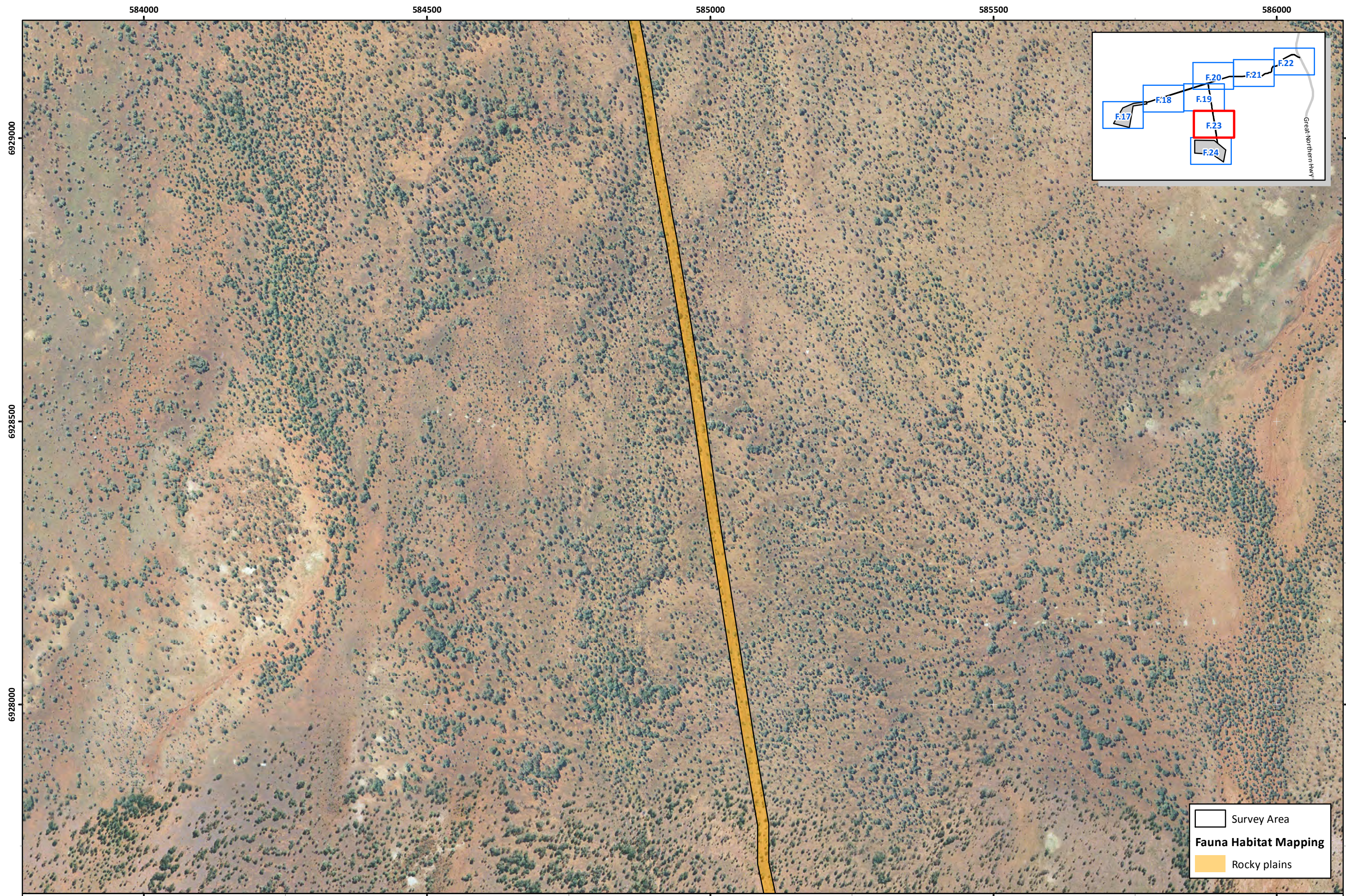
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
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Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure F.23: GNH 593 SLK Fauna habitat mapping**

Author: L. Dadour

Drawn: C. Dyde

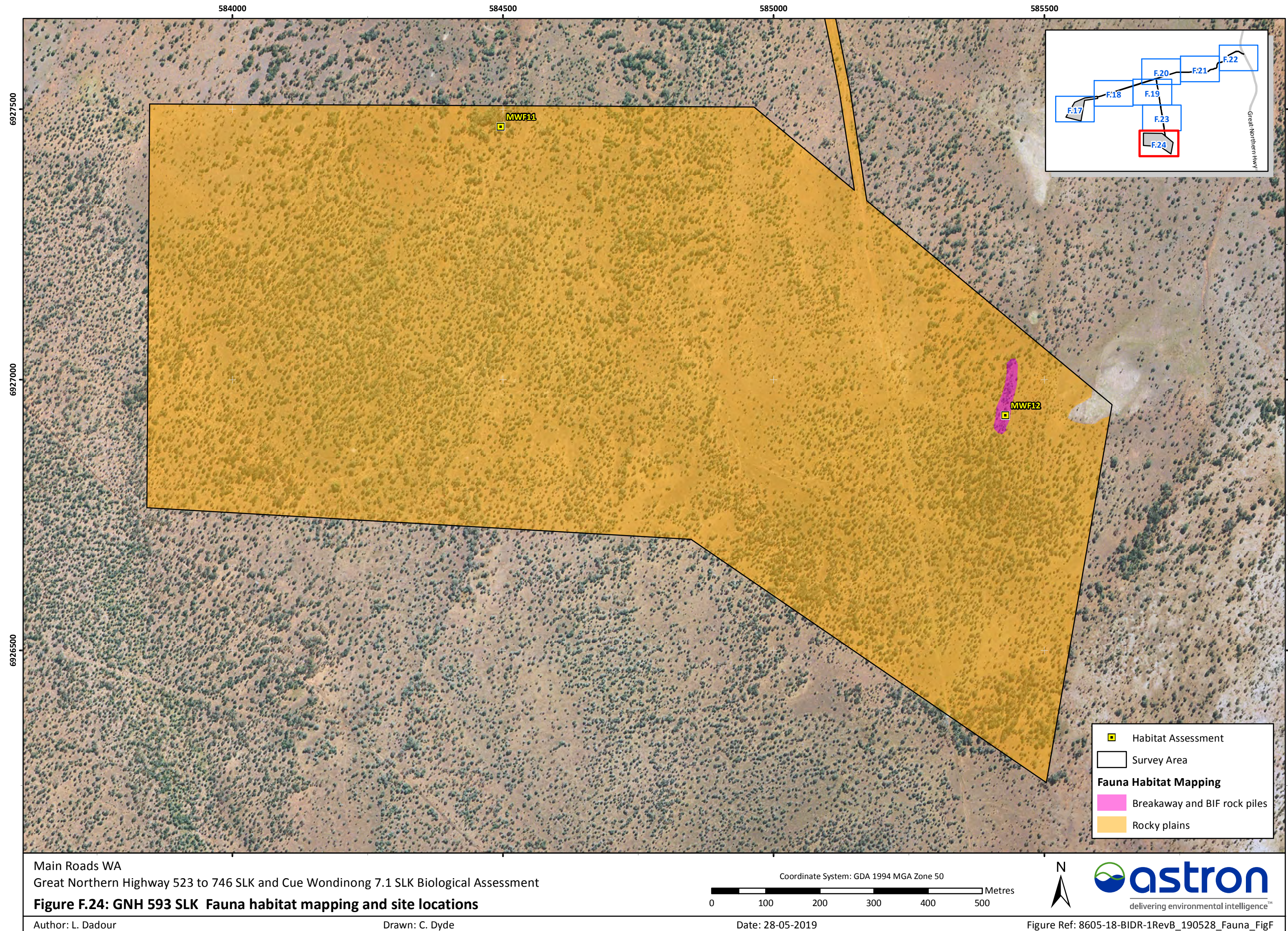
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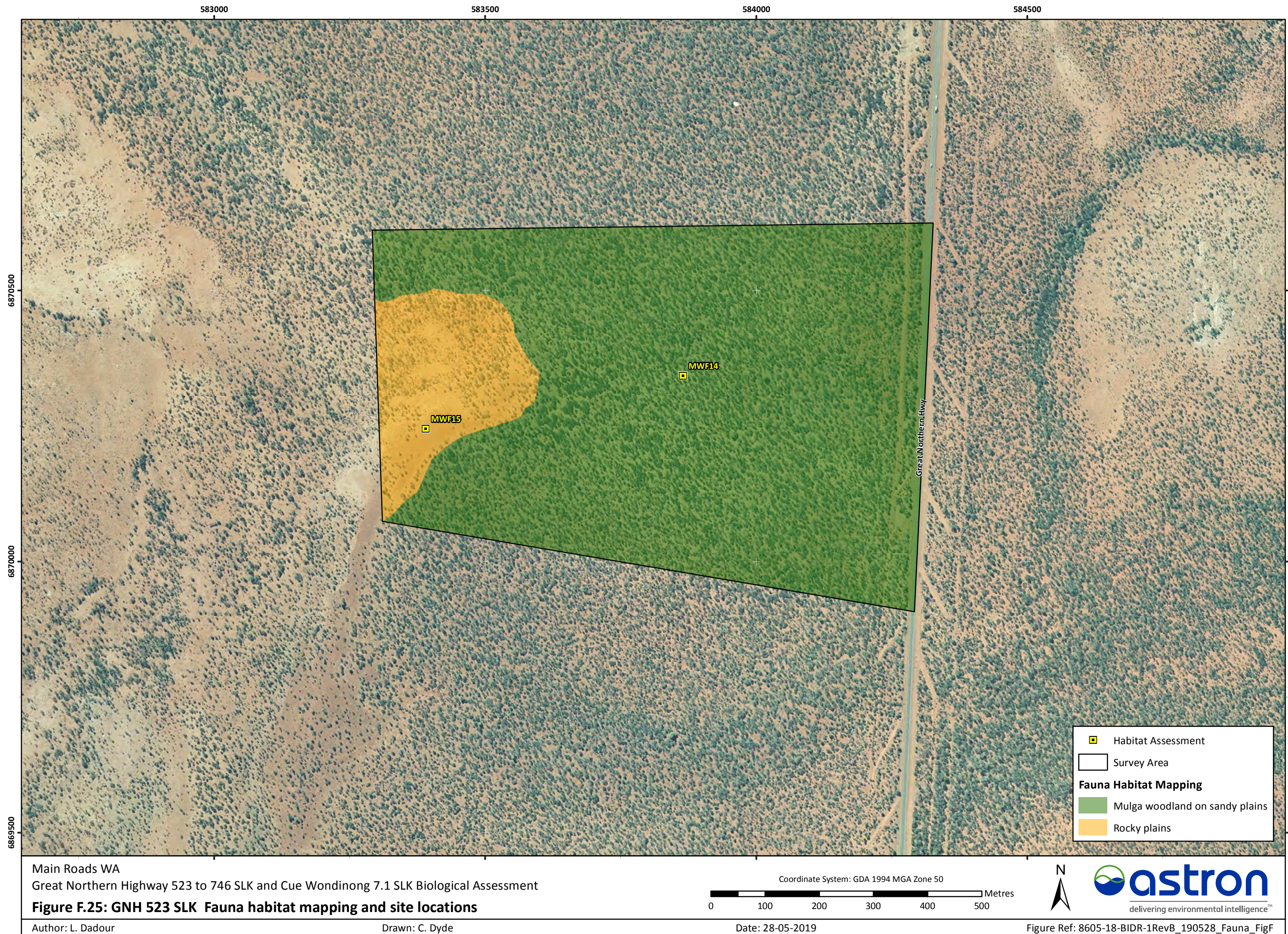


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Fauna\_FigF











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## **Appendix G: Threatened and Priority Flora and Fauna Species Likelihood of Occurrence within the Survey Area**



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Table G.1: Likelihood of occurrence of Threatened and Priority flora recorded within 20 km of the survey area (NatureMap (Department of Biodiversity, Conservation and Attractions 2018a), TPFL (Department of Biodiversity, Conservation and Attractions 2018d), WA Herbarium (Department of Biodiversity, Conservation and Attractions 2018e) and Protected Matters Search Tool (Department of the Environment and Energy 2019)).

| Species   | Habit and flowering information*   | Life Form* | Habitat*   | Likelihood of occurrence |             |
|---|--|------------|--|--------------------------|-------------|
|   |  |            |  | Pre-survey               | Post-survey |
| Threatened  |  |            |  |                          |             |
| <i>Eremophila rostrata</i> subsp. <i>rostrata</i> | Rounded shrub, to 3 m high.  | Perennial  | Saline quartzite loams. Hills and flats.   | Likely                   | Unlikely    |
| <i>Minuria tridens</i> <sup>1</sup>               | Daisry, 20-50 cm high. Flower heads with mauve or white ray florets and yellow disk florets. Flowers Feb, Mar, May – Oct.              | Perennial  | South facing slopes or steep rocky cliffs in low shrubland on dolomite, limestone and calcrete-impregnated sandstone hills and ranges.                         | Unlikely                 | Unlikely    |
| <i>Pityrodia augustensis</i>                      | Bushy shrub, ca 1 m high. Fl. purple/purple-red, Aug to Sep.   | Perennial  | Amongst rocks on slopes or in drainage lines.  | Unlikely                 | Unlikely    |
| <i>Ricinocarpus brevis</i>                        | Shrub, to 1.8 m high. Fl. white, Jun to Jul.   | Perennial  | Rocky hillslopes, rock outcrops.   | Unlikely                 | Unlikely    |
| Priority 1  |  |            |  |                          |             |
| <i>Acacia dilloniorum</i>                         | Spiny shrub to 1.8 m high, phyllodes small, blue-green. Fl. Aug  | Perennial  | Red clay-loam over exposed ironstone and dolerite outcropping. Steep upper slope or midslope and crest of range. Gully. Dry fluviatile gravel. Granite boulder | Likely                   | Unlikely    |
| <i>Acacia lapidosa</i>                            | Shrubs 1-3 m high, . Phyllodes green to sub-glaucous, linear, not rigid.   | Perennial  | Brown loam. Rocky ridge (diorite), gabbro  | Potential                | Unlikely    |
| <i>Angianthus uniflorus</i>                       | Erect or ascending annual, herb, to 0.07 m high.   | Annual     | Margin of calcrete rise near gypseous salt lake.   | Unlikely                 | Unlikely    |
| <i>Banksia rosserae</i>                           | Multi-stemmed, open-branched, lignotuberous shrub, to 3 m high, with papery bark around the base of the stems. Fl. yellow, Jul to Oct. | Perennial  | Deep yellow sand, laterite. Plains.  | Unlikely                 | Unlikely    |



| Species   | Habit and flowering information*  | Life Form* | Habitat*   | Likelihood of occurrence |             |
|---|---|------------|--|--------------------------|-------------|
|   |   |            |  | Pre-survey               | Post-survey |
| <i>Darwinia</i> sp. Kirkalocka (M. Crowhurst 296) | Compact multi-stemmed shrub to 0.3 m. Fl. Red, terminal, Sep                              | Perennial  | Yellow soil. Dune, ironstone, yellow sand dunes  | Potential                | Unlikely    |
| <i>Dicrastylis mitchellii</i>                     | Shrub, to about 0.3 m high.   | Perennial  | Sand or clay soils. Around dunes.  | Potential                | Unlikely    |
| <i>Dicrastylis</i> sp. Cue (A.A. Mitchell 764)    | Shrub, 1-3 m high. Fl. white, Sep to Oct.   | Perennial  | Drainage area, near granite.   | Likely                   | Unlikely    |
| <i>Drosera eremaea</i>                            | Low ephemeral herb growing to 15 cm tall from underground tuber                           | Annual     | Seasonally inundated, brown loam soil. Red orange loamy sand with extensive outcropping. Apron of granite outcrop. Loose rock: 0-10%. Banded ironstone formation scree | Potential                | Unlikely    |
| <i>Eremophila retropila</i>                       | Spreading shrub, 0.7-1.7 m high, to 4.2 m wide. Fl. purple-red-white, Aug to Sep.         | Perennial  | Gravelly loam. Stony flats.  | Potential                | Unlikely    |
| <i>Grevillea kirkalocka</i>                       | Low, spreading to decumbent shrub, to 1 m high. Fl. red, Aug to Sep.                      | Perennial  | Yellow sand with some ironstone or laterite gravel. Base of sandhill, beside track.  | Potential                | Unlikely    |
| <i>Jacksonia lanicarpa</i>                        | Shrub, to 2 m high. Fl. orange, Nov.  | Perennial  | Red sand.  | Potential                | Unlikely    |
| <i>Millotia depauperata</i>                       | Slender annual, herb, to 0.2 m high. Fl. yellow, Aug to Sep.                              | Annual     | Sandy loam. Granite outcrops.  | Potential                | Unlikely    |
| <i>Minuria tridens</i>                            | Dwarf virgate shrub, 0.25-0.35 m high. Fl. white-blue, Sep.                               | Perennial  | Roadsides.   | Unlikely                 | Unlikely    |
| <i>Philotheca nutans</i>                          | Upright shrub, 0.3-0.9 m high. Fl. green-cream-yellow/red-pink, Apr or Jun to Jul or Sep. | Perennial  | Sandy soils. Low plains, undulating rises, edges of salt lakes.  | Potential                | Unlikely    |
| <i>Stenanthemum mediale</i>                       | Erect shrub, ca 0.35 m high, leaves entire. Fl. Apr to Aug.                               | Perennial  | Red clayey sand.   | Unlikely                 | Unlikely    |
| <i>Stenanthemum patens</i>                        | Shrub, ca 0.5 m high.   | Perennial  | Rocky hillside.  | Unlikely                 | Unlikely    |
| <b>Priority 2</b>                                 |   |            |  |                          |             |



| Species   | Habit and flowering information*  | Life Form* | Habitat*   | Likelihood of occurrence |             |
|---|---|------------|--|--------------------------|-------------|
|   |   |            |  | Pre-survey               | Post-survey |
| <i>Angianthus microcephalus</i>                             | Decumbent or ascending annual, herb, 0.06-0.1(-0.21) m high. Fl. yellow, Sep to Dec.  | Annual     | Sandy or clayey soils. Salt swamps & pans.   | Unlikely                 | Potential   |
| <i>Bergia auriculata</i>                                    | Prostrate perennial, herb.  | Annual     | Clay soils. Mud flats  | Unlikely                 | Unlikely    |
| <b>Priority 3</b>   |   |            |  |                          |             |
| <i>Acacia burrowsiana</i>                                   | Stout shrub or tree, to 5 m high, bark grey, fibrous, fissured, smooth on upper branches; phyllodes sub-rigid, sub-glaucous, erect, coarsely pungent. | Perennial  | Red-brown loams with ironstone rubble on surface, calcrete soils, laterite, quartz. Flats adjacent to watercourses, crests of low rises, breakaways. | Potential                | Unlikely    |
| <i>Acacia subsessilis</i>                                   | Rounded, straggly, pungent shrub, 1-2 m high. Fl. yellow, Jul to Aug.   | Perennial  | Red sand or stony gravel over ironstone. Rocky hills.  | Unlikely                 | Unlikely    |
| <i>Alyxia tetanifolia</i>                                   | Erect, rigid, pungent shrub, 1-2 m high, to 2.5 m wide. Fl. white-cream, May to Jun or Nov.   | Perennial  | Sandy clay, loam, concretionary gravel. Drainage lines, near lakes.  | Potential                | Unlikely    |
| <i>Baeckea</i> sp. London Bridge (M.E. Trudgen 5393)        | Rounded shrub, 0.3-0.5 m high. Fl. red, Oct to Nov.   | Perennial  | Gravel, sandstone. Rocky breakaways & hills.   | Potential                | Unlikely    |
| <i>Calotis</i> sp. Perrinvale Station (R.J. Cranfield 7096) | Low herb, 0.1 m high.   | Annual     | Red loam. Red-orange sandy clay-loam over Banded Ironstone Formation, laterite. Plain.   | Potential                | Unlikely    |
| <i>Calytrix verruculosa</i>                                 | Shrub, 0.4-0.75 m high. Fl. pink/white, Aug or Oct.   | Perennial  | Sandy clay.  | Potential                | Unlikely    |
| <i>Dicrastylis linearifolia</i>                             | Much-branched shrub, 1-3 m high, inflorescence with scale-like indumentum; upper surface of leaves hairy; stamens usually 5. Fl. white, Nov to Dec.   | Perennial  | Red sand. Sandplain.   | Potential                | Unlikely    |
| <i>Drummondita miniata</i>                                  | Divicately branched shrub, 0.5-2 m high. Fl. orange-red, Jul to Aug or Nov.   | Perennial  | Laterite. Breakaways.  | Likely                   | Recorded    |
| <i>Eremophila fasciata</i>                                  | Erect shrub, 0.6-0.9 m high. Fl. blue-violet, Aug.  | Perennial  | Red sand/loam/rocky. Flats and sides of breakaways   | Potential                | Unlikely    |



| Species                         | Habit and flowering information*   | Life Form* | Habitat*   | Likelihood of occurrence |             |
|---------------------------------|--|------------|--|--------------------------|-------------|
|                                 |  |            |  | Pre-survey               | Post-survey |
| <i>Euryomyrtus recurva</i>      | Shrub, 0.3-1 m high. Fl. white-pink, Jul to Sep.   | Perennial  | Yellow/red sand, brown/yellow sandy clay. Gravel pits, catchment slopes.   | Likely                   | Unlikely    |
| <i>Hemigenia tysonii</i>        | Upright shrub, to 0.5 m high. Fl. purple-blue-pink/white, May or Jul to Dec.   | Perennial  | Red sand, sandy clay, lateritic sand. Flats, sand dunes, hills.  | Unlikely                 | Unlikely    |
| <i>Hemigenia virescens</i>      | Prostrate sprawling shrubs. Leaves opposite or whorled, entire, with dendritic. Flowering time July, August or December. | Perennial  | Brown very rocky sand. Hillside. Rangeland. Brown ironstone gravel. Sand banks   | Potential                | Unlikely    |
| <i>Hibiscus krichauffianus</i>  | Low or ascending shrub, (0.03-)0.2-0.7 m high. Fl. purple-pink, Mar or Oct.  | Perennial  | Red sandy soils.   | Potential                | Unlikely    |
| <i>Homalocalyx echinulatus</i>  | Shrub, 0.45-1 m high. Fl. pink, Jun to Sep.  | Perennial  | Laterite. Breakaways, sandstone hills.   | Potential                | Unlikely    |
| <i>Maireana prosthocochaeta</i> | Open, densely-leaved shrub, 0.3-0.6 m high.  | Perennial  | Laterite. Hills, salty places.   | Potential                | Unlikely    |
| <i>Menkea draboides</i>         | Prostrate, spreading annual, herb, to 0.6 m wide. Fl. white/cream, Aug to Sep.   | Annual     | Red sand or clay, granite.   | Likely                   | Unlikely    |
| <i>Micromyrtus placoides</i>    | Shrub, 0.5-2.3 m high, sometimes widely spreading with several stems or branches from the base.                          | Perennial  | Red-orange sandy clay, orange-yellow sandy clay to clayey loam, coarse gravel, banded ironstone, laterite, quartz, basalt. Gently undulating plains, dry creek beds, hillcrests, ridges. | Potential                | Unlikely    |
| <i>Petrophile pauciflora</i>    | Shrub, ca 1 m high. Fl. yellow, Sep.   | Perennial  | Decaying & dissected granite breakaways.   | Unlikely                 | Unlikely    |
| <i>Prostanthera petrophila</i>  | Spreading shrub, 0.6-1.5 m high. Fl. white, Aug.   | Perennial  | Lateritic soils.   | Potential                | Unlikely    |
| <i>Ptilotus beardii</i>         | Compact, perennial shrub, 0.15-0.5 m high, leaves linear. Fl. pink-red, Aug to Oct.                                      | Perennial  | Clayey soils. Saline flats, low breakaways   | Potential                | Unlikely    |



| Species                         | Habit and flowering information*   | Life Form*                      | Habitat*  | Likelihood of occurrence |             |
|---------------------------------|--|---------------------------------|---|--------------------------|-------------|
|                                 |  |                                 |   | Pre-survey               | Post-survey |
| <i>Ptilotus luteolus</i>        | Perennial herb, 0.3 m high. Fl. Yellow, Aug -Nov   | Short-lived annual or perennial | Loam / clay. Outcrop. Red-orange clay loam over laterite. Banded Ironstone outcrop. Slope   | Potential                | Unlikely    |
| <i>Sida picklesiana</i>         | Herb or shrub. Stems glabrous. Flowering time April, August or November.                           | Perennial                       | Red brown sandy clay soil with ironstone, quartz and basalt rocks. Plain, sandplain. Breakaway plateaux and upper slopes of breakaways. | Potential                | Unlikely    |
| <i>Tecticornia fimbriata</i>    | Erect shrub, 0.25-1 m high. Clay, loam.  | Perennial                       | Margins of salt & gypsum lakes.   | Unlikely                 | Unlikely    |
| <i>Tribulus adelacanthus</i>    | Prostrate herb, plants villous; leaflet pairs 3-6; fruits 5-winged, lacking spines, 10-14 mm high. | Annual                          | Red clayey sand, silty clay loam. Dry red/brown soil. Dry red quartz. Flat. Moderate slope.   | Potential                | Unlikely    |
| <i>Verticordia jamiesonii</i>   | Shrub, 0.2-0.6 m high. Fl. white/pink, Sep to Oct.   | Perennial                       | Sandy clay soils. Lateritic breakaways.   | Unlikely                 | Unlikely    |
| <b>Priority 4</b>               |  |                                 |   |                          |             |
| <i>Acacia speckii</i>           | Bushy, rounded shrub or tree, 1.5-3 m high.  | Perennial                       | Rocky soils over granite, basalt or dolerite. Rocky hills or rises.   | Likely                   | Unlikely    |
| <i>Dodonaea amplisemina</i>     | Dioecious, multi-stemmed shrub, 0.3-1 m high.  | Perennial                       | Red-brown sandy clay on basalt and gabbro and banded ironstone or on dolerite and quartzite. Rocky hills.                               | Likely                   | Unlikely    |
| <i>Goodenia berringbinensis</i> | Ascending annual, herb, 0.1-0.3 m high. Fl. yellow, Oct.   | Annual                          | Red sandy loam. Along watercourses.   | Potential                | Potential   |
| <i>Goodenia neogoodenia</i>     | Prostrate, herb, flowers minute. Fl. brown/brown & yellow, Aug to Sep.                             | Annual                          | Red loam or clay. Near water.   | Potential                | Potential   |
| <i>Grevillea inconspicua</i>    | Intricately branched, spreading shrub, 0.6-2 m high. Fl. white/pink-white, Jun to Aug.             | Perennial                       | Loam, gravel. Along drainage lines on rocky outcrops, creeklines  | Potential                | Unlikely    |

\*Information derived from Florabase (Western Australian Herbarium 1998-2018)

<sup>1</sup>Also listed as a Priority 1 species under the Biodiversity Conservation Act 2016



Table G.2 Likelihood of occurrence of conservation listed vertebrate fauna species listed as potentially occurring within 20km of the survey area (Department of the Environment and Energy 2018e), Threatened and Priority Fauna database (Department of Biodiversity, Conservation and Attractions 2018c), *NatureMap* (Department of Biodiversity, Conservation and Attractions 2018a)).

| Scientific name<br>(common name)                                 | Conservation codes |        |                    | Environmental context and habitat preference  | Likelihood of occurrence |
|--|--------------------|--------|--------------------|---|--------------------------|
|  | EPBC Act           | BC Act | DBCA Priority List |   |                          |
| Reptiles   |                    |        |                    |   |                          |
| <i>Pogona minor minima</i><br>(Abrolhos dwarf bearded dragon)    |                    | VU     |                    | Found only on islands at the Houtman Abrolhos Islands. It occurs in sandy habitats or limestone outcrops. The survey area is outside the current distribution of this species.  | Low                      |
| <i>Egernia stokesii badia</i><br>(Western spiny-tailed skink)    | EN                 | VU     |                    | Occurs in rocky outcrops and stony hills where it shelters in deep crevices and under large boulders. In the Wheatbelt it inhabits areas of eucalypt woodland where it shelters within hollow timbers. The survey area is outside the current distribution of this species. | Low                      |
| <i>Lerista eupoda</i><br>(Meekatharra slider)                    |                    |        | P1                 | Occurs in open mulga areas on loamy soils between Meekatharra and Cue. There are records within 6 km of some of the survey areas; however, the survey areas with suitable habitat are 50 to 100 km from the known records.  | Moderate                 |
| Birds  |                    |        |                    |   |                          |
| <i>Plegadis falcinellus</i><br>(Glossy ibis)                     | IA                 | IA     |                    | Wetland habitats such as fresh water marshes at the edges of lakes, rivers and wet swamp areas. This species is occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons.   | Low                      |
| <i>Thinornis cucullatus</i><br>(Hooded plover (hooded dotterel)) |                    |        | P4                 | Inhabits sandy, ocean beaches, with highest densities on beaches with large amounts of washed up seaweed and open dunes. Also inhabits coastal and inland saltlakes.  | Low                      |
| <i>Charadrius veredus</i><br>(Oriental plover)                   | IA                 | IA     |                    | Breeding habitat includes arid grasslands, salt pans; non-breeding habitat includes grasslands, salt-fields, and coastal regions.   | Low                      |
| <i>Limosa lapponica</i><br>(Bar-tailed godwit)                   | IA                 | IA     |                    | Associated with water sources, which may include estuaries, beaches, near-coastal salt lakes, swamps, lakes, fresh/brackish wetlands, sewerage  | Moderate, may be         |



| Scientific name<br>(common name)   | Conservation codes |         |                    | Environmental context and habitat preference   | Likelihood of occurrence           |
|--|--------------------|---------|--------------------|--|------------------------------------|
|  | EPBC Act           | BC Act  | DBCA Priority List |  |                                    |
| <i>Tringa stagnatilis</i><br>(Marsh sandpiper)                               | IA                 | IA      |                    | ponds, bore overflows and irrigated areas.   | present during seasonal inundation |
| <i>Tringa nebularia</i><br>(Common greenshank)                               | IA                 | IA      |                    |  |                                    |
| <i>Tringa glareola</i><br>(Wood sandpiper)                                   | IA                 | IA      |                    |  |                                    |
| <i>Actitis hypoleucos</i> ( <i>Tringa hypoleucos</i> )<br>(Common sandpiper) | IA                 | IA      |                    |  |                                    |
| <i>Calidris ruficollis</i><br>(Red-necked stint)                             | IA                 | IA      |                    |  |                                    |
| <i>Calidris melanotos</i><br>(Pectoral sandpiper)                            | IA                 | IA      |                    |  |                                    |
| <i>Calidris acuminata</i><br>(Sharp-tailed sandpiper)                        | IA                 | IA      |                    |  |                                    |
| <i>Calidris ferruginea</i><br>(Curlew sandpiper)                             | CR & IA            | CR & IA |                    |  |                                    |
| <i>Apus pacificus</i><br>(Fork-tailed swift)                                 | IA                 | IA      |                    | Summer migrant to Australia and occurs in low to very high airspace, largely independent of terrestrial habitats and landforms.  | Low                                |
| <i>Falco peregrinus</i><br>(Peregrine falcon)                                |                    | OS      |                    | Cosmopolitan, will hunt in any habitat, soaring at height or from a perch; often near cliffs. Nests on rocky ledges in tall, vertical cliff faces and tall trees associated with drainage lines. | Moderate                           |



| Scientific name<br>(common name)                 | Conservation codes |        |                    | Environmental context and habitat preference   | Likelihood of occurrence |
|--|--------------------|--------|--------------------|--|--------------------------|
|  | EPBC Act           | BC Act | DBCA Priority List |  |                          |
| <i>Pezoporus occidentalis</i><br>(Night parrot)  | EN                 | CR     |                    | Arid and semi-arid areas characterised by dense, low vegetation. Based on accepted records, the habitat consists of <i>Triodia</i> grasslands in stony or sandy environments, of samphire and chenopod shrublands, on floodplains and claypans and margins of saltlakes, creeks and other water sources.<br><br>Roosting and nesting sites are in clumps of dense vegetation, primarily old and large spinifex clumps (often >50 years unburnt), especially hummocks that are ring-forming. These may be in expanses or isolated patches, but sometimes associated with other vegetation types, such as dense chenopod shrubs. | Low                      |
| <i>Polytelis alexandrae</i><br>(Princess parrot) | VU                 |        | P4                 | Inhabits sand dunes and sand flats in the arid zone. Occurs in savanna woodlands and shrublands that usually consist of scattered stands of <i>Eucalyptus</i> spp, <i>Casuarina/Allocasuarina</i> trees, an understorey of shrubs and a ground cover dominated by <i>Triodia</i> ssp.  | Low                      |
| <i>Leipoa ocellata</i><br>(Malleefowl)           | VU                 | VU     |                    | Largely confined to arid and semi-arid woodland that is dominated by mallee eucalypts on sandy soils with less than 430 mm of rainfall annually. There are records within 5 km of some of the survey areas; however, the survey areas with suitable habitat are over 40 km from the known records.   | Moderate                 |
| <i>Motacilla flava</i><br>(Yellow wagtail)       | IA                 | IA     |                    | Damp short-grass flats, edges of swamps, sewerage ponds, grazed or mowed grass and irrigated areas. Vagrant to Australia.  | Low                      |
| <i>Motacilla cinerea</i><br>(Grey wagtail)       | IA                 | IA     |                    | Mainly banks and rocks in fast flowing fresh water. Vagrant to Australia.  | Low                      |
| <i>Oxyura australis</i><br>(Blue-billed duck)    |                    |        | P4                 | Mainly the deeper freshwater lakes and swamps, occasionally salt lakes and estuaries freshened by floodwaters.   | Low                      |



| Scientific name<br>(common name)                                     | Conservation codes |        |                    | Environmental context and habitat preference  | Likelihood of occurrence |
|--|--------------------|--------|--------------------|---|--------------------------|
|  | EPBC Act           | BC Act | DBCA Priority List |   |                          |
| <i>Amytornis textilis textilis</i><br>(Western grasswren)            |                    |        | P4                 | Occurs mainly in spinifex with and without shrubs (bushy Acacias) on sandy or loamy plains. This subspecies is only known from two subpopulations in the Shark Bay region on the mid-western coast of Western Australia. The species was previously recorded from much of southern Western Australia, but since 1910 it has only been recorded in the Shark Bay region. The records within 20 km of the survey area were made in 1899 and 1903. | Low                      |
| <i>Gelochelidon nilotica</i><br>(Gull-billed tern)                   | IA                 | IA     |                    | Inhabits shallow wetlands, including coastal or inland lakes, swamps and lagoons, as well as sheltered bays and estuaries.  | Low                      |
| <i>Hydroprogne caspia</i> ( <i>Sterna caspia</i> )<br>(Caspian tern) | IA                 | IA     |                    | Mainly sheltered seas, estuaries and tidal creeks.  | Low                      |
| <i>Sterna leucoptera</i><br>(White-winged black tern)                | IA                 | IA     |                    | Vagrant from two unconfirmed sightings.   | Low                      |
| <b>Mammals</b>   |                    |        |                    |   |                          |
| <i>Dasyurus hallucatus</i><br>(Northern quoll)                       | EN                 | EN     |                    | Occurs in a variety of habitats, but commonly found in rocky escarpments and open lowland savanna forest. Also in areas associated with rocky areas, but also along watercourses. Habitat generally encompasses some form of rocky area for denning purposes with surrounding vegetated habitats used for foraging and dispersal.   | Low                      |
| <i>Macrotis lagotis</i><br>(Greater bilby)                           | VU                 | VU     |                    | The major habitats they now occupy in Western Australia include mulga scrub and hummock grasslands on sandplains or along drainage or salt lake systems. They require sandy or loamy soils in which to burrow.  | Low                      |
| <i>Sminthopsis longicaudata</i><br>(Long-tailed dunnart)             |                    |        | P4                 | Found in rocky scree and plateau areas, generally with little vegetation or in areas of spinifex hummock grassland, shrubs and open woodland.   | Moderate                 |



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## **Appendix H: Terrestrial Vertebrate Fauna Species Lists**



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Table H.1: Amphibian species list – results of database searches and Astron survey results.

| Scientific Name                | Common Name          | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|--------------------------------|----------------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|                                |                      |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| Pelodryadidae                  |                      |            |                    |        |      |           |           |      |                |
| <i>Litoria rubella</i>         | Little red tree frog |            |                    |        |      | X         |           |      |                |
| Limnodynastidae                |                      |            |                    |        |      |           |           |      |                |
| <i>Neobatrachus kunapalari</i> | Kunapalari frog      |            |                    |        |      | X         |           |      |                |
| <i>Neobatrachus sudellae</i>   | Desert Trilling Frog |            |                    |        |      | X         |           |      |                |
| <i>Neobatrachus sutor</i>      | Shoemaker frog       |            |                    |        |      | X         |           |      |                |
| <i>Neobatrachus wilsmorei</i>  | Plonking frog        |            |                    |        |      | X         |           |      |                |
|                                |                      |            |                    |        |      |           |           |      |                |



Table H.2: Reptile species list – results of database searches and Astron survey results.

| Scientific Name                    | Common Name                | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|------------------------------------|----------------------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|                                    |                            |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| Cheluidae                          |                            |            |                    |        |      |           |           |      |                |
| <i>Chelodina steindachneri</i>     | Flat-shelled turtle        |            |                    |        |      | X         |           |      |                |
| Carphodactylidae                   |                            |            |                    |        |      |           |           |      |                |
| <i>Nephrurus wheeleri wheeleri</i> |                            |            |                    |        |      | X         |           |      |                |
| Diplodactylidae                    |                            |            |                    |        |      |           |           |      |                |
| <i>Diplodactylus klugei</i>        |                            |            |                    |        |      | X         |           |      |                |
| <i>Diplodactylus pulcher</i>       |                            |            |                    |        |      | X         |           |      |                |
| <i>Lucasium squarrosum</i>         |                            |            |                    |        |      | X         |           |      |                |
| <i>Rhynchoedura ornata</i>         | Western beaked gecko       |            |                    |        |      | X         |           |      |                |
| <i>Strophurus strophurus</i>       |                            |            |                    |        |      | X         |           |      |                |
| <i>Strophurus wellingtonae</i>     |                            |            |                    |        |      | X         |           |      |                |
| Gekkonidae                         |                            |            |                    |        |      |           |           |      |                |
| <i>Heteronotia binoei</i>          | Bynoe's gecko              |            |                    |        |      | X         |           |      |                |
| <i>Gehyra punctata</i>             |                            |            |                    |        |      | X         |           |      |                |
| <i>Gehyra variegata</i>            |                            |            |                    |        |      | X         |           |      |                |
| Pygopodidae                        |                            |            |                    |        |      |           |           |      |                |
| <i>Lialis burtonis</i>             |                            |            |                    |        |      | X         |           |      |                |
| <i>Pygopus nigriceps</i>           |                            |            |                    |        |      | X         |           |      |                |
| Agamidae                           |                            |            |                    |        |      |           |           |      |                |
| <i>Ctenophorus caudicinctus</i>    | Western ring-tailed dragon |            |                    |        |      | X         |           |      |                |
| <i>Ctenophorus isolepis</i>        | Central military dragon    |            |                    |        |      |           |           |      | X              |
| <i>Ctenophorus nuchalis</i>        | Central netted dragon      |            |                    |        |      | X         |           |      |                |
| <i>Ctenophorus ornatus</i>         | Ornate crevice dragon      |            |                    |        |      | X         |           |      |                |
| <i>Ctenophorus reticulatus</i>     | Western netted dragon      |            |                    |        |      | X         |           |      |                |
| <i>Ctenophorus salinarum</i>       | Salt pan dragon            |            |                    |        |      | X         |           |      |                |
| <i>Ctenophorus scutulatus</i>      |                            |            |                    |        |      | X         |           |      |                |
| <i>Moloch horridus</i>             | Thorny devil               |            |                    |        |      | X         |           |      |                |
| <i>Pogona minor</i>                |                            |            |                    |        |      | X         |           |      |                |



| Scientific Name                         | Common Name                       | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|---|-----------------------------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|   |                                   |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| <i>Pogona minor minima</i>              | Abrolhos dwarf bearded dragon     |            |                    | VU     |      | X         |           |      |                |
| <i>Tympanocryptis cephalus</i>          | Pebble dragon                     |            |                    |        |      | X         |           |      |                |
| Scincidae                               |                                   |            |                    |        |      |           |           |      |                |
| <i>Ctenotus helenae</i>                 |                                   |            |                    |        |      | X         |           |      |                |
| <i>Ctenotus leonhardii</i>              |                                   |            |                    |        |      | X         |           |      |                |
| <i>Ctenotus schomburgkii</i>            |                                   |            |                    |        |      | X         |           |      |                |
| <i>Ctenotus severus</i>                 |                                   |            |                    |        |      | X         |           |      |                |
| <i>Ctenotus uber</i>                    |                                   |            |                    |        |      | X         |           |      |                |
| <i>Ctenotus uber uber</i>               |                                   |            |                    |        |      | X         |           |      |                |
| <i>Egernia depressa</i>                 | Southern pygmy spiny-tailed skink |            |                    |        |      | X         |           |      |                |
| <i>Egernia stokesii badia</i>           | Western spiny-tailed skink        |            | EN                 | VU     |      |           | X         |      |                |
| <i>Eremiascincus richardsonii</i>       | Broad-banded sand swimmer         |            |                    |        |      | X         |           |      |                |
| <i>Lerista eupoda</i>                   |                                   |            |                    |        | P1   | X         |           | X    |                |
| <i>Lerista gerrardii</i>                |                                   |            |                    |        |      | X         |           |      |                |
| <i>Lerista macropisthopus fusciceps</i> |                                   |            |                    |        |      | X         |           |      |                |
| <i>Lerista macropisthopus galea</i>     |                                   |            |                    |        |      | X         |           |      |                |
| <i>Lerista muelleri</i>                 |                                   |            |                    |        |      | X         |           |      |                |
| <i>Lerista nicholli</i>                 |                                   |            |                    |        |      | X         |           |      |                |
| <i>Lerista timida</i>                   |                                   |            |                    |        |      | X         |           |      |                |
| <i>Liopholis striata</i>                | Night skink                       |            |                    |        |      | X         |           |      |                |
| <i>Menetia greyii</i>                   |                                   |            |                    |        |      | X         |           |      |                |
| <i>Menetia maini</i>                    |                                   |            |                    |        |      | X         |           |      |                |
| Varanidae                               |                                   |            |                    |        |      |           |           |      |                |
| <i>Varanus caudolineatus</i>            |                                   |            |                    |        |      | X         |           |      |                |
| <i>Varanus gouldii</i>                  | Gould's monitor                   |            |                    |        |      |           |           |      | X              |
| <i>Varanus panoptes</i>                 |                                   |            |                    |        |      | X         |           |      |                |
| <i>Varanus panoptes rubidus</i>         |                                   |            |                    |        |      | X         |           |      |                |
| Typhlopidae                             |                                   |            |                    |        |      |           |           |      |                |



| Scientific Name                  | Common Name         | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|----------------------------------|---------------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|                                  |                     |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| Pythonidae                       |                     |            |                    |        |      |           |           |      |                |
| <i>Antaresia perthensis</i>      | Pygmy python        |            |                    |        |      | X         |           |      |                |
| Elapidae                         |                     |            |                    |        |      |           |           |      |                |
| <i>Brachyuropsis approximans</i> |                     |            |                    |        |      | X         |           |      |                |
| <i>Parasuta monachus</i>         |                     |            |                    |        |      | X         |           |      |                |
| <i>Pseudonaja mengdeni</i>       | Western brown snake |            |                    |        |      | X         |           |      |                |
| <i>Pseudonaja modesta</i>        | Ringed brown snake  |            |                    |        |      | X         |           |      |                |
| <i>Suta fasciata</i>             | Rosen's snake       |            |                    |        |      | X         |           |      |                |
|                                  |                     |            |                    |        |      |           |           |      |                |



Table H.3: Bird species list – results of database searches and Astron survey results.

| Scientific Name                    | Common Name                                  | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Birddata | Current Survey |
|------------------------------------|--|------------|--------------------|--------|------|-----------|-----------|------|----------|----------------|
|                                    |  |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| Dromaiidae                         |  |            |                    |        |      |           |           |      |          |                |
| <i>Dromaius novaehollandiae</i>    | Emu  |            |                    |        |      | X         |           |      | X        | X              |
| Anatidae                           |  |            |                    |        |      |           |           |      |          |                |
| <i>Cygnus atratus</i>              | Black swan                                   |            |                    |        |      | X         |           |      | X        |                |
| <i>Stictonetta naevosa</i>         | Freckled duck                                |            |                    |        |      | X         |           |      | X        |                |
| <i>Tadorna tadornoides</i>         | Australian shelduck (mountain duck)          |            |                    |        |      | X         |           |      | X        |                |
| <i>Malacorhynchus membranaceus</i> | Pink-eared duck                              |            |                    |        |      | X         |           |      | X        |                |
| <i>Chenonetta jubata</i>           | Australian wood duck (wood duck, maned duck) |            |                    |        |      | X         |           |      | X        |                |
| <i>Anas superciliosa</i>           | Pacific black duck                           |            |                    |        |      | X         |           |      | X        |                |
| <i>Anas rhynchotis</i>             | Australasian shoveler                        |            |                    |        |      | X         |           |      | X        |                |
| <i>Anas gracilis</i>               | Grey teal                                    |            |                    |        |      |           |           |      | X        |                |
| <i>Anas castanea</i>               | Chestnut teal                                |            |                    |        |      | X         |           |      | X        |                |
| <i>Aythya australis</i>            | Hardhead                                     |            |                    |        |      | X         |           |      | X        |                |
| <i>Oxyura australis</i>            | Blue-billed duck                             |            |                    |        | P4   | X         |           | X    | X        |                |
| <i>Biziura lobata</i>              | Musk duck                                    |            |                    |        |      | X         |           |      | X        |                |
| Megapodiidae                       |  |            |                    |        |      |           |           |      |          |                |
| <i>Leipoa ocellata</i>             | Malleefowl                                   |            | VU                 | VU     |      | X         | X         | X    | X        |                |
| Phasianidae                        |  |            |                    |        |      |           |           |      |          |                |
| <i>Coturnix pectoralis</i>         | Stubble quail                                |            |                    |        |      | X         |           |      | X        |                |
| <i>Coturnix ypsilophora</i>        | Brown quail                                  |            |                    |        |      | X         |           |      |          |                |
| Podicipedidae                      |  |            |                    |        |      |           |           |      |          |                |
| <i>Tachybaptus novaehollandiae</i> | Australasian grebe (black-throated grebe)    |            |                    |        |      | X         |           |      | X        |                |
| <i>Poliocephalus poliocephalus</i> | Hoary-headed grebe                           |            |                    |        |      | X         |           |      | X        |                |
| <i>Podiceps cristatus</i>          | Great crested grebe                          |            |                    |        |      | X         |           |      | X        |                |



| Scientific Name                              | Common Name             | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Birddata | Current Survey |
|--|-------------------------|------------|--------------------|--------|------|-----------|-----------|------|----------|----------------|
|  |                         |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| Threskiornithidae                            |                         |            |                    |        |      |           |           |      |          |                |
| <i>Threskiornis spinicollis</i>              | Straw-necked Ibis       |            |                    |        |      | X         |           |      |          |                |
| <i>Plegadis falcinellus</i>                  | Glossy ibis             |            | IA                 | IA     |      | X         |           | X    | X        |                |
| <i>Platalea regia</i>                        | Royal spoonbill         |            |                    |        |      | X         |           |      |          |                |
| <i>Platalea flavipes</i>                     | Yellow-billed spoonbill |            |                    |        |      | X         |           |      |          |                |
| Ardeidae                                     |                         |            |                    |        |      |           |           |      |          |                |
| <i>Ardea pacifica</i>                        | White-necked heron      |            |                    |        |      | X         |           |      |          |                |
| <i>Ardea modesta</i>                         | Eastern great egret     | -          |                    |        |      | X         |           | X    |          |                |
| Pelecanidae                                  |                         |            |                    |        |      |           |           |      |          |                |
| <i>Pelecanus conspicillatus</i>              | Australian pelican      |            |                    |        |      | X         |           |      |          |                |
| Phalacrocoracidae                            |                         |            |                    |        |      |           |           |      |          |                |
| <i>Phalacrocorax melanoleucos</i>            | Little pied cormorant   |            |                    |        |      |           |           |      | X        |                |
| <i>Phalacrocorax sulcirostris</i>            | Little black cormorant  |            |                    |        |      | X         |           |      | X        |                |
| <i>Phalacrocorax carbo</i>                   | Great cormorant         |            |                    |        |      | X         |           |      | X        |                |
| Anhingidae                                   |                         |            |                    |        |      |           |           |      |          |                |
| <i>Anhinga novaehollandiae</i>               | Australasian darter     |            |                    |        |      | X         |           |      | X        |                |
| Accipitridae                                 |                         |            |                    |        |      |           |           |      |          |                |
| <i>Elanus caeruleus</i>                      | Black-shouldered kite   |            |                    |        |      |           |           |      | X        |                |
| <i>Hamirostra isura</i>                      | Square-tailed kite      |            |                    |        |      | X         |           |      | X        |                |
| <i>Hamirostra melanosternon</i>              | Black-breasted buzzard  |            |                    |        |      | X         |           |      | X        |                |
| <i>Hieraaetus morphnoides</i>                | Little eagle            |            |                    |        |      | X         |           |      | X        |                |
| <i>Aquila audax</i>                          | Wedge-tailed eagle      |            |                    |        |      | X         |           |      | X        | X              |
| <i>Accipiter fasciatus</i>                   | Brown goshawk           |            |                    |        |      | X         |           |      | X        |                |
| <i>Accipiter cirrocephalus</i>               | Collared sparrowhawk    |            |                    |        |      | X         |           |      | X        |                |
| <i>Accipiter cirrocephalus cirrocephalus</i> |                         |            |                    |        |      | X         |           |      |          |                |
| <i>Circus approximans</i>                    | Swamp harrier           |            |                    |        |      | X         |           |      | X        |                |



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|  |                                 |            | EPBC Act           | BC Act | DBCA |           |           |      |         |                |
| <i>Circus assimilis</i>                    | Spotted harrier                 |            |                    |        |      | X         |           |      | X       |                |
| <i>Milvus migrans</i>                      | Black kite                      |            |                    |        |      | X         |           |      | X       |                |
| <i>Haliastur sphenurus</i>                 | Whistling kite                  |            |                    |        |      | X         |           |      | X       | X              |
| Otididae                                   |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Ardeotis australis</i>                  | Australian bustard              |            |                    |        |      |           |           |      | X       |                |
| Rallidae                                   |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Porzana fluminea</i>                    | Australian spotted crane        |            |                    |        |      | X         |           |      | X       |                |
| <i>Tribonyx ventralis</i>                  | Black-tailed native-hen         |            |                    |        |      | X         |           |      | X       |                |
| <i>Fulica atra</i>                         | Eurasian coot                   |            |                    |        |      | X         |           |      | X       |                |
| Turnicidae                                 |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Turnix velox</i>                        | Little button-quail             |            |                    |        |      | X         |           |      | X       |                |
| Burhinidae                                 |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Burhinus grallarius</i>                 | Bush stone-curlew               |            |                    |        |      | X         |           |      | X       |                |
| Recurvirostridae                           |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Himantopus himantopus leucocephalus</i> |                                 |            |                    |        |      | X         |           |      | X       |                |
| <i>Cladorhynchus leucocephalus</i>         | Banded stilt                    |            |                    |        |      | X         |           |      | X       |                |
| <i>Recurvirostra novaehollandiae</i>       | Red-necked avocet               |            |                    |        |      | X         |           |      | X       |                |
| Charadriidae                               |                                 |            |                    |        |      |           |           |      |         |                |
| <i>Vanellus tricolor</i>                   | Banded lapwing                  |            |                    |        |      | X         |           |      | X       |                |
| <i>Erythronyx cinctus</i>                  | Red-kneed dotterel              |            |                    |        |      | X         |           |      | X       |                |
| <i>Peltohyas australis</i>                 | Inland dotterel                 |            |                    |        |      | X         |           |      |         |                |
| <i>Charadrius ruficapillus</i>             | Red-capped plover               |            |                    |        |      | X         |           |      | X       |                |
| <i>Charadrius veredus</i>                  | Oriental plover                 |            | IA                 | IA     |      |           | X         |      |         |                |
| <i>Thinornis cucullatus</i>                | Hooded plover (hooded dotterel) |            |                    |        | P4   | X         | X         |      | X       |                |
| <i>Euseiornis melanops</i>                 | Black-fronted dotterel          |            |                    |        |      | X         |           |      | X       |                |



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| Scolopacidae   |                             |            |                    |         |      |           |           |      |         |                |
| <i>Limosa lapponica</i>                                | Bar-tailed godwit           |            | IA                 | IA      |      |           |           |      | X       |                |
| <i>Tringa stagnatilis</i>                              | Marsh sandpiper             |            | IA                 | IA      |      | X         |           | X    | X       |                |
| <i>Tringa nebularia</i>                                | Common greenshank           |            | IA                 | IA      |      | X         | X         | X    | X       |                |
| <i>Tringa guttifer</i>                                 | Nordmann's greenshank       | V          |                    |         |      |           |           |      |         |                |
| <i>Tringa glareola</i>                                 | Wood sandpiper              |            | IA                 | IA      |      | X         |           | X    | X       |                |
| <i>Actitis hypoleucos</i> ( <i>Tringa hypoleucos</i> ) | Common sandpiper            |            | IA                 | IA      |      | X         | X         |      | X       |                |
| <i>Calidris ruficollis</i>                             | Red-necked stint            |            | IA                 | IA      |      | X         |           | X    | X       |                |
| <i>Calidris melanotos</i>                              | Pectoral sandpiper          |            | IA                 | IA      |      |           | X         |      | X       |                |
| <i>Calidris acuminata</i>                              | Sharp-tailed sandpiper      |            | IA                 | IA      |      | X         | X         | X    | X       |                |
| <i>Calidris ferruginea</i>                             | Curlew sandpiper            |            | CR & IA            | CR & IA |      | X         | X         | X    | X       |                |
| Laridae  |                             |            |                    |         |      |           |           |      |         |                |
| <i>Gelochelidon nilotica</i>                           | Gull-billed tern            |            | IA                 | IA      |      | X         |           |      |         |                |
| <i>Hydroprogne caspia</i> ( <i>Sterna caspia</i> )     | Caspian tern                |            | IA                 | IA      |      |           |           |      | X       |                |
| <i>Sterna leucoptera</i>                               | White-winged black tern     |            | IA                 | IA      |      | X         |           | X    |         |                |
| Columbidae   |                             |            |                    |         |      |           |           |      |         |                |
| <i>Columba livia</i>                                   | Domestic pigeon (rock dove) | *          |                    |         |      | X         |           |      | X       |                |
| <i>Spilopelia senegalensis</i>                         | Laughing turtle-dove        | *          |                    |         |      | X         | X         |      |         |                |
| <i>Phaps chalcoptera</i>                               | Common bronzewing           |            |                    |         |      | X         |           |      | X       |                |
| <i>Ocyphaps lophotes</i>                               | Crested pigeon              |            |                    |         |      | X         |           |      | X       | X              |
| <i>Geophaps plumifera</i>                              | Spinifex pigeon             |            |                    |         |      | X         |           |      | X       |                |
| <i>Geopelia cuneata</i>                                | Diamond dove                |            |                    |         |      | X         |           |      | X       |                |
| <i>Geopelia striata</i>                                | Zebra dove                  |            |                    |         |      | X         |           |      |         |                |
| Cuculidae  |                             |            |                    |         |      |           |           |      |         |                |
| <i>Chrysococcyx basalis</i>                            | Horsfield's bronze cuckoo   |            |                    |         |      |           |           |      | X       |                |



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|   |                                      |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| <i>Chrysococcyx osculans</i>            | Black-eared cuckoo                   |            |                    |        |      |           | X         |      | X        |                |
| <i>Cacomantis pallidus</i>              | Pallid cuckoo                        |            |                    |        |      | X         |           |      | X        |                |
| Tytonidae                               |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Tyto alba</i>                        | Barn owl                             |            |                    |        |      |           |           |      | X        |                |
| Strigidae                               |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Ninox boobook boobook</i>            | Southern boobook                     |            |                    |        |      |           |           |      | X        |                |
| Podargidae                              |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Podargus strigoides</i>              | Tawny frogmouth                      |            |                    |        |      | X         |           |      | X        |                |
| <i>Podargus strigoides brachypterus</i> |                                      |            |                    |        |      | X         |           |      |          |                |
| Caprimulgidae                           |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Eurostopodus argus</i>               | Spotted nightjar                     |            |                    |        |      | X         |           |      | X        |                |
| Aegothelidae                            |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Aegotheles cristatus</i>             | Australian owlet-nightjar            |            |                    |        |      | X         |           |      | X        |                |
| <i>Aegotheles cristatus cristatus</i>   |                                      |            |                    |        |      | X         |           |      |          |                |
| Apodidae                                |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Apus pacificus</i>                   | Fork-tailed swift                    |            | IA                 | IA     |      |           | X         |      |          |                |
| Alcedinidae                             |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Todiramphus sanctus</i>              | Sacred kingfisher                    |            |                    |        |      | X         |           |      | X        |                |
| <i>Todiramphus pyrrhopygius</i>         | Red-backed kingfisher                |            |                    |        |      | X         |           |      | X        |                |
| Meropidae                               |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Merops ornatus</i>                   | Rainbow bee-eater                    |            |                    |        |      | X         | X         | X    | X        |                |
| Falconidae                              |                                      |            |                    |        |      |           |           |      |          |                |
| <i>Falco cenchroides</i>                | Australian kestrel (nankeen kestrel) |            |                    |        |      | X         |           |      | X        | X              |
| <i>Falco cenchroides cenchroides</i>    |                                      |            |                    |        |      | X         |           |      |          |                |
| <i>Falco longipennis</i>                | Australian hobby                     |            |                    |        |      | X         |           |      | X        |                |



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|   |                           |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| <i>Falco berigora</i>                     | Brown falcon              |            |                    |        |      | X         |           |      | X        |                |
| <i>Falco berigora berigora</i>            |                           |            |                    |        |      | X         |           |      |          |                |
| <i>Falco subniger</i>                     | Black falcon              |            |                    |        |      | X         |           |      | X        |                |
| <i>Falco peregrinus</i>                   | Peregrine falcon          |            |                    | OS     |      | X         |           | X    | X        |                |
| Cacatuidae                                |                           |            |                    |        |      |           |           |      |          |                |
| <i>Calyptrorhynchus banksii</i>           | Red-tailed black cockatoo |            |                    |        |      | X         |           |      | X        |                |
| <i>Cacatua roseicapilla</i>               | Galah                     |            |                    |        |      |           |           |      | X        | X              |
| <i>Cacatua sanguinea</i>                  | Little corella            |            |                    |        |      | X         |           |      | X        |                |
| <i>Nymphicus hollandicus</i>              | Cockatiel                 |            |                    |        |      | X         |           |      | X        |                |
| Psittacidae                               |                           |            |                    |        |      |           |           |      |          |                |
| <i>Platyercus zonarius</i>                | Australian ringneck       |            |                    |        |      |           |           |      | X        |                |
| <i>Platyercus varius</i>                  | Mulga parrot              |            |                    |        |      | X         |           |      | X        | X              |
| <i>Neophema bourkii</i>                   | Bourke's parrot           |            |                    |        |      | X         |           |      | X        |                |
| <i>Neophema elegans</i>                   | Elegant parrot            |            |                    |        |      |           |           |      | X        |                |
| <i>Melopsittacus undulatus</i>            | Budgerigar                |            |                    |        |      | X         |           |      | X        |                |
| <i>Pezoporus occidentalis</i>             | Night parrot              |            | EN                 | CR     |      |           | X         |      |          |                |
| <i>Polytelis alexandrae</i>               | Princess parrot           |            | VU                 |        | P4   |           | X         |      |          |                |
| Ptilonorhynchidae                         |                           |            |                    |        |      |           |           |      |          |                |
| <i>Ptilonorhynchus maculatus guttatus</i> | Western bowerbird         |            |                    |        |      |           |           |      | X        |                |
| Climacteridae                             |                           |            |                    |        |      |           |           |      |          |                |
| <i>Climacteris affinis</i>                | White-browed treecreeper  |            |                    |        |      | X         |           |      | X        |                |
| Maluridae                                 |                           |            |                    |        |      |           |           |      |          |                |
| <i>Malurus lamberti</i>                   | Variegated fairy-wren     |            |                    |        |      | X         |           |      | X        |                |
| <i>Malurus lamberti assimilis</i>         |                           |            |                    |        |      | X         |           |      |          |                |
| <i>Malurus splendens</i>                  | Splendid fairy-wren       |            |                    |        |      | X         |           |      | X        |                |



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|                                    |                          |            | EPBC Act           | BC Act | DBCA |           |           |      |         |                |
| <i>Malurus leucopterus</i>         | White-winged fairy-wren  |            |                    |        |      | X         |           |      | X       | X              |
| <i>Amytornis textilis textilis</i> | Western grasswren        |            |                    |        | P4   | X         |           | X    |         |                |
| Meliphagidae                       |                          |            |                    |        |      |           |           |      |         |                |
| <i>Sugomel niger</i>               | Black honeyeater         |            |                    |        |      |           |           |      | X       |                |
| <i>Certhionyx variegatus</i>       | Pied honeyeater          |            |                    |        |      | X         |           |      | X       |                |
| <i>Lichmera indistincta</i>        | Brown honeyeater         |            |                    |        |      | X         |           |      | X       | X              |
| <i>Epthianura tricolor</i>         | Crimson chat             |            |                    |        |      | X         |           |      | X       | X              |
| <i>Epthianura aurifrons</i>        | Orange chat              |            |                    |        |      | X         |           |      | X       |                |
| <i>Epthianura albifrons</i>        | White-fronted chat       |            |                    |        |      | X         |           |      | X       |                |
| <i>Lacustroica whitei</i>          | Grey honeyeater          |            |                    |        |      | X         |           |      | X       |                |
| <i>Acanthagenys rufogularis</i>    | Spiny-cheeked honeyeater |            |                    |        |      | X         |           |      | X       | X              |
| <i>Manorina flavigula</i>          | Yellow-throated miner    |            |                    |        |      | X         |           |      | X       | X              |
| <i>Purnella albifrons</i>          | White-fronted honeyeater |            |                    |        |      | X         |           |      | X       |                |
| <i>Gavicalis virescens</i>         | Singing honeyeater       |            |                    |        |      | X         |           |      | X       | X              |
| <i>Ptilotula keartlandi</i>        | Grey-headed honeyeater   |            |                    |        |      |           |           |      | X       |                |
| <i>Ptilotula plumula</i>           | Grey-fronted honeyeater  |            |                    |        |      |           |           |      | X       |                |
| <i>Ptilotula ornata</i>            | Yellow-plumed honeyeater |            |                    |        |      |           |           |      | X       | X              |
| <i>Ptilotula penicillata</i>       | White-plumed honeyeater  |            |                    |        |      |           |           |      | X       |                |
| Pardalotidae                       |                          |            |                    |        |      |           |           |      |         |                |
| <i>Pardalotus rubricatus</i>       | Red-browed pardalote     |            |                    |        |      |           |           |      | X       |                |
| <i>Pardalotus striatus</i>         | Striated pardalote       |            |                    |        |      | X         |           |      | X       |                |
| Acanthizidae                       |                          |            |                    |        |      |           |           |      |         |                |
| <i>Calamanthus campestris</i>      | Rufous fieldwren         |            |                    |        |      | X         |           |      | X       |                |
| <i>Pyrrholaemus brunneus</i>       | Redthroat                |            |                    |        |      | X         |           |      | X       |                |
| <i>Smicrornis brevirostris</i>     | Weebill                  |            |                    |        |      | X         |           |      | X       |                |



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|  |                                       |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| <i>Gerygone fusca</i>                          | Western gerygone                      |            |                    |        |      | X         |           |      | X        |                |
| <i>Gerygone fusca fusca</i>                    |                                       |            |                    |        |      | X         |           |      |          |                |
| <i>Acanthiza apicalis</i>                      | Broad-tailed thornbill                |            |                    |        |      | X         |           |      | X        |                |
| <i>Acanthiza chrysorrhoa</i>                   | Yellow-rumped thornbill               |            |                    |        |      | X         |           |      | X        |                |
| <i>Acanthiza inornata</i>                      | Western Thornbill                     |            |                    |        |      |           |           |      |          | X              |
| <i>Acanthiza iredalei</i>                      | Samphire thornbill                    |            |                    |        |      | X         |           |      | X        |                |
| <i>Acanthiza robustirostris</i>                | Slaty-backed thornbill                |            |                    |        |      | X         |           |      | X        | X              |
| <i>Acanthiza uropygialis</i>                   | Chestnut-rumped thornbill             |            |                    |        |      | X         |           |      | X        | X              |
| <i>Aphelocephala leucopsis</i>                 | Southern whiteface                    |            |                    |        |      | X         |           |      | X        | X              |
| <i>Aphelocephala leucopsis castaneiventris</i> |                                       |            |                    |        |      | X         |           |      |          |                |
| <i>Aphelocephala nigricincta</i>               | Banded whiteface                      |            |                    |        |      | X         |           |      | X        |                |
| Pomatostomidae                                 |                                       |            |                    |        |      |           |           |      |          |                |
| <i>Pomatostomus temporalis</i>                 | Grey-crowned babbler                  |            |                    |        |      | X         |           |      | X        | X              |
| <i>Pomatostomus temporalis rubeculus</i>       |                                       |            |                    |        |      | X         |           |      |          |                |
| <i>Pomatostomus superciliosus</i>              | White-browed babbler                  |            |                    |        |      | X         |           |      | X        | X              |
| Psophodidae                                    |                                       |            |                    |        |      |           |           |      |          |                |
| <i>Psophodes occidentalis</i>                  | Western wedgebill (chiming wedgebill) |            |                    |        |      | X         |           |      | X        |                |
| <i>Cinclosoma castaneothorax</i>               | Chestnut-breasted quail-thrush        |            |                    |        |      | X         |           |      |          |                |
| <i>Cinclosoma marginatum</i>                   | Western quail-thrush                  |            |                    |        |      | X         |           |      |          | X              |
| Artamidae                                      |                                       |            |                    |        |      |           |           |      |          |                |
| <i>Artamus personatus</i>                      | Masked woodswallow                    |            |                    |        |      | X         |           |      | X        | X              |
| <i>Artamus superciliosus</i>                   | White-browed woodswallow              |            |                    |        |      | X         |           |      |          |                |
| <i>Artamus cinereus</i>                        | Black-faced woodswallow               |            |                    |        |      | X         |           |      | X        |                |



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| <i>Artamus cyanopterus</i>                  | Dusky woodswallow         |            |                    |        |      | X         |           |      | X        |                |
| <i>Artamus minor</i>                        | Little woodswallow        |            |                    |        |      | X         |           |      | X        |                |
| <b>Cracticidae</b>                          |                           |            |                    |        |      |           |           |      |          |                |
| <i>Cracticus torquatus</i>                  | Grey butcherbird          |            |                    |        |      | X         |           |      | X        |                |
| <i>Cracticus nigrogularis</i>               | Pied butcherbird          |            |                    |        |      | X         |           |      | X        | X              |
| <i>Cracticus tibicen</i>                    | Australian magpie         |            |                    |        |      | X         |           |      |          |                |
| <i>Strepera versicolor</i>                  | Grey currawong            |            |                    |        |      |           |           |      | X        |                |
| <b>Campephagidae</b>                        |                           |            |                    |        |      |           |           |      |          |                |
| <i>Coracina maxima</i>                      | Ground cuckoo-shrike      |            |                    |        |      | X         |           |      | X        |                |
| <i>Coracina novaehollandiae</i>             | Black-faced cuckoo-shrike |            |                    |        |      | X         |           |      | X        | X              |
| <i>Lalage tricolor</i>                      | White-winged triller      |            |                    |        |      |           |           |      | X        |                |
| <b>Neosittidae</b>                          |                           |            |                    |        |      |           |           |      |          |                |
| <i>Daphoenositta chrysoptera</i>            | Varied sittella           |            |                    |        |      | X         |           |      | X        |                |
| <i>Daphoenositta chrysoptera pileata</i>    | Varied sittella           |            |                    |        |      | X         |           |      |          |                |
| <b>Oreoicidae</b>                           |                           |            |                    |        |      |           |           |      |          |                |
| <i>Oreoica gutturalis</i>                   | Crested bellbird          |            |                    |        |      | X         |           |      | X        | X              |
| <b>Pachycephalidae</b>                      |                           |            |                    |        |      |           |           |      |          |                |
| <i>Pachycephala inornata</i>                | Gilbert's whistler        |            |                    |        |      | X         |           |      | X        |                |
| <i>Pachycephala rufiventris</i>             | Rufous whistler           |            |                    |        |      | X         |           |      | X        | X              |
| <i>Pachycephala rufiventris rufiventris</i> |                           |            |                    |        |      | X         |           |      |          |                |
| <i>Colluricincla harmonica</i>              | Grey shrike-thrush        |            |                    |        |      | X         |           |      | X        | X              |
| <i>Colluricincla harmonica rufiventris</i>  |                           |            |                    |        |      | X         |           |      |          |                |
| <b>Rhipiduridae</b>                         |                           |            |                    |        |      |           |           |      |          |                |
| <i>Rhipidura leucophrys</i>                 | Willie wagtail            |            |                    |        |      | X         |           |      | X        | X              |



| Scientific Name                        | Common Name                          | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Birdata | Current Survey |
|--|--------------------------------------|------------|--------------------|--------|------|-----------|-----------|------|---------|----------------|
|  |                                      |            | EPBC Act           | BC Act | DBCA |           |           |      |         |                |
| <i>Rhipidura leucophrys leucophrys</i> |                                      |            |                    |        |      | X         |           |      |         |                |
| <i>Rhipidura albiscapa</i>             | Grey fantail                         |            |                    |        |      | X         |           |      |         |                |
| Monarchidae                            |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Grallina cyanoleuca</i>             | Magpie-lark                          |            |                    |        |      | X         |           |      | X       |                |
| Corvidae                               |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Corvus orru</i>                     | Torresian crow                       |            |                    |        |      | X         |           |      | X       | X              |
| <i>Corvus bennetti</i>                 | Little crow                          |            |                    |        |      | X         |           |      | X       |                |
| <i>Corvus coronoides</i>               | Australian raven                     |            |                    |        |      | X         |           |      | X       |                |
| Petroicidae                            |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Melanodryas cucullata</i>           | Hooded robin                         |            |                    |        |      | X         |           |      | X       | X              |
| <i>Microeca fascians</i>               | Jacky winter                         |            |                    |        |      | X         |           |      | X       | X              |
| <i>Petroica goodenovii</i>             | Red-capped robin                     |            |                    |        |      | X         |           |      | X       | X              |
| Hirundinidae                           |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Cheramoeca leucosterna</i>          | White-backed swallow                 |            |                    |        |      | X         |           |      | X       |                |
| <i>Hirundo neoxena</i>                 | Welcome swallow                      |            |                    |        |      | X         |           |      | X       |                |
| <i>Petrochelidon ariel</i>             | Fairy martin                         |            |                    |        |      | X         |           |      | X       |                |
| <i>Petrochelidon nigricans</i>         | Tree martin                          |            |                    |        |      | X         |           |      | X       |                |
| Zosteropidae                           |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Zosterops lateralis</i>             | Grey-breasted white-eye (silveryeye) |            |                    |        |      | X         |           |      | X       |                |
| Dicaeidae                              |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Dicaeum hirundinaceum</i>           | Mistletoebird                        |            |                    |        |      | X         |           |      | X       |                |
| Estrildidae                            |                                      |            |                    |        |      |           |           |      |         |                |
| <i>Taeniopygia guttata</i>             | Zebra finch                          |            |                    |        |      | X         |           |      | X       | X              |
| <i>Taeniopygia guttata castanotis</i>  |                                      |            |                    |        |      | X         |           |      |         |                |
| Motacillidae                           |                                      |            |                    |        |      |           |           |      |         |                |



| Scientific Name                   | Common Name      | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Birddata | Current Survey |
|-----------------------------------|------------------|------------|--------------------|--------|------|-----------|-----------|------|----------|----------------|
|                                   |                  |            | EPBC Act           | BC Act | DBCA |           |           |      |          |                |
| <i>Motacilla flava</i>            | Yellow wagtail   |            | IA                 | IA     |      |           | X         |      |          |                |
| <i>Motacilla cinerea</i>          | Grey wagtail     |            | IA                 | IA     |      |           | X         |      |          |                |
| <i>Anthus australis</i>           | Australian pipit |            |                    |        |      | X         |           |      |          |                |
| <i>Anthus australis australis</i> |                  |            |                    |        |      | X         |           |      |          |                |
|                                   |                  |            |                    |        |      |           |           |      |          |                |



Table H.4: Mammal species list – results of database searches and Astron survey results.

| Scientific Name                         | Common name                | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|---|----------------------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|   |                            |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| Tachyglossidae                          |                            |            |                    |        |      |           |           |      |                |
| <i>Tachyglossus aculeatus acanthion</i> | Short-beaked echidna       |            |                    |        |      | X         |           |      |                |
| Dasyuridae                              |                            |            |                    |        |      |           |           |      |                |
| <i>Antechinomys laniger</i>             | Kultarr                    |            |                    |        |      | X         |           |      |                |
| <i>Dasyurus geoffroii fortis</i>        | Western quoll, chuditch    |            | VU                 | VU     |      |           | X         |      |                |
| <i>Pseudantechinus woolleyae</i>        | Woolley's pseudantechinus  |            |                    |        |      | X         |           |      |                |
| <i>Sminthopsis crassicaudata</i>        | Fat-tailed dunnart         |            |                    |        |      | X         |           |      |                |
| <i>Sminthopsis dolichura</i>            | Little long-tailed dunnart |            |                    |        |      | X         |           |      |                |
| <i>Sminthopsis longicaudata</i>         | Long-tailed dunnart        |            |                    |        | P4   |           |           | X    |                |
| <i>Sminthopsis macroura</i>             | Stripe-faced dunnart       |            |                    |        |      | X         |           |      |                |
| Thylacomyidae                           |                            |            |                    |        |      |           |           |      |                |
| <i>Macrotis lagotis</i>                 | Greater bilby, dalgyte     |            | VU                 | VU     |      | X         |           | X    |                |
| Macropodidae                            |                            |            |                    |        |      |           |           |      |                |
| <i>Osphranter robustus erubescens</i>   | Euro, biggada              |            |                    |        |      | X         |           |      | X              |
| <i>Osphranter rufus</i>                 | Red kangaroo, marlu        |            |                    |        |      | X         |           |      | X              |
| Muridae                                 |                            |            |                    |        |      |           |           |      |                |
| <i>Notomys alexis</i>                   | Spinifex hopping-mouse     |            |                    |        |      | X         |           |      |                |
| Leporidae                               |                            |            |                    |        |      |           |           |      |                |
| <i>Oryctolagus cuniculus</i>            | Rabbit                     | *          |                    |        |      | X         | X         |      | X              |
| Vespertilionidae                        |                            |            |                    |        |      |           |           |      |                |
| <i>Vespadelus baverstocki</i>           | Inland forest bat          |            |                    |        |      | X         |           |      |                |
| Canidae                                 |                            |            |                    |        |      |           |           |      |                |
| <i>Canis familiaris</i>                 | Dog/dingo                  | *          |                    |        |      |           | X         |      | X              |
| <i>Vulpes vulpes</i>                    | Red fox                    | *          |                    |        |      |           | X         |      |                |
| Felidae                                 |                            |            |                    |        |      |           |           |      |                |
| <i>Felis catus</i>                      | Cat                        | *          |                    |        |      |           | X         |      |                |



| Scientific Name     | Common name     | Introduced | Conservation Codes |        |      | NatureMap | EPBC PMST | DBCA | Current Survey |
|---------------------|-----------------|------------|--------------------|--------|------|-----------|-----------|------|----------------|
|                     |                 |            | EPBC Act           | BC Act | DBCA |           |           |      |                |
| Equidae             |                 |            |                    |        |      |           |           |      |                |
| <i>Equus asinus</i> | Donkey          | *          |                    |        |      |           | X         |      |                |
| Bovidae             |                 |            |                    |        |      |           |           |      |                |
| <i>Capra hircus</i> | Goat            | *          |                    |        |      | X         | X         |      | X              |
| <i>Bos taurus</i>   | European cattle |            |                    |        |      | X         |           |      | X              |



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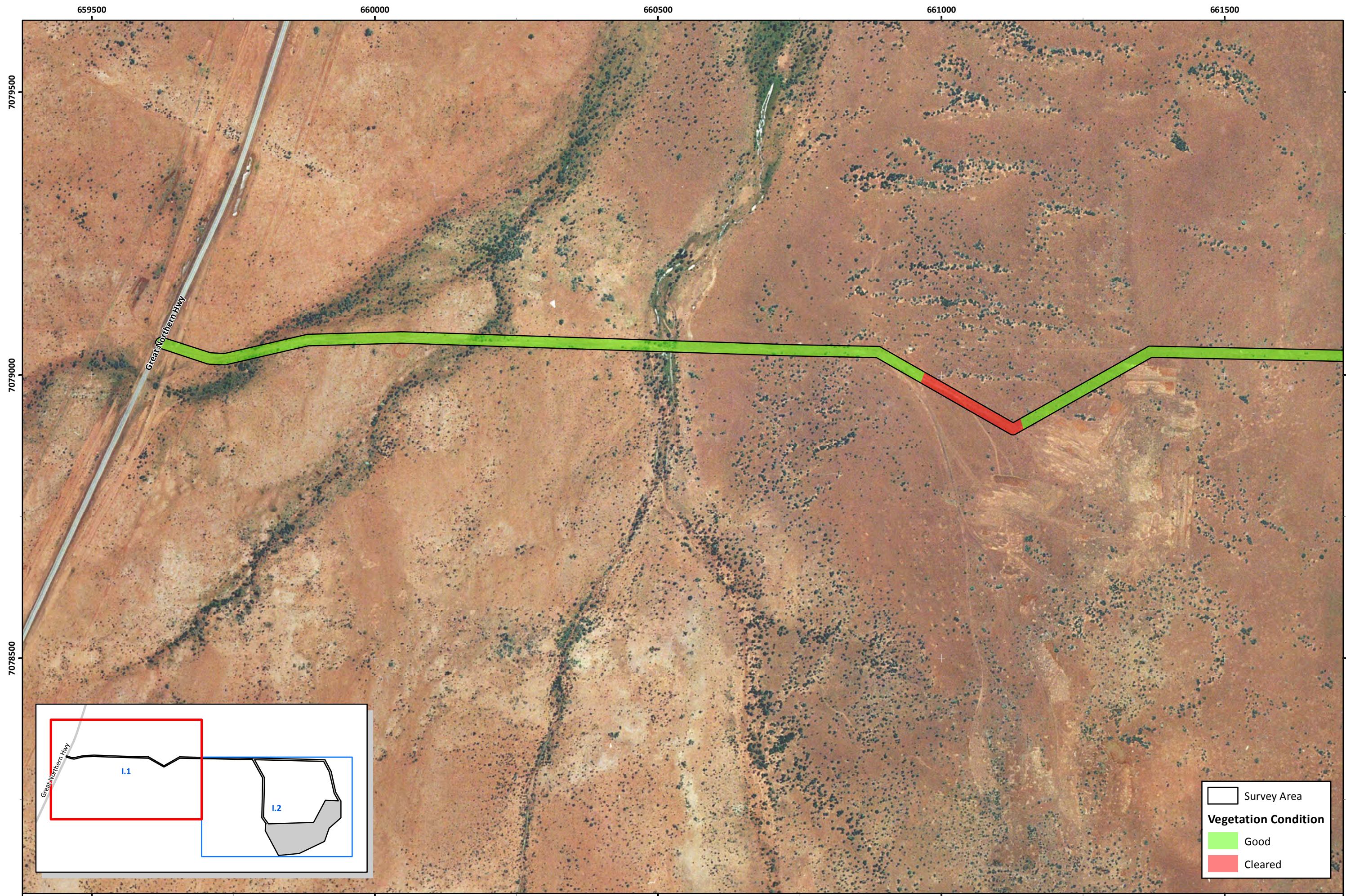


## **Appendix I: Vegetation Condition Mapping**



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Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.1: GNH 770 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

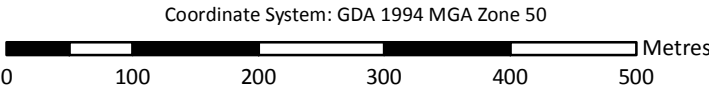
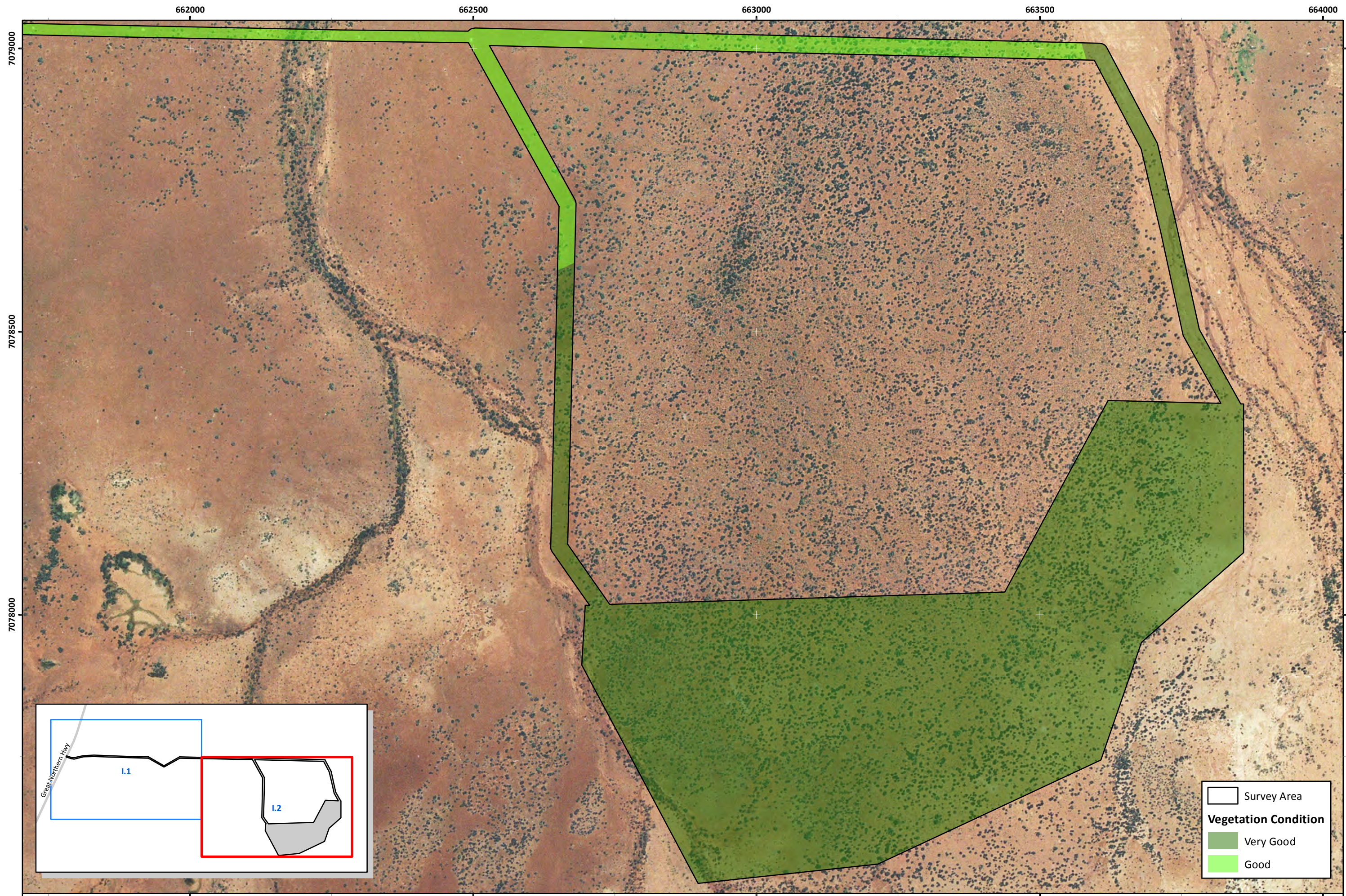


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.2: GNH 770 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

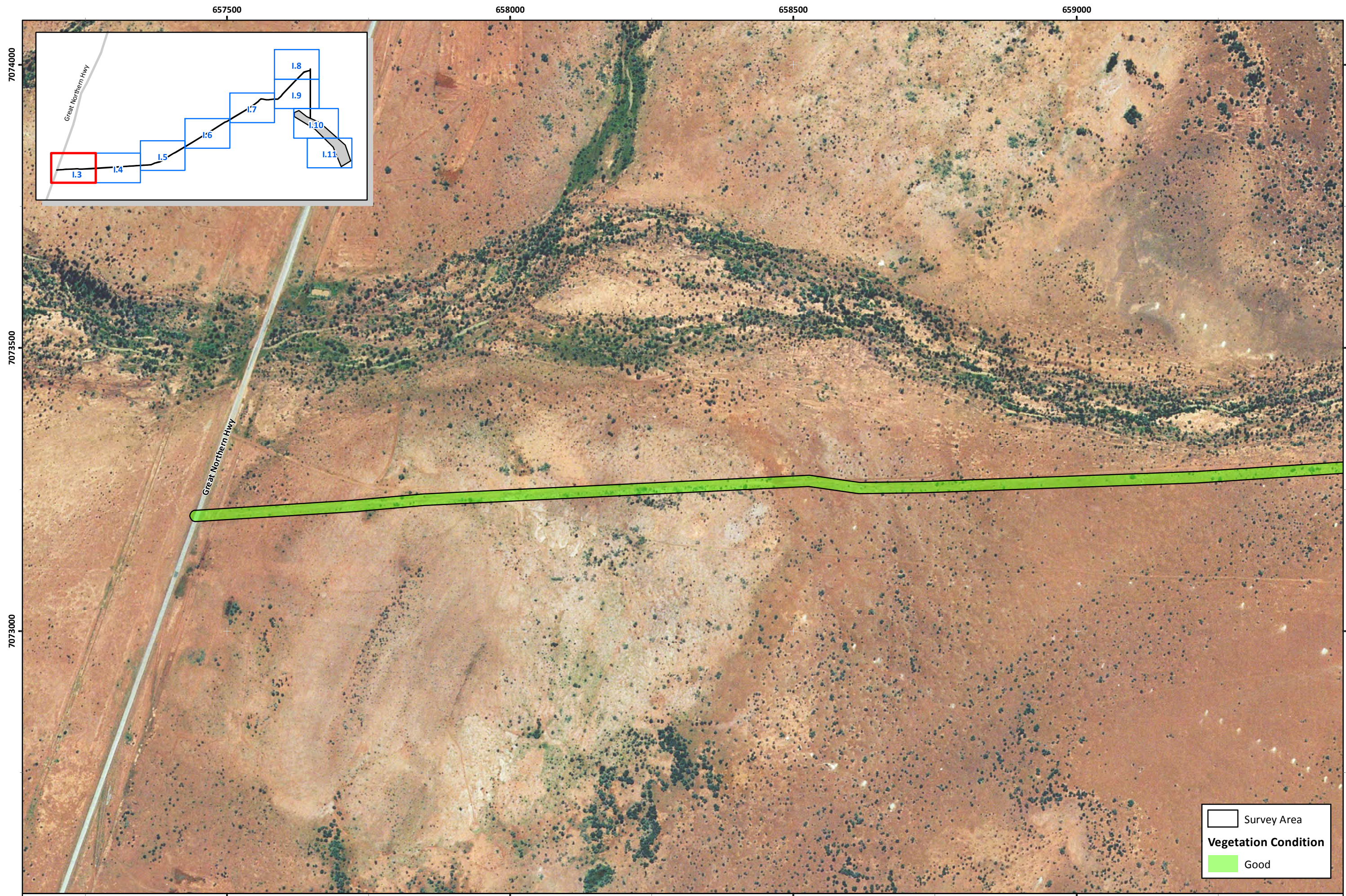
Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.3: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

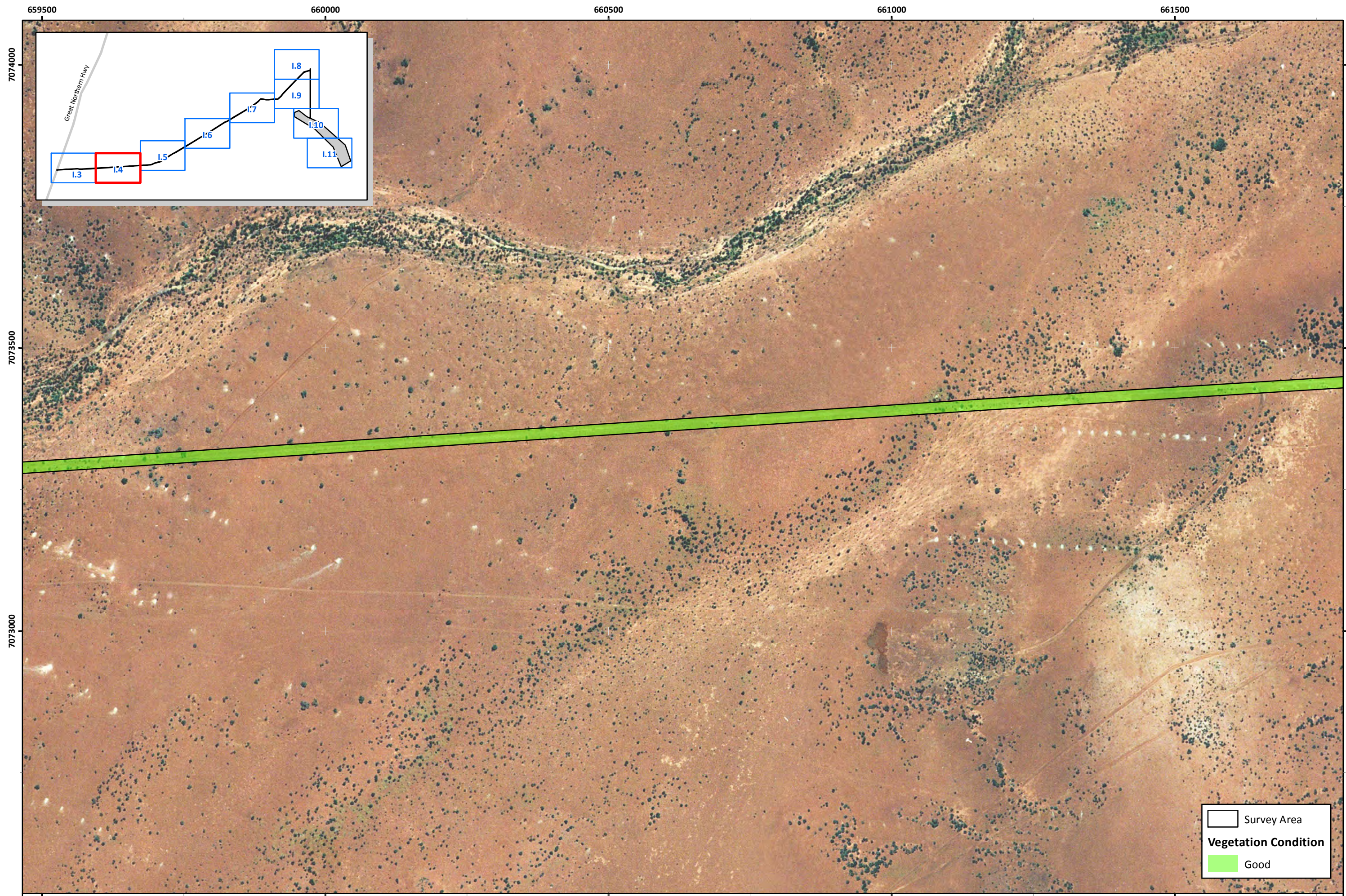
Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.4: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

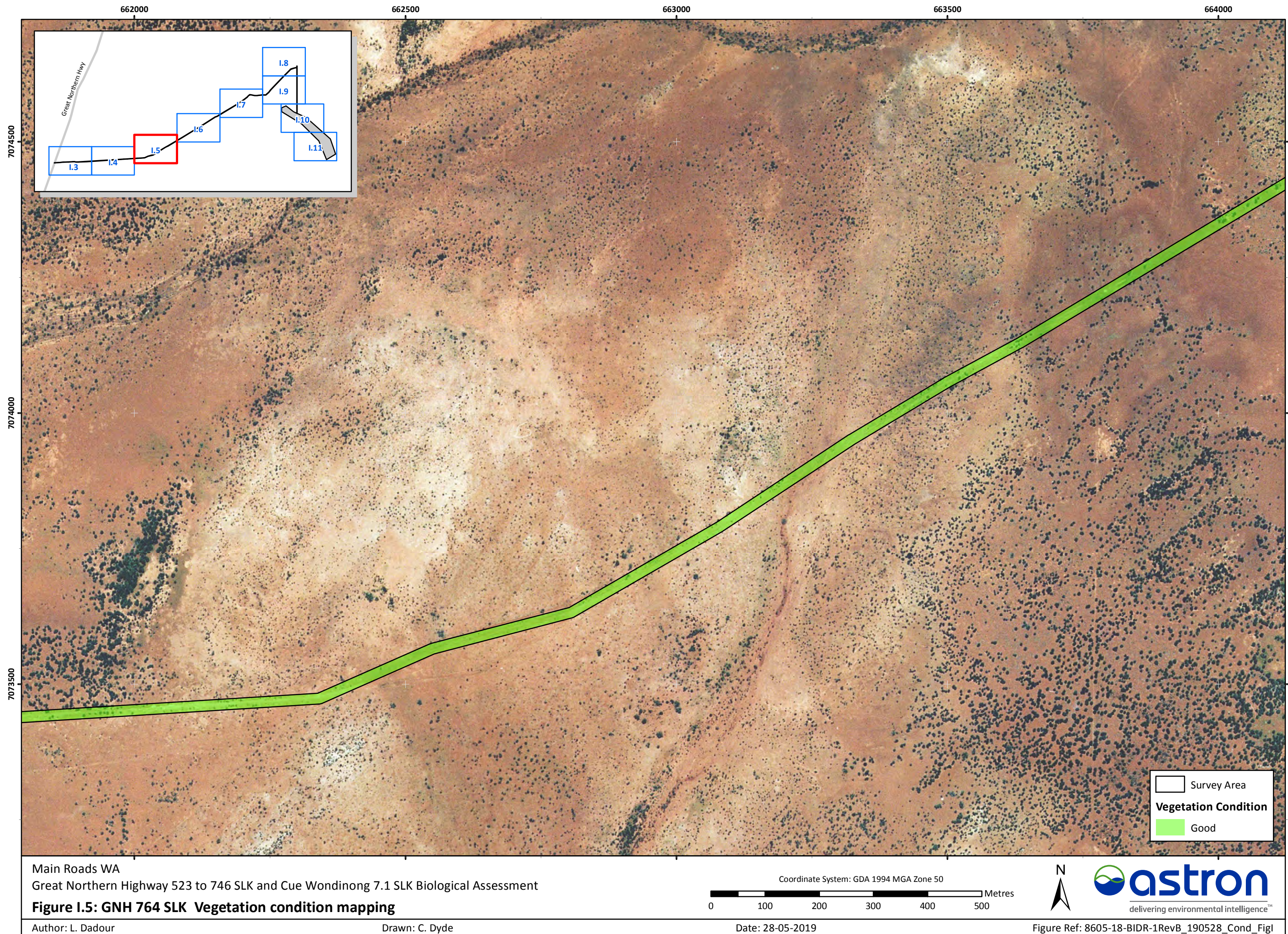
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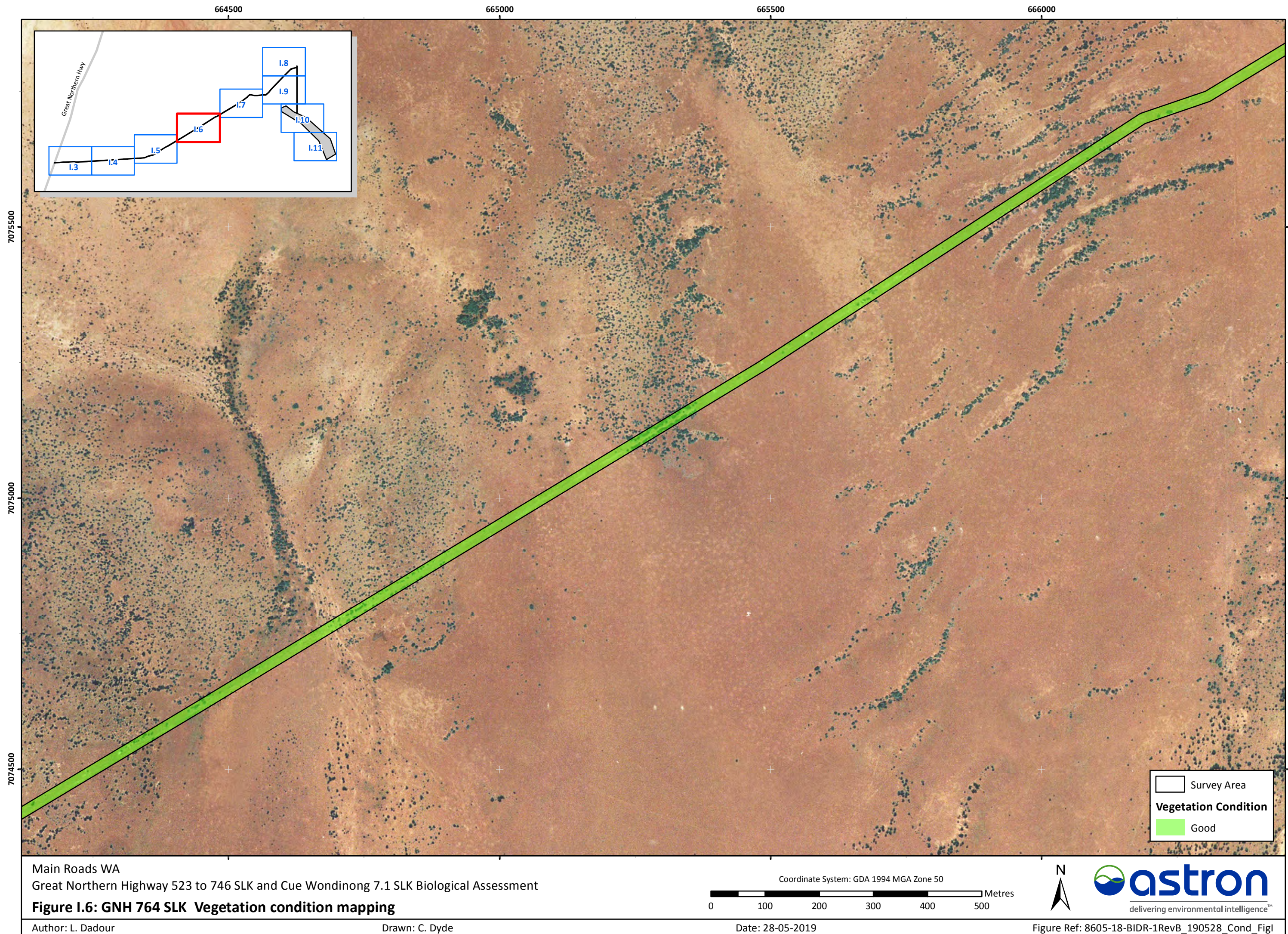
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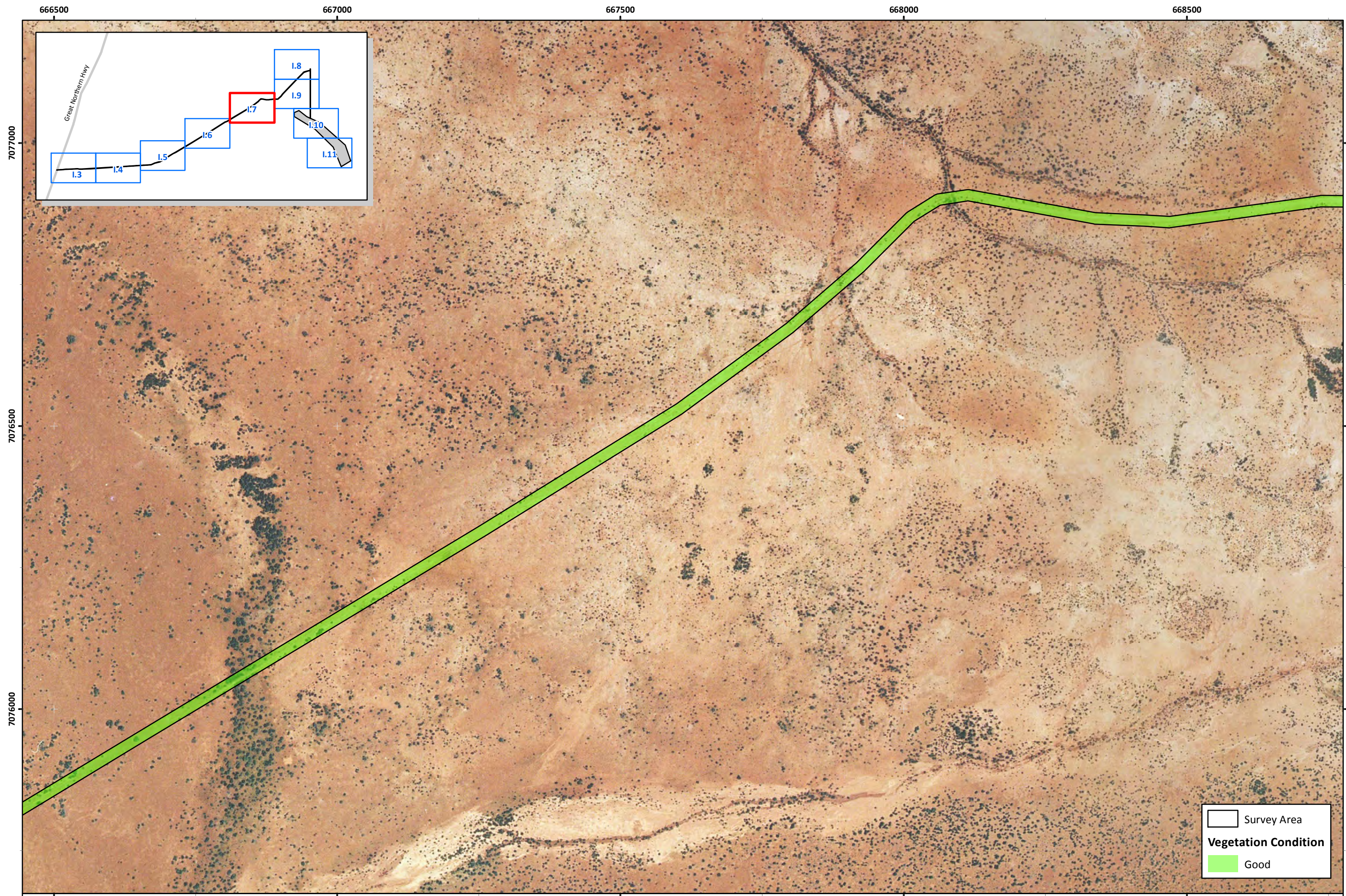












Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.7: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

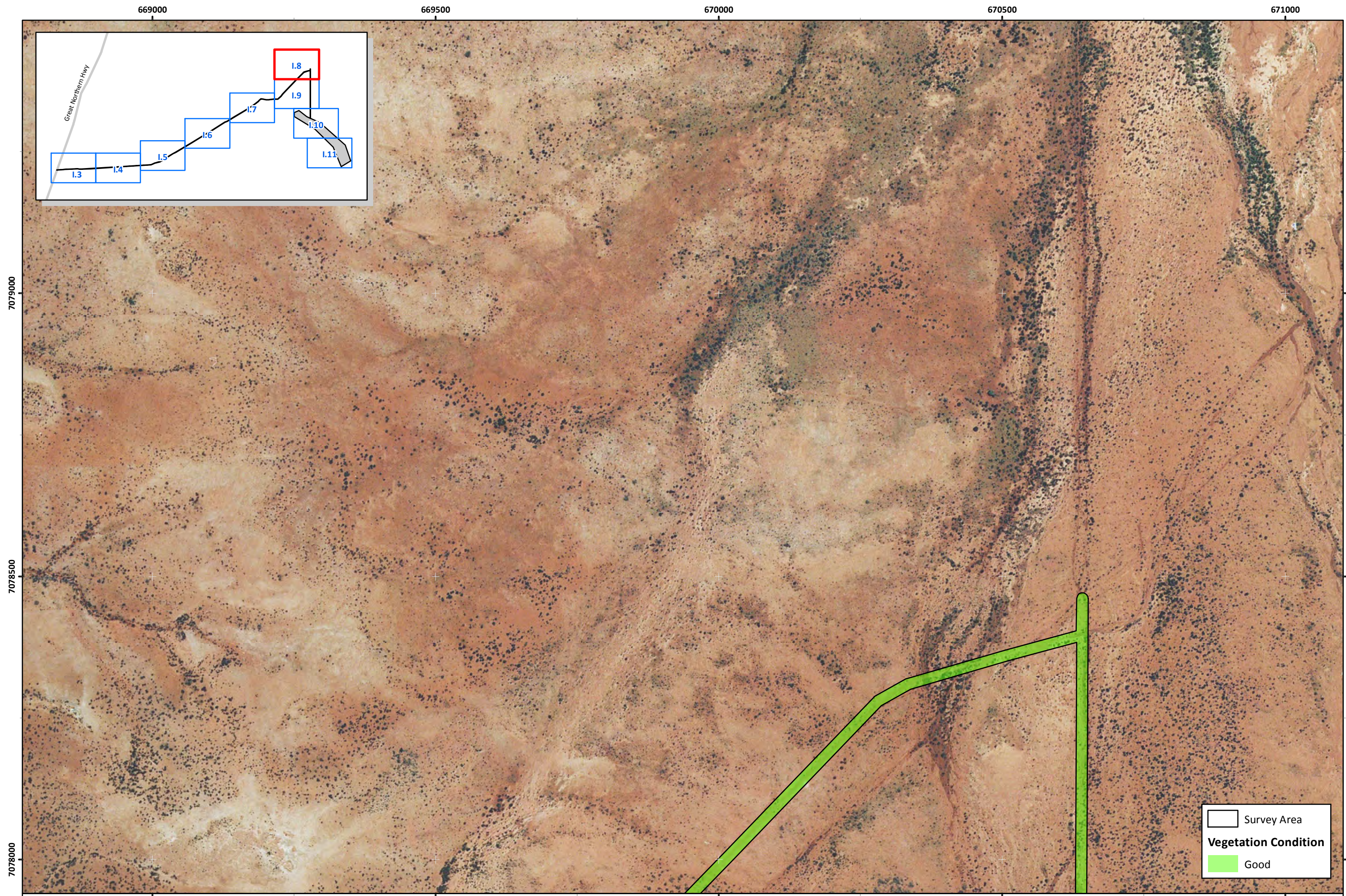
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.8: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

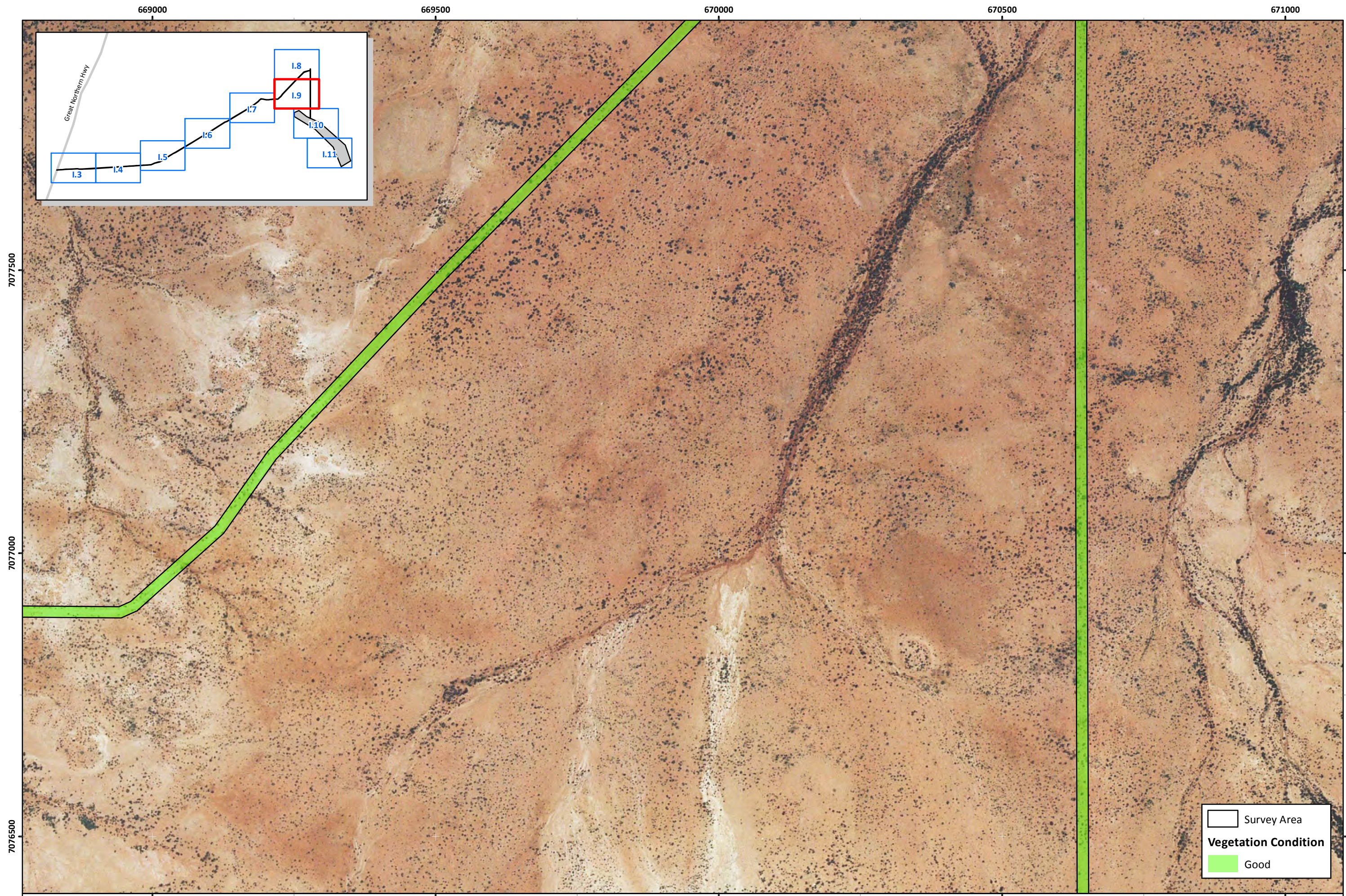
Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.9: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

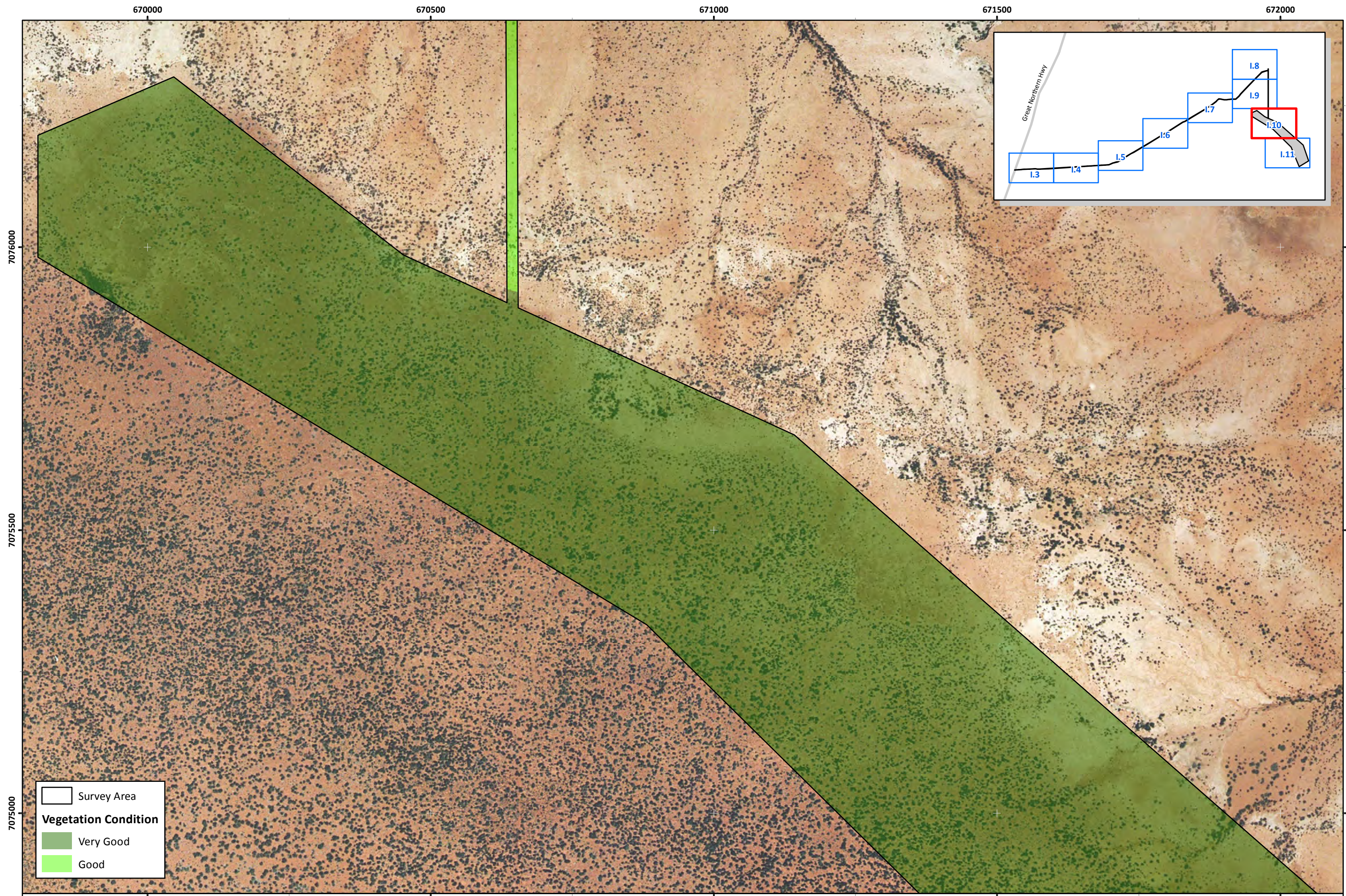
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Survey Area

**Vegetation Condition**

Very Good

Good

Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.10: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

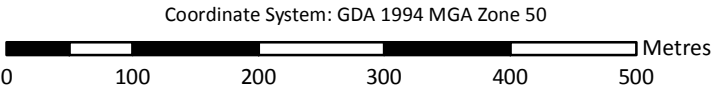
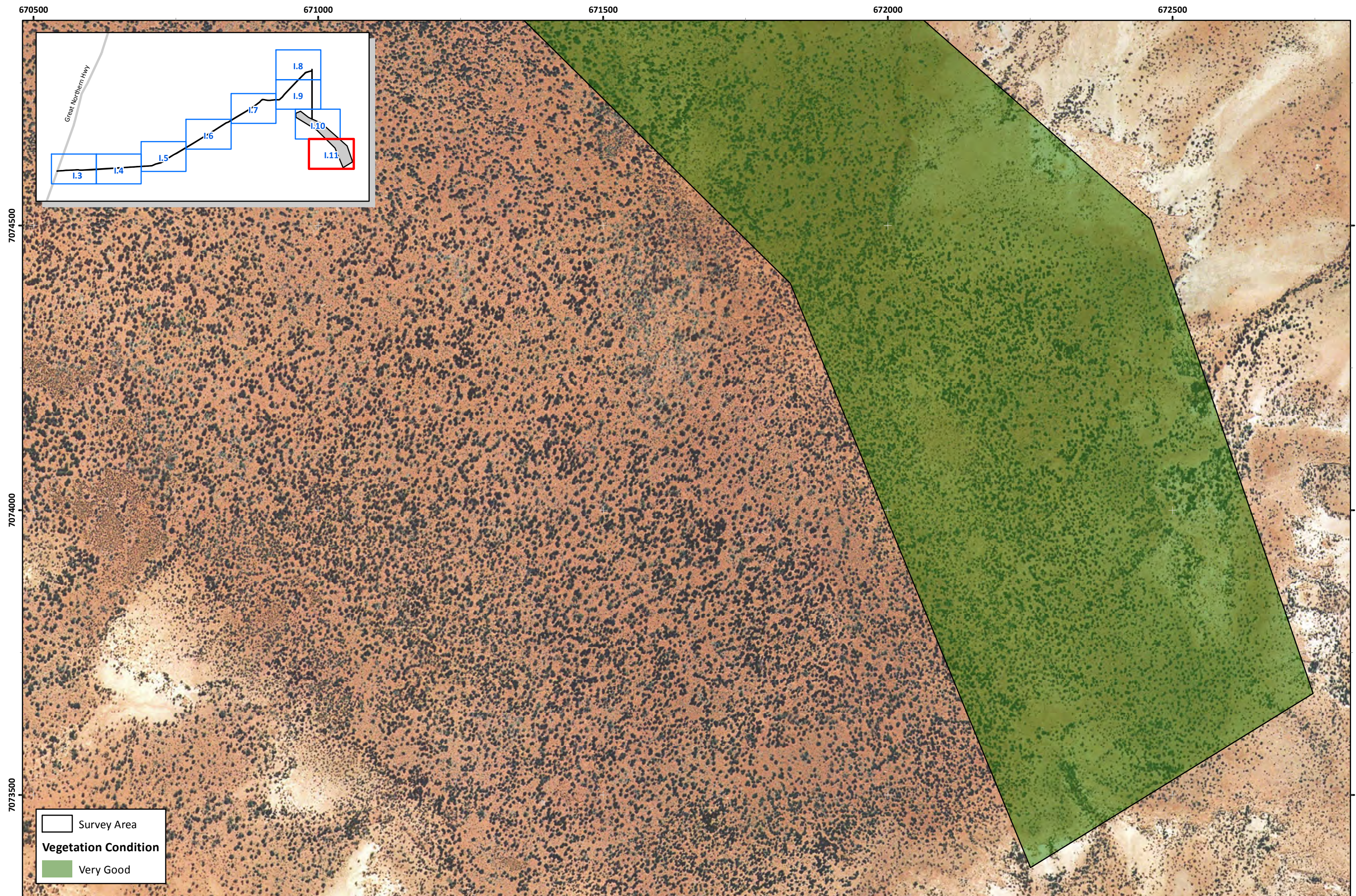


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.11: GNH 764 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

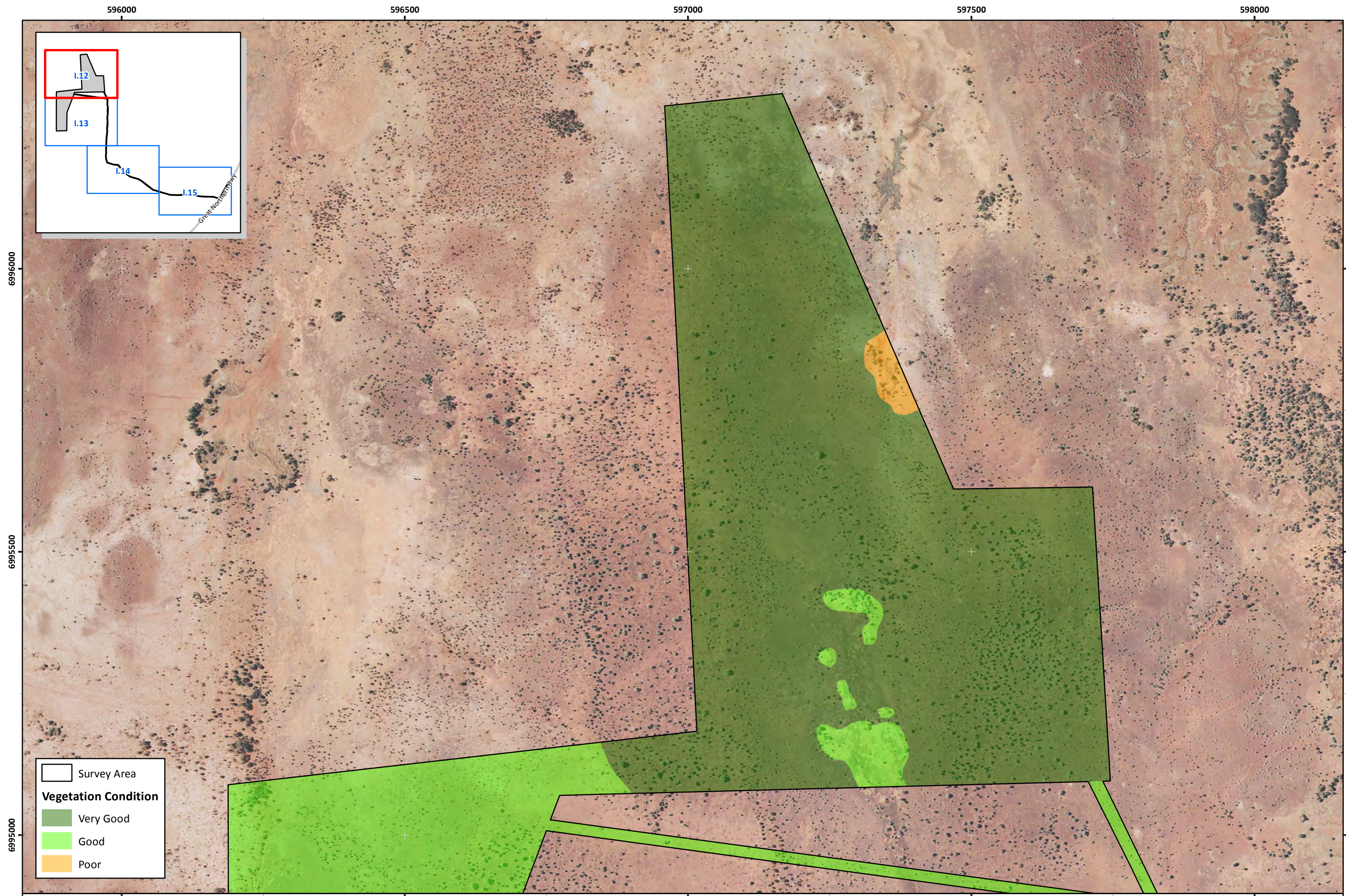
Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.12: GNH 660 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

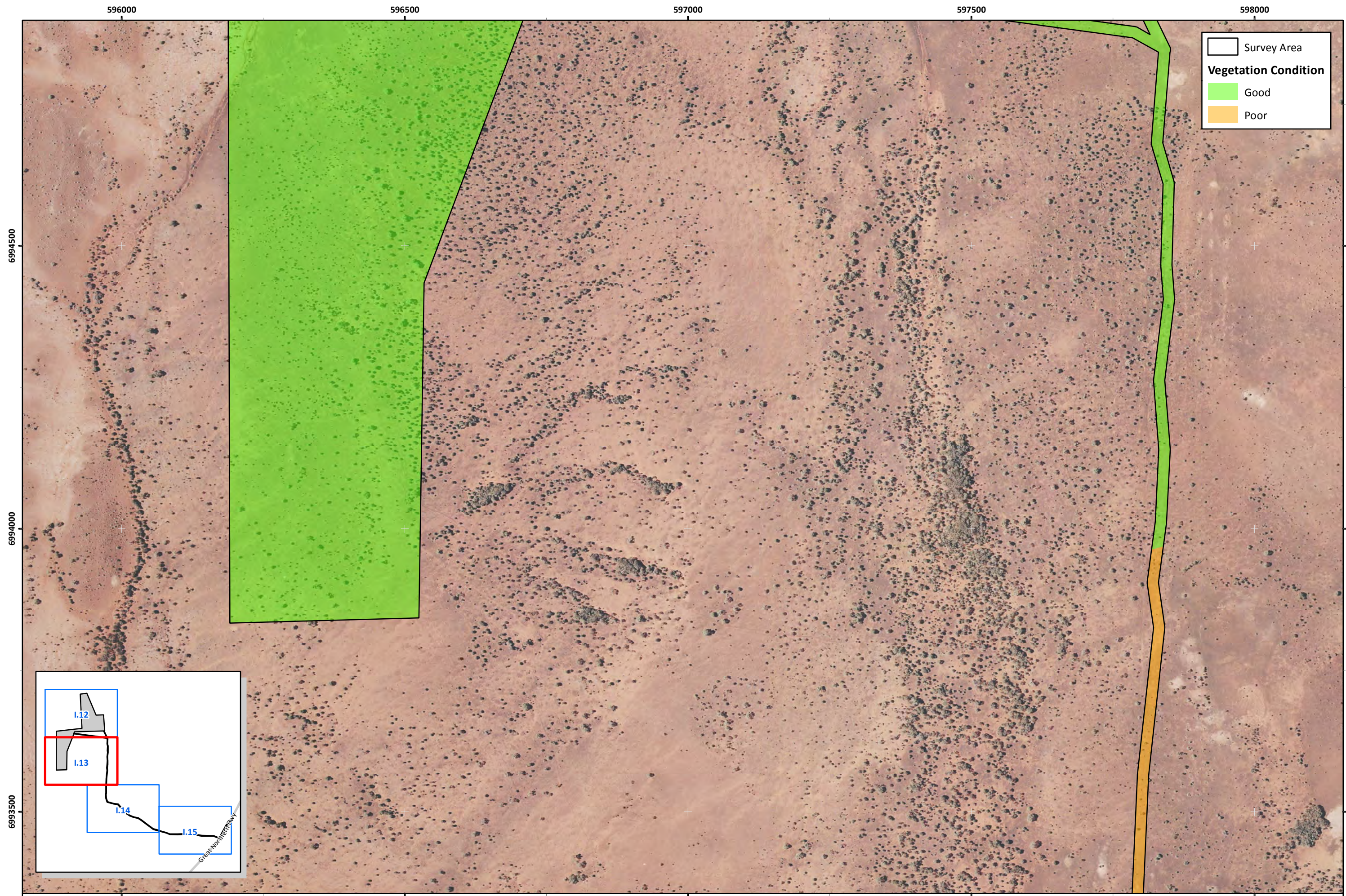
Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.13: GNH 660 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

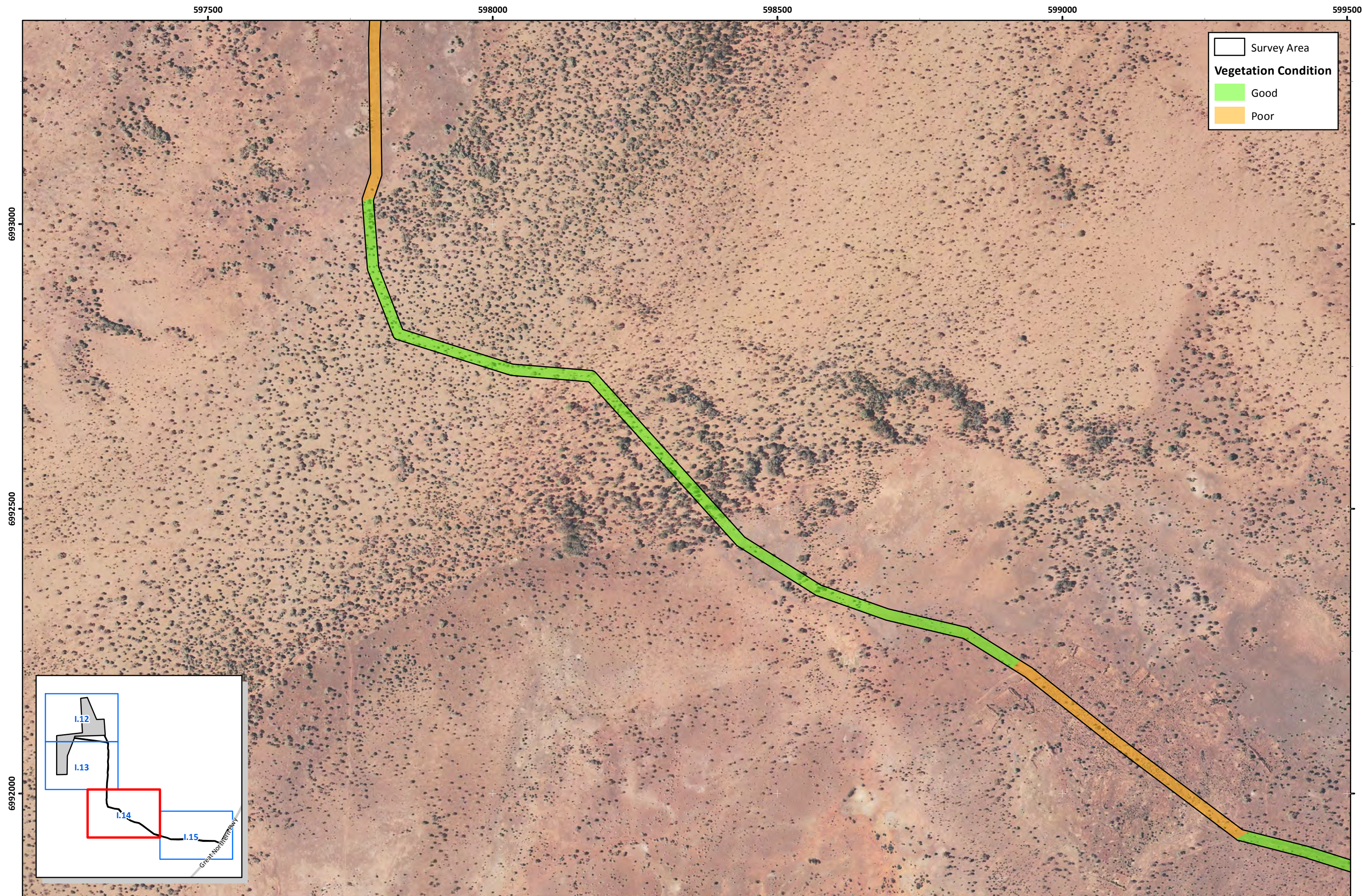
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Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres







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Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

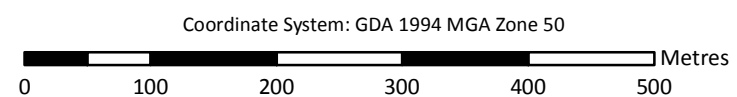
**Figure I.14: GNH 660 SLK Vegetation condition mapping**

Author: L. Dadour

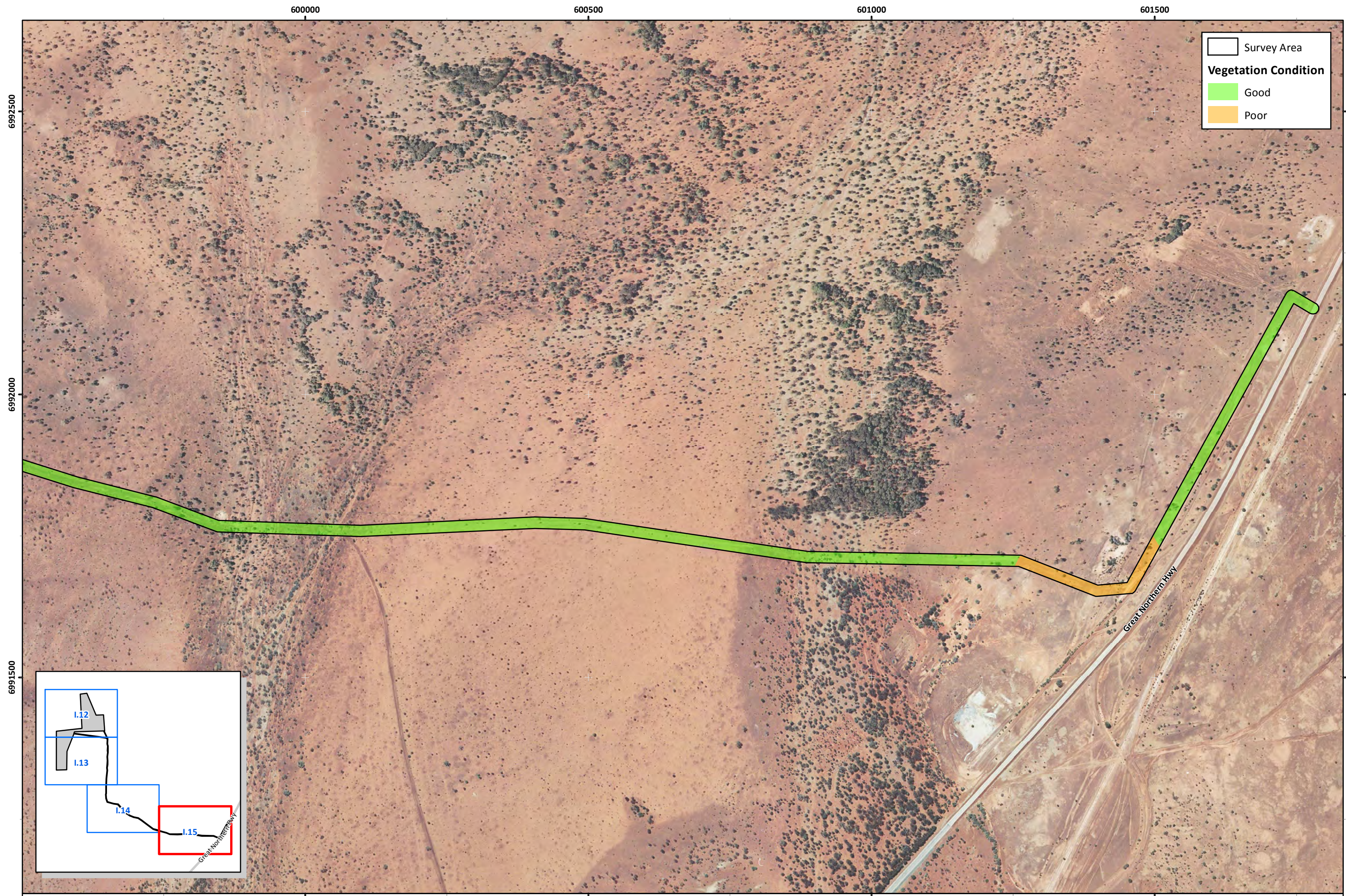
Drawn: C. Dyde

Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI







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**Figure I.15: GNH 660 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





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**Figure I.16: Cue Wondinong 7.1 SLK Vegetation condition mapping**

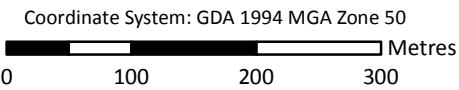


Author: L. Dadour

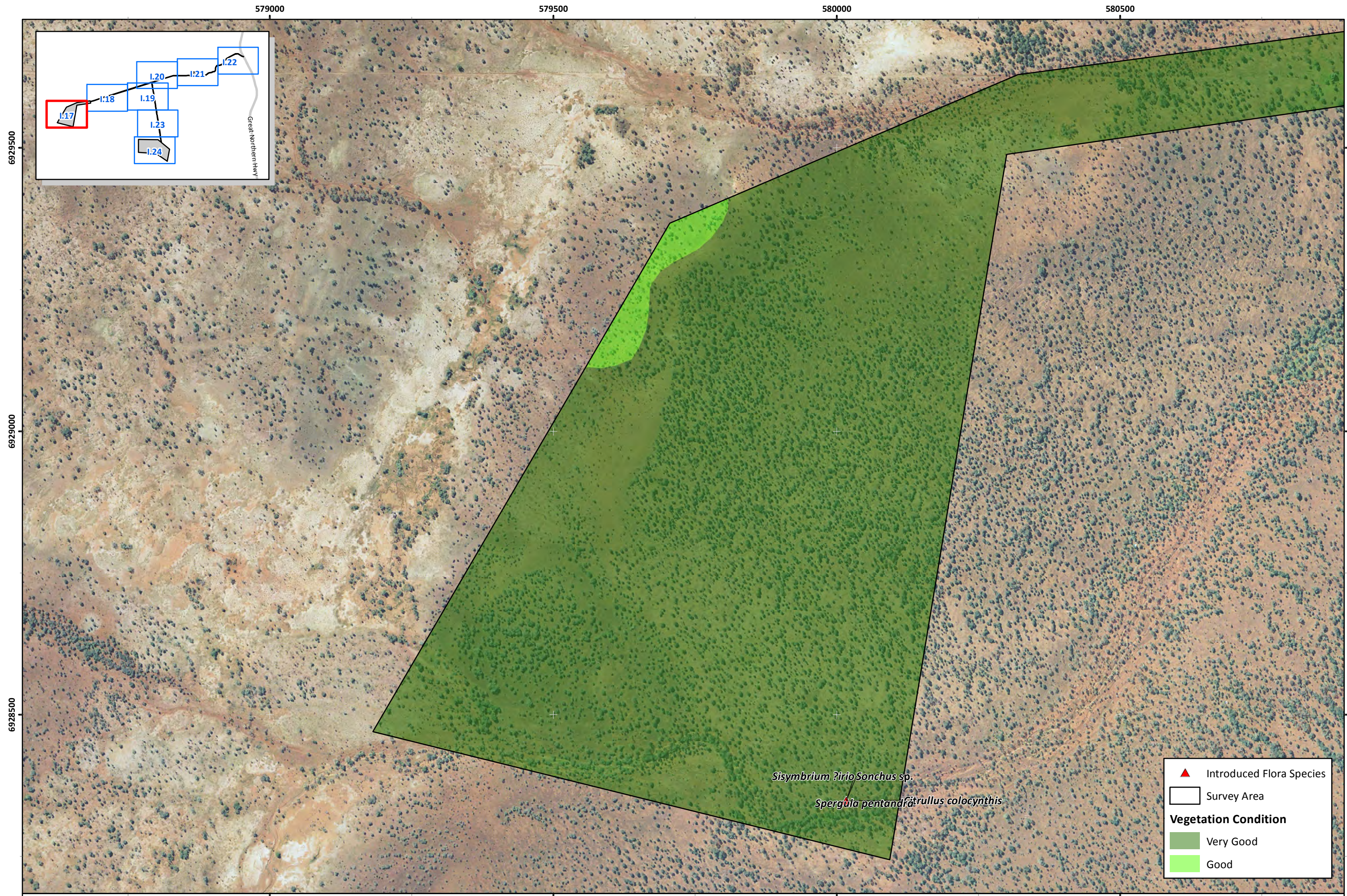
Date: 28-05-2019

Drawn: C. Dyde

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_Figl\_16







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.17: GNH 593 SLK Vegetation condition mapping and weed locations**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

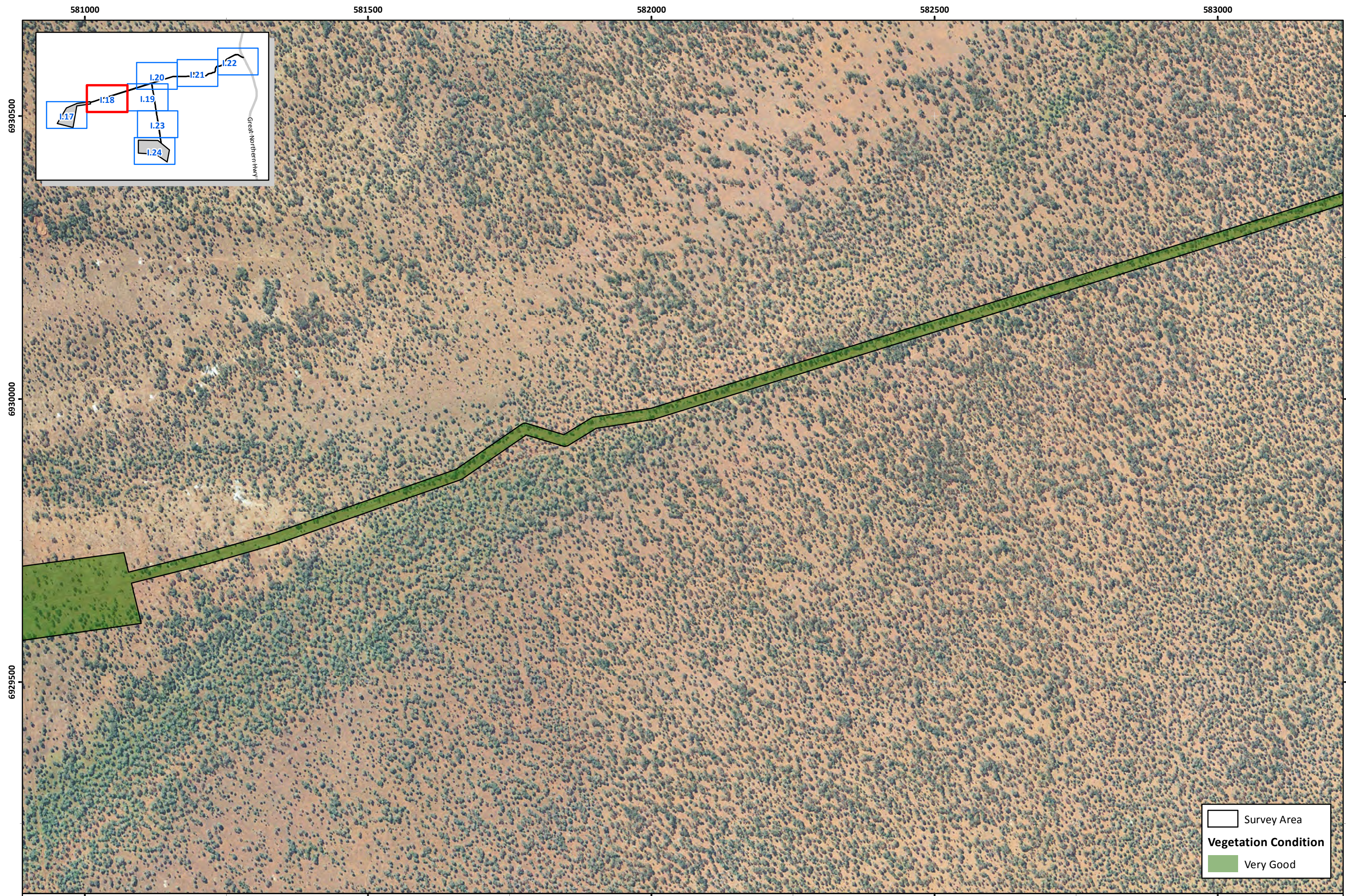
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Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.18: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

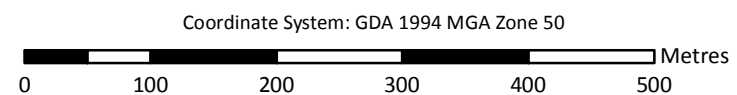


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.19: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

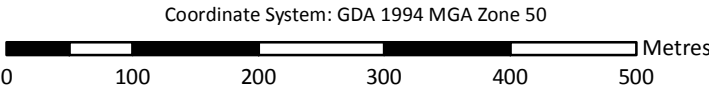


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.20: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

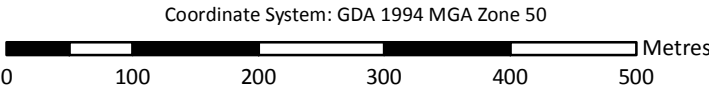
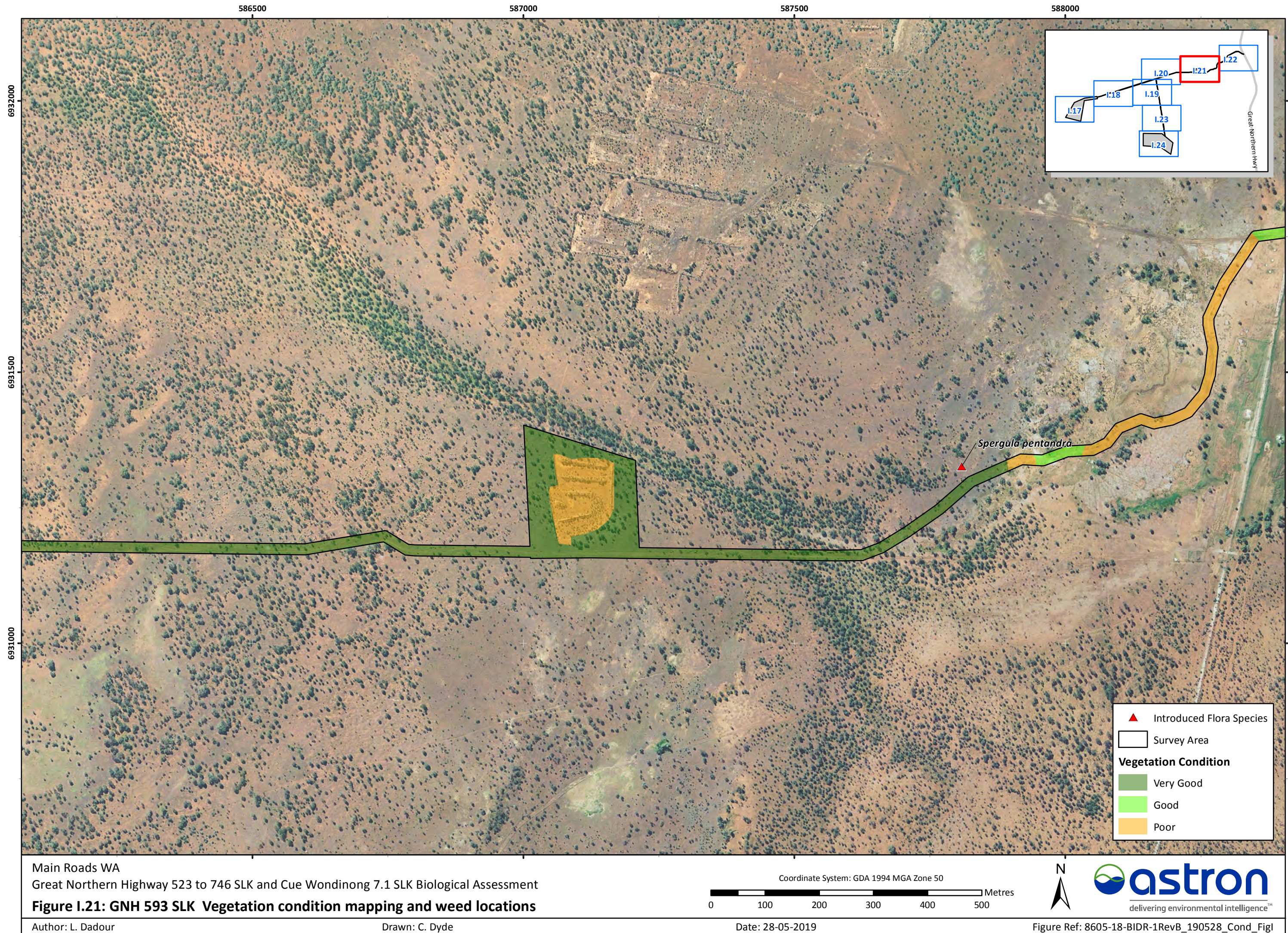
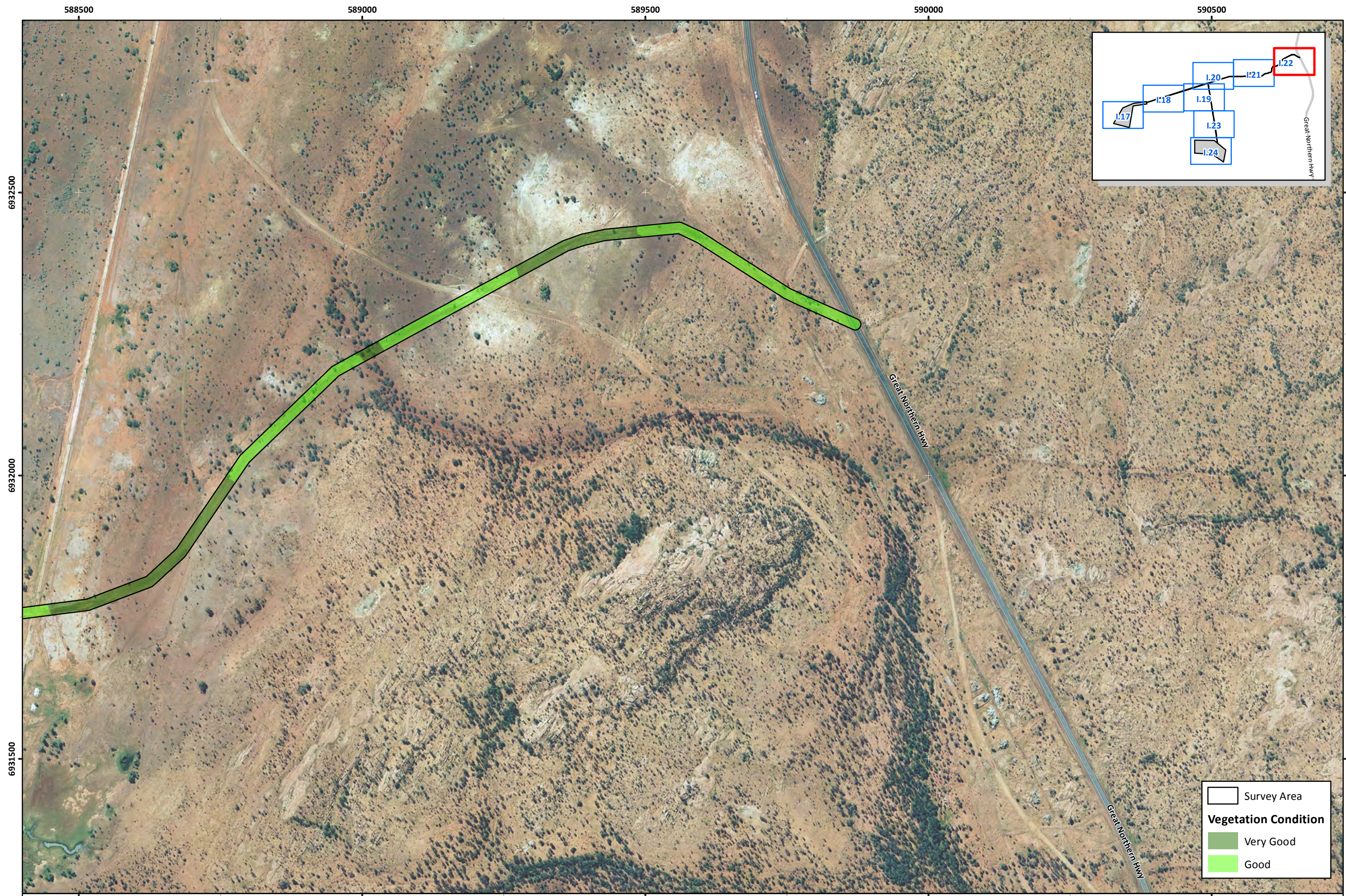


Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI









Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.22: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.23: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50  
0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.24: GNH 593 SLK Vegetation condition mapping**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure I.25: GNH 523 SLK Vegetation condition mapping and weed locations**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Coordinate System: GDA 1994 MGA Zone 50

0 100 200 300 400 500 Metres



Figure Ref: 8605-18-BIDR-1RevB\_190528\_Cond\_FigI



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## **Appendix J: Vascular Flora Species List and Site by Species Matrix**



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Table J.1: Flora species list.

| Family        | Species name  | Conservation status | Weed |
|---------------|---|---------------------|------|
| Aizoaceae     | <i>Gunnipopsis septifraga</i>                           |                     |      |
| Amaranthaceae | <i>Alternanthera angustifolia</i>                       |                     |      |
|               | <i>Alternanthera nodiflora</i>                          |                     |      |
|               | <i>Ptilotus aervoides</i>                               |                     |      |
|               | <i>Ptilotus divaricatus</i>                             |                     |      |
|               | <i>Ptilotus nobilis</i>                                 |                     |      |
|               | <i>Ptilotus obovatus</i>                                |                     |      |
|               | <i>Ptilotus rotundifolius</i>                           |                     |      |
|               | <i>Ptilotus schwartzii</i>                              |                     |      |
|               | <i>Ptilotus schwartzii</i> var. <i>schwartzii</i>       |                     |      |
|               | <i>Ptilotus</i> sp.                                     |                     |      |
| Apocynaceae   | <i>Cynanchum viminale</i> subsp. <i>australe</i>        |                     |      |
|               | <i>Marsdenia australis</i>                              |                     |      |
| Asparagaceae  | <i>Thysanotus manglesianus</i>                          |                     |      |
| Asteraceae    | <i>Actinobole uliginosum</i>                            |                     |      |
|               | <i>Brachyscome ciliaris</i>                             |                     |      |
|               | <i>Calocephalus multiflorus</i>                         |                     |      |
|               | <i>Calotis hispidula</i>                                |                     |      |
|               | <i>Calotis multicaulis</i>                              |                     |      |
|               | <i>Calotis plumulifera</i>                              |                     |      |
|               | <i>Centipeda thespidioides</i>                          |                     |      |
|               | <i>Cephalopterum drummondii</i>                         |                     |      |
|               | <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i>       |                     |      |
|               | <i>Gilberta tenuifolia</i>                              |                     |      |
|               | <i>Gnephosis brevifolia</i>                             |                     |      |
|               | <i>Gnephosis tenuissima</i>                             |                     |      |
|               | <i>Lemooria burkittii</i>                               |                     |      |
|               | <i>Minuria integerrima</i>                              |                     |      |
|               | <i>Podolepis capillaris</i>                             |                     |      |
|               | <i>Podotheca gnaphalioides</i>                          |                     |      |
|               | <i>Pogonolepis muelleriana</i>                          |                     |      |
|               | <i>Rhodanthe ?laevis</i>                                |                     |      |
|               | <i>Rhodanthe stricta</i>                                |                     |      |
|               | <i>Roebuckiella cheilocarpa</i> var. <i>cheilocarpa</i> |                     |      |
|               | <i>Sonchus</i> sp.                                      |                     |      |
|               | <i>Streptoglossa liatroides</i>                         |                     |      |
|               | <i>Trichanthodium exilis</i>                            |                     |      |



| Family          | Species name                                   | Conservation status | Weed |
|-----------------|--|---------------------|------|
|                 | <i>Vittadinia eremaea</i>                      |                     |      |
| Asteraceae      | <i>Waitzia acuminata</i> var. <i>acuminata</i> |                     |      |
| Boraginaceae    | <i>Omphalolappula concava</i>                  |                     |      |
| Brassicaceae    | <i>Lepidium oxytrichum</i>                     |                     |      |
|                 | <i>Menkea australis</i>                        |                     |      |
|                 | <i>Sisymbrium ?irio</i>                        |                     |      |
|                 | <i>Stenopetalum</i> sp.                        |                     |      |
| Campanulaceae   | <i>Lobelia simulans</i>                        |                     |      |
| Caryophyllaceae | * <i>Spergula pentandra</i>                    |                     | *    |
| Chenopodiaceae  | ? <i>Maireana</i> sp.                          |                     |      |
|                 | <i>Atriplex codonocarpa</i>                    |                     |      |
|                 | <i>Dissocarpus paradoxus</i>                   |                     |      |
|                 | <i>Dysphania rhadinostachya</i>                |                     |      |
|                 | <i>Enchylaena tomentosa</i>                    |                     |      |
|                 | <i>Maireana appressa</i>                       |                     |      |
|                 | <i>Maireana carnosae</i>                       |                     |      |
|                 | <i>Maireana eriosphaera</i>                    |                     |      |
|                 | <i>Maireana georgei</i>                        |                     |      |
|                 | <i>Maireana glomerifolia</i>                   |                     |      |
|                 | <i>Maireana planifolia</i>                     |                     |      |
|                 | <i>Maireana pyramidata</i>                     |                     |      |
|                 | <i>Maireana</i> sp.                            |                     |      |
|                 | <i>Maireana thesioides</i>                     |                     |      |
|                 | <i>Maireana tomentosa</i>                      |                     |      |
|                 | <i>Maireana triptera</i>                       |                     |      |
|                 | <i>Rhagodia eremaea</i>                        |                     |      |
|                 | <i>Salsola australis</i>                       |                     |      |
|                 | <i>Sclerolaena cuneata</i>                     |                     |      |
|                 | <i>Sclerolaena densiflora</i>                  |                     |      |
|                 | <i>Sclerolaena eriacantha</i>                  |                     |      |
|                 | <i>Sclerolaena fusiformis</i>                  |                     |      |
|                 | <i>Sclerolaena patentiuspica</i>               |                     |      |
| Convolvulaceae  | * <i>Cuscuta epithymum</i>                     |                     | *    |
|                 | <i>Convolvulus clementii</i>                   |                     |      |
|                 | <i>Duperreya commixta</i>                      |                     |      |
| Crassulaceae    | <i>Crassula colorata</i> var. <i>acuminata</i> |                     |      |
| Cucurbitaceae   | * <i>Citrullus colocynthis</i>                 |                     | *    |
| Cyperaceae      | <i>Eleocharis acuta</i>                        |                     |      |



| Family        | Species name   | Conservation status | Weed |
|---------------|--|---------------------|------|
| Euphorbiaceae | <i>Euphorbia boophthona</i>                            |                     |      |
|               | <i>Euphorbia</i> sp.                                   |                     |      |
| Euphorbiaceae | <i>Euphorbia tannensis</i> subsp. <i>eremophila</i>    |                     |      |
| Fabaceae      | <i>Acacia ?aptaneura</i>                               |                     |      |
|               | <i>Acacia ?caesaneura</i> (narrow phyllode variant)    |                     |      |
|               | <i>Acacia ?caesaneura</i> x <i>incurvaneura</i>        |                     |      |
|               | <i>Acacia ?cuthbertsonii</i>                           |                     |      |
|               | <i>Acacia ?fusaneura</i>                               |                     |      |
|               | <i>Acacia ?incurvaneura</i> x <i>mulganeura</i>        |                     |      |
|               | <i>Acacia ?sibilans</i>                                |                     |      |
|               | <i>Acacia ?umbraculiformis</i> x <i>lpidosa</i>        |                     |      |
|               | <i>Acacia aneura</i>                                   |                     |      |
|               | <i>Acacia aptaneura</i>                                |                     |      |
|               | <i>Acacia ayersiana</i> (hybrid)                       |                     |      |
|               | <i>Acacia ayersiana</i> (narrow phyllode variant)      |                     |      |
|               | <i>Acacia caesaneura</i> (narrow phyllode variant)     |                     |      |
|               | <i>Acacia craspedocarpa</i>                            |                     |      |
|               | <i>Acacia craspedocarpa</i> (hybrid)                   |                     |      |
|               | <i>Acacia craspedocarpa</i> (hybrid: narrow phyllodes) |                     |      |
|               | <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i>     |                     |      |
|               | <i>Acacia fusaneura</i>                                |                     |      |
|               | <i>Acacia grasbyi</i>                                  |                     |      |
|               | <i>Acacia incurvaneura</i>                             |                     |      |
|               | <i>Acacia macraneura</i>                               |                     |      |
|               | <i>Acacia masliniana</i>                               |                     |      |
|               | <i>Acacia mulganeura</i>                               |                     |      |
|               | <i>Acacia pruinocarpa</i>                              |                     |      |
|               | <i>Acacia pteraneura</i>                               |                     |      |
|               | <i>Acacia quadrimarginea</i>                           |                     |      |
|               | <i>Acacia ramulosa</i> var. <i>linophylla</i>          |                     |      |
|               | <i>Acacia ramulosa</i> var. <i>ramulosa</i>            |                     |      |
|               | <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>  |                     |      |
|               | <i>Acacia synchronicia</i>                             |                     |      |
|               | <i>Acacia tetragonophylla</i>                          |                     |      |
|               | <i>Acacia xanthocarpa</i>                              |                     |      |
|               | <i>Acacia xiphophylla</i>                              |                     |      |
|               | <i>Mirbelia rhagodioides</i>                           |                     |      |
|               | <i>Senna artemisioides</i> subsp. <i>helmsii</i>       |                     |      |



| Family            | Species name  | Conservation status | Weed |
|-------------------|---|---------------------|------|
|                   | <i>Senna artemisioides</i> subsp. <i>petiolaris</i>             |                     |      |
|                   | <i>Senna artemisioides</i> subsp. <i>x artemisioides</i>        |                     |      |
|                   | <i>Senna artemisioides</i> subsp. <i>x sturtii</i>              |                     |      |
| Fabaceae          | <i>Senna glaucifolia</i>  |                     |      |
|                   | <i>Senna</i> sp. Meekatharra (E. Bailey 1-26)                   |                     |      |
|                   | <i>Trigonella suavissima</i>                                    |                     |      |
| Geraniaceae       | <i>Erodium ?cygnorum</i>  |                     |      |
| Goodeniaceae      | <i>Brunonia australis</i>                                       |                     |      |
|                   | <i>Goodenia havilandii</i>                                      |                     |      |
|                   | <i>Goodenia occidentalis</i>                                    |                     |      |
|                   | <i>Goodenia</i> sp.   |                     |      |
|                   | <i>Scaevola spinescens</i>                                      |                     |      |
|                   | <i>Velleia ?rosea</i>   |                     |      |
|                   | <i>Velleia rosea</i>  |                     |      |
| Haloragaceae      | <i>Haloragis odontocarpa</i>                                    |                     |      |
| Hemerocallidaceae | <i>Dianella revoluta</i> var. <i>divaricata</i>                 |                     |      |
| Juncaginaceae     | <i>Triglochin</i> sp. A Flora of Australia (G.J. Keighery 2477) |                     |      |
| Lamiaceae         | <i>Teucrium ?racemosum</i>                                      |                     |      |
| Malvaceae         | <i>Abutilon cryptopetalum</i>                                   |                     |      |
|                   | <i>Brachychiton gregorii</i>                                    |                     |      |
|                   | <i>Hibiscus burtonii</i>  |                     |      |
|                   | <i>Seringia elliptica</i>                                       |                     |      |
|                   | <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260)        |                     |      |
|                   | <i>Sida calyxhymenia</i>  |                     |      |
|                   | <i>Sida ectogama</i>  |                     |      |
|                   | <i>Sida fibulifera</i>  |                     |      |
|                   | <i>Sida</i> sp.   |                     |      |
|                   | <i>Sida</i> sp.   |                     |      |
|                   | <i>Sida</i> sp. dark green fruits (S. van Leeuwen 2260)         |                     |      |
|                   | <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32)         |                     |      |
| Marsileaceae      | <i>Marsilea</i> sp.   |                     |      |
| Montiaceae        | <i>Calandrinia Ptychosperma</i>                                 |                     |      |
|                   | <i>Calandrinia pumila</i>                                       |                     |      |
|                   | <i>Calandrinia translucens</i>                                  |                     |      |
| Myrtaceae         | <i>Calytrix divergens</i>                                       |                     |      |
|                   | <i>Calytrix uncinata</i>  |                     |      |
|                   | <i>Eucalyptus kingsmillii</i>                                   |                     |      |
|                   | <i>Eucalyptus leptopoda</i> subsp. <i>arctata</i>               |                     |      |



| Family         | Species name   | Conservation status | Weed |
|----------------|--|---------------------|------|
|                | <i>Micromyrtus sulphurea</i>                         |                     |      |
|                | <i>Thryptomene decussata</i>                         |                     |      |
| Nyctaginaceae  | <i>Boerhavia</i> sp.                                 |                     |      |
| Phyllanthaceae | <i>Phyllanthus erwinii</i>                           |                     |      |
| Pittosporaceae | <i>Pittosporum angustifolium</i>                     |                     |      |
| Plantaginaceae | <i>Plantago</i> sp. Mt Magnet (A.S. George 6793)     |                     |      |
|                | <i>Plantago turrifera</i>                            |                     |      |
| Poaceae        | <i>Aristida contorta</i>                             |                     |      |
|                | <i>Cymbopogon ambiguus</i>                           |                     |      |
|                | <i>Cymbopogon</i> sp.                                |                     |      |
|                | <i>Dactyloctenium radulans</i>                       |                     |      |
|                | <i>Dichanthium sericeum</i> subsp. <i>humilius</i>   |                     |      |
|                | <i>Enteropogon ramosus</i>                           |                     |      |
|                | <i>Eragrostis australasica</i>                       |                     |      |
|                | <i>Eragrostis dielsii</i>                            |                     |      |
|                | <i>Eragrostis eriopoda</i>                           |                     |      |
|                | <i>Eragrostis kennedyae</i>                          |                     |      |
|                | <i>Eragrostis</i> sp.                                |                     |      |
|                | <i>Eragrostis tenellula</i>                          |                     |      |
|                | <i>Eragrostis xerophila</i>                          |                     |      |
|                | <i>Eriachne ?helmsii</i>                             |                     |      |
|                | <i>Eriachne flaccida</i>                             |                     |      |
|                | <i>Eriachne helmsii</i>                              |                     |      |
|                | <i>Eriachne pulchella</i> subsp. <i>pulchella</i>    |                     |      |
|                | <i>Tragus australianus</i>                           |                     |      |
|                | <i>Tripogonella loliiformis</i>                      |                     |      |
| Primulaceae    | * <i>Lysimachia arvensis</i>                         |                     | *    |
| Proteaceae     | <i>Grevillea berryana</i>                            |                     |      |
|                | <i>Grevillea stenobotrya</i>                         |                     |      |
|                | <i>Grevillea striata</i>                             |                     |      |
|                | <i>Hakea chordophylla</i>                            |                     |      |
|                | <i>Hakea preissii</i>                                |                     |      |
| Pteridaceae    | <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>     |                     |      |
| Ranunculaceae  | <i>Ranunculus pentandrus</i> var. <i>platycarpus</i> |                     |      |
| Rubiaceae      | <i>Psydrax latifolia</i>                             |                     |      |
|                | <i>Psydrax rigidula</i>                              |                     |      |
|                | <i>Psydrax suaveolens</i>                            |                     |      |
| Rutaceae       | <i>Drummondita miniata</i>                           | P3                  |      |



| Family           | Species name   | Conservation status | Weed |
|------------------|--|---------------------|------|
|                  | <i>Philotheca brucei</i> subsp. <i>brucei</i>              |                     |      |
| Santalaceae      | <i>Anthobolus leptomerioides</i>                           |                     |      |
|                  | <i>Exocarpos aphyllus</i>                                  |                     |      |
|                  | <i>Santalum spicatum</i>                                   |                     |      |
| Sapindaceae      | <i>Alectryon oleifolius</i>                                |                     |      |
| Sapindaceae      | <i>Dodonaea ?pinifolia</i>                                 |                     |      |
|                  | <i>Dodonaea petiolaris</i>                                 |                     |      |
|                  | <i>Dodonaea rigida</i>                                     |                     |      |
|                  | <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>         |                     |      |
| Scrophulariaceae | <i>Eremophila ?forrestii</i>                               |                     |      |
|                  | <i>Eremophila ?jucunda</i> subsp. <i>jucunda</i>           |                     |      |
|                  | <i>Eremophila ?lachnocalyx</i>                             |                     |      |
|                  | <i>Eremophila ?macmillaniana</i>                           |                     |      |
|                  | <i>Eremophila ?phyllopoda</i>                              |                     |      |
|                  | <i>Eremophila ?platycalyx</i>                              |                     |      |
|                  | <i>Eremophila glutinosa</i>                                |                     |      |
|                  | <i>Eremophila exilifolia</i>                               |                     |      |
|                  | <i>Eremophila flabellata</i>                               |                     |      |
|                  | <i>Eremophila forrestii</i> subsp. <i>forrestii</i>        |                     |      |
|                  | <i>Eremophila galeata</i>                                  |                     |      |
|                  | <i>Eremophila georgei</i>                                  |                     |      |
|                  | <i>Eremophila glutinosa</i>                                |                     |      |
|                  | <i>Eremophila lachnocalyx</i>                              |                     |      |
|                  | <i>Eremophila latrobei</i> subsp. <i>latrobei</i>          |                     |      |
|                  | <i>Eremophila linearis</i>                                 |                     |      |
|                  | <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i> |                     |      |
|                  | <i>Eremophila pantonii</i>                                 |                     |      |
|                  | <i>Eremophila punicea</i>                                  |                     |      |
|                  | <i>Eremophila spathulata</i>                               |                     |      |
|                  | <i>Eremophila spuria</i>                                   |                     |      |
| Solanaceae       | <i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>        |                     |      |
|                  | <i>Solanum lasiophyllum</i>                                |                     |      |
|                  | <i>Solanum nummularium</i>                                 |                     |      |
| Stylidiaceae     | <i>Stylidium longibracteatum</i>                           |                     |      |
| Zygophyllaceae   | <i>Roepera eichleri</i>                                    |                     |      |
|                  | <i>Roepera ovata</i>                                       |                     |      |

\* Denotes introduced (weed) species



Table J.2: Flora site by species matrix.

| Species  | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPS |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|
| <i>Abutilon cryptopetalum</i>                          |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ?fuscaneura</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     | 2    |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia aneura</i>                                   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 5    |      |      |      |      |      | 1    |     |
| <i>Acacia ?aptaneura</i>                               |     |     |     |     |     |     |     |     |     | 2   |     |      |      |      |      |      |      |      |      | 0.5  |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia aptaneura</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      | 5    |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ayersiana</i> (hybrid)                       |     |     |     | 1.5 |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ayersiana</i> (narrow phyllode variant)      |     |     |     |     |     |     |     |     | 1   |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ?caesaneura</i> (narrow phyllode variant)    |     | 7   | 12  |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 15   |      |      |      |      |     |
| <i>Acacia caesaneura</i> (narrow phyllode variant)     |     |     |     |     |     |     |     |     |     |     |     | 1    |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ?caesaneura x incurvaneura</i>               |     |     |     |     |     |     |     |     |     |     |     |      | 25   |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 2    |     |
| <i>Acacia craspedocarpa</i>                            |     |     |     |     |     |     |     |     |     |     |     | 25   |      |      | 2    |      |      |      |      | 12   |     |      | 4    |      |      | 2    |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |
| <i>Acacia craspedocarpa</i> (hybrid)                   |     |     |     |     |     |     | 0.1 |     |     |     |     |      |      |      | 28   |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.5  |      |      |      |      |      |      |     |
| <i>Acacia craspedocarpa</i> (hybrid: narrow phyllodes) |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      | 0.5  |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 1    |     |
| <i>Acacia ?cuthbertsonii</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 4    |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i>     |     |     |     | 0.5 |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ?fuscaneura</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 0.5  |      |      |      |      |      |      |      |     |
| <i>Acacia fuscaneura</i>                               |     |     |     | 0.1 |     |     |     |     |     |     | 15  |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia grasbyi</i>                                  |     |     |     |     |     |     | 0.5 |     |     |     |     |      |      |      |      |      |      |      |      |      |     | 1.5  |      |      | 2    | 0.1  |      |      |      |      |     |      |      |      |      | 1    |      |      |      |     |
| <i>Acacia incurvaneura</i>                             |     |     |     |     | 1   |     |     |     |     | 5   |     |      |      |      |      |      |      | 3    | 14   |      |     |      |      | 19   |      |      |      |      |      |      |     |      | 5    |      |      |      | 3    |      |      |     |
| <i>Acacia ?incurvaneura x mulganeura</i>               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 6    | 4    |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 1    |     |
| <i>Acacia macraneura</i>                               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 2    |      |      |      |      |      |      |      |     |
| <i>Acacia masliniana</i>                               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 3    |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.5  |     |
| <i>Acacia mulganeura</i>                               |     | 0.1 |     | 6   |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 2    |     |      |      |      | 3    |      |      |      |      |     |
| <i>Acacia pruinocarpa</i>                              |     |     |     |     |     |     |     | 3   |     | 5   |     | 7    |      | 1    |      |      |      | 8    | 4.5  |      |     | 7    |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.5  |      | 3    |     |
| <i>Acacia pteraneura</i>                               |     | 3   |     |     |     |     | 5   | 1.5 | 12  |     |     |      |      | 1.5  | 2    |      | 0.5  |      |      |      |     |      |      |      |      | 1    |      |      |      |      |     | 2    |      |      | 5    | 1.5  |      |      |      |     |
| <i>Acacia quadrimarginea</i>                           |     |     |     |     | 2   |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.5  |      |      |      |      |      |     |
| <i>Acacia ramulosa</i> var. <i>linophylla</i>          |     |     |     |     |     |     |     |     |     |     |     |      | 1    |      |      |      |      |      | 0.5  |      |     | 1    | 1.5  | 2    |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Acacia ramulosa</i> var. <i>ramulosa</i>            |     | 2   | 2   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 1    |     |      |      |      | 0.1  |      |      |      |      |     |
| <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 1    |     |
| <i>Acacia ?sibilans</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 5    |      |      |      | 0.1  |     |
| <i>Acacia synchronicia</i>                             |     |     |     |     |     |     |     |     | 2   |     | 1   |      |      |      |      |      | 1    |      |      |      | 0.1 |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia tetragonophylla</i>                          |     |     |     |     |     | 0.1 |     |     | 2   |     | 0.5 | 2    |      | 1    | 1.5  |      |      | 0.1  |      | 2    |     |      | 1.5  | 2    |      | 0.5  | 0.5  | 0.1  | 0.5  |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia ?umbraculiformis x lapidosa</i>              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 1    |     |
| <i>Acacia xanthocarpa</i>                              |     |     |     |     |     |     |     |     |     |     |     | 1    |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Acacia xiphophylla</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 15   |      | 2    |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Actinobole uliginosum</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |     |
| <i>Alectryon oleifolius</i>                            |     |     |     |     |     |     |     |     | 0.1 |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Alternanthera angustifolia</i>                      |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Alternanthera nodiflora</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |



| Species  | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPs |     |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|
| <i>Asteraceae</i> sp.                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |
| <i>Asteraceae</i> sp.                              |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Atriplex codonocarpa</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.1  |      |      |      |      |     |      | 0.1  |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Boecharvia</i> sp.                              |     |     |     |     |     |     |     |     | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Boerhavia</i> sp.                               |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Brachychiton gregorii</i>                       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Brachyscome ciliaris</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Brassicaceae</i> sp.                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Brunonia australis</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |
| <i>Calandrinia ptychosperma</i>                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      | 0.1  | 0.1  | 0.1  |      |     |      |      |      |      |      |      |      |      |     |
| <i>Calandrinia pumila</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Calandrinia translucens</i>                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      |      |      |     | 0.1  |      |      |      |      |      |      |      | 0.1 |
| <i>Calocephalus multiflorus</i>                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 0.1  |      | 0.1  |      |      |      |      |      |     |
| <i>Calotis hispidula</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Calotis multicaulis</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      | 0.1 |      | 0.1  |      |      |      |      |      |      |     |
| <i>Calotis plumulifera</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |
| <i>Calytrix divergens</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Calytrix uncinata</i>                           |     |     |     |     | 0.5 |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 1    |      |      |      |      |      |      |     |
| <i>Centipeda thespidioides</i>                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.5  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Cephalipterum drummondii</i>                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>*Citrullus colocynthis</i>                      |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Convolvulus clementii</i>                       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Crassula colorata</i> var. <i>acuminata</i>     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>*Cuscuta epithymum</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Cymbopogon ambiguus</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Cymbopogon</i> sp.                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Cynanchum viminale</i> subsp. <i>australe</i>   |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dactyloctenium radulans</i>                     |     |     |     |     |     |     |     |     | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dianella revoluta</i> var. <i>divaricata</i>    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Dichanthium sericeum</i> subsp. <i>humilius</i> |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dissocarpus paradoxus</i>                       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dodonaea petiolaris</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 3    |      |      | 1    |     |
| <i>Dodonaea</i> ? <i>pinifolia</i>                 |     | 0.1 |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dodonaea rigida</i>                             |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Dodonaea viscosa</i> subsp. <i>angustissima</i> |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Drummondita miniata</i> P3                      |     |     |     |     | 0.1 |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |
| <i>Duperreya commixta</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      | 0.1  |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Dysphania rhadinostachya</i>                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Eleocharis acuta</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 2    |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Enchylaena tomentosa</i>                        |     |     |     |     |     |     |     |     | 0.5 |     | 0.1 |      |      |      |      |      | 0.1  |      |      |      |     | 0.1  |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Enteropogon ramosus</i>                         |     |     |     |     |     |     |     |     | 0.1 |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |
| <i>Eragrostis australasica</i>                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 12   |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |



Main Roads Western Australia  
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| Species  | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPS |  |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|--|
| <i>Eragrostis dielsii</i>                                  |     |     |     |     |     |     |     |     | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eragrostis eriopoda</i>                                 |     |     |     |     | 0.1 |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 0.1  |      |      |      |      |      | 0.5  |      |  |
| <i>Eragrostis kennedyae</i>                                |     |     |     |     |     |     |     | 0.1 |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eragrostis</i> sp.                                      |     | 1   | 1   | 0.5 |     | 0.1 |     |     |     | 0.1 |     |      |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eragrostis tenellula</i>                                |     |     |     |     |     |     |     | 0.1 | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eragrostis xerophila</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      | 6   |      |      |      |      |      |      |      |      |  |
| <i>Eremophila exilifolia</i>                               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila flabellata</i>                               |     |     |     |     |     |     |     |     | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila</i> ? <i>forrestii</i>                       |     | 0.5 | 0.5 | 1   |     | 0.1 |     |     |     |     |     |      | 1    |      | 0.5  |      |      |      |      |      |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      | 0.1  | 0.1  |      |      |      |  |
| <i>Eremophila forrestii</i> subsp. <i>forrestii</i>        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 1.5  |     |      |      | 0.5  |      |      |      |      |      |  |
| <i>Eremophila galeata</i>                                  |     |     |     |     |     |     |     | 0.1 | 0.5 |     | 0.1 | 12   |      |      |      |      |      | 0.1  | 0.1  | 0.5  |     | 0.5  | 0.1  | 0.5  | 0.1  | 0.5  | 0.1  | 0.5  |      |      | 0.1 |      |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila georgei</i>                                  |     |     |     |     |     |     |     |     |     |     |     |      | 0.5  |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 0.1  |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila glutinosa</i>                                |     |     | 6   |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila</i> ? <i>jucunda</i> subsp. <i>jucunda</i>   |     |     |     |     |     | 0.1 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila</i> ? <i>lachnocalyx</i>                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila lachnocalyx</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i>          |     |     |     |     |     |     |     |     |     | 0.1 |     |      |      | 0.1  | 0.1  |      |      |      |      |      |     |      |      | 0.1  | 0.5  |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      | 0.1  |  |
| <i>Eremophila linearis</i>                                 |     |     |     |     |     |     |     | 0.5 |     |     |     |      |      | 2    | 0.1  |      |      |      |      |      |     |      |      | 0.1  |      |      |      |      |      |      | 0.1 |      |      |      |      | 0.1  |      |      | 0.1  |  |
| <i>Eremophila</i> ? <i>macmillaniana</i>                   |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i> |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila pantonii</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila</i> ? <i>phyllopoda</i>                      |     |     |     |     |     |     | 2   |     | 1   |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila</i> ? <i>platycalyx</i>                      |     |     |     |     |     |     |     |     |     |     | 0.1 |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |
| <i>Eremophila punicea</i>                                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |  |
| <i>Eremophila glutinosa</i>                                |     |     |     |     | 0.1 |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.1  |      |      |      |      |      |  |
| <i>Eremophila spatulata</i>                                |     |     |     |     |     |     | 0.5 |     |     |     | 2   |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |  |
| <i>Eremophila spuria</i>                                   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.5  |     |      |      |      |      |      |      |      |      |  |
| <i>Eriachne flaccida</i>                                   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      | 5   |      |      |      |      |      |      |      |      |  |
| <i>Eriachne</i> ? <i>helmsii</i>                           |     | 0.1 |     |     | 0.1 | 0.1 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |  |



| Species   | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPS |     |  |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|--|
| <i>Goodenia havilandii</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      | 0.1  |      |     |  |
| <i>Goodenia occidentalis</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      | 0.1 |      | 0.1  |      |      |      |      |      |      |     |  |
| <i>Goodenia</i> sp.                                 |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Grevillea berryana</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |  |
| <i>Grevillea stenobotrya</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 1    |      |     |      |      |      |      |      |      |      | 0.1  |     |  |
| <i>Grevillea striata</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |  |
| <i>Gunniopsis septifraga</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Hakea chordophylla</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |  |
| <i>Hakea preissii</i>                               |     |     |     |     |     |     |     |     | 1   |     |     |      |      |      |      | 2    |      |      |      |      |     |      |      |      |      |      | 0.1  | 1    |      |      | 0.1 |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Haloragis odontocarpa</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |  |
| <i>Hibiscus burtonii</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |     |  |
| <i>Lemooria burkittii</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      | 0.1  | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Lepidium oxytrichum</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      | 0.1  | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Lobelia simulans</i>                             |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      | 0.1  |      |      |      |      |      | 0.1 |  |
| * <i>Lysimachia arvensis</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana appressa</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana carnosae</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Maireana eriosphaera</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana georgei</i>                             |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 0.5  |      |      | 0.1  |     |  |
| <i>Maireana glomerifolia</i>                        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.5  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana planifolia</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana pyramidata</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 0.1  |      | 5    |      |      |     |      |      |      |      |      |      |      |      |     |  |
| ? <i>Maireana</i> sp.                               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana</i> sp.                                 |     |     |     |     |     | 0.1 |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana thesioides</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Maireana tomentosa</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      | 0.1  |      |      |      |      |      | 0.1 | 0.5  |      |      |      |      |      | 0.1  |      |      |     |      | 0.1  |      |      | 0.1  |      |      |      |     |  |
| <i>Maireana triptera</i>                            |     |     |     |     |     |     |     | 0.1 |     |     |     |      |      | 0.1  |      |      | 2    |      |      |      |     | 0.1  | 0.1  |      | 0.1  |      | 0.5  | 0.5  | 0.1  |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Maireana</i> sp.                                 |     |     |     |     |     |     | 0.1 |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Marsdenia australis</i>                          |     |     |     |     | 0.1 |     |     |     |     |     | 0.1 |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Marsilea</i> sp.                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.1  |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      | 0.1 |      |      |      |      |      |      |      |      |     |  |
| <i>Menkea australis</i>                             |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      | 0.1  |      |      |      |      |     |  |
| <i>Micromyrtus sulphurea</i>                        | 1   |     |     |     | 1   |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.5  |      |      |      |      |      |     |  |
| <i>Minuria integerrima</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Mirbelia rhagodioides</i>                        |     |     |     |     | 0.1 |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Myrtaceae</i> sp.                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Nicotiana occidentalis</i> subsp. <i>obliqua</i> |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Omphalolappula concava</i>                       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | 0.1 |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Philotheca brucei</i> subsp. <i>brucei</i>       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Phyllanthus erwinii</i>                          |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Pittosporum angustifolium</i>                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.5  |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Plantago</i> sp. Mt Magnet (A.S. George 6793)    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | 0.1 |      |      |      |      |      |      |      | 0.1  |      |     |      |      | 0.1  |      |      |      | 0.1  |      |     |  |
| <i>Plantago turrifera</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Poaceae</i> sp.                                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      | 0.1  |      |      |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |



| Species  | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPS |     |     |  |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|-----|--|
| <i>Podolepis capillaris</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      | 0.1 |     |  |
| <i>Podotheca gnaphalioides</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |     |  |
| <i>Pogonolepis muelleriana</i>                           |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      | 0.1  |      |      |      | 0.1  | 0.1  |     |      | 0.1  |      |      |      |      |      |      |     |     |  |
| <i>Psyrax latifolia</i>                                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 5    |      |      |      |     |     |  |
| <i>Psyrax rigidula</i>                                   |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 6    |      |      |      | 0.1  |     |     |  |
| <i>Psyrax suaveolens</i>                                 |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Ptilotus aervoides</i>                                |     |     |     |     |     |     |     | 0.1 |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      | 0.1  | 0.1  |      |     | 0.1  |      |      |      |      |      |      |      |     |     |  |
| <i>Ptilotus divaricatus</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      |      |     |     |  |
| <i>Ptilotus exaltatus</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |     |  |
| <i>Ptilotus obovatus</i>                                 |     |     |     |     |     |     | 0.1 | 0.1 | 1   |     | 0.1 | 3    |      | 0.1  | 0.1  |      | 0.5  | 0.1  | 0.1  | 0.1  | 0.1 | 0.5  | 0.1  |      | 0.1  | 0.1  | 1.5  | 1    | 0.1  |      |     | 0.1  |      | 0.1  |      | 0.1  |      | 0.1  | 2    |     |     |  |
| <i>Ptilotus rotundifolius</i>                            |     |     |     |     |     | 0.5 |     | 0.5 |     |     |     |      |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Ptilotus schwartzii</i>                               |     |     |     |     |     | 0.5 |     |     |     | 0.1 |     |      | 0.1  |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      | 0.5  |      |      |      |     |      | 0.1  |      | 0.1  |      |      |      |      |     |     |  |
| <i>Ptilotus schwartzii</i> var. <i>schwartzii</i>        |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      | 0.1  | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Ptilotus</i> sp.                                      |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Ranunculus pentandrus</i> var. <i>platycarpus</i>     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Rhagodia eremaea</i>                                  |     |     |     |     |     |     |     |     | 0.1 |     | 0.1 | 0.1  |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      | 0.1  |      |      | 0.1 |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Rhodanthe ?laevis</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      | 0.1  |      |      |      |      |     |     |  |
| <i>Rhodanthe stricta</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Roebuckiella cheilocarpa</i> var. <i>cheilocarpa</i>  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Roepera eichleri</i>                                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | 0.1 |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Roepera ovata</i>                                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Salsola australis</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | 1   |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Santalum spicatum</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Scaevola spinescens</i>                               |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      | 0.5  |      |      | 0.1  | 0.1  |      |     |      |      |      |      |      | 1    |      |      |     | 0.1 |  |
| <i>Sclerolaena cuneata</i>                               |     |     |     |     |     |     |     |     |     |     |     |      |      | 0.1  | 3    |      |      |      |      |      |     |      | 0.1  |      |      |      | 0.1  | 0.1  | 0.1  |      | 0.1 |      |      |      |      |      |      |      | 0.1  |     |     |  |
| <i>Sclerolaena densiflora</i>                            |     |     |     |     |     |     | 0.1 | 0.1 |     |     |     |      |      | 0.1  |      |      |      |      |      |      | 0.1 |      |      |      |      |      | 0.1  | 0.1  | 0.1  |      | 0.1 |      |      |      |      |      |      |      |      |     |     |  |
| <i>Sclerolaena eriacantha</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.5  |      |      |      |     |      |      |      | 0.1  |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Sclerolaena fusiformis</i>                            |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     | 0.1  |      |      |      |      |      |      |      |     |     |  |
| <i>Sclerolaena patenticuspis</i>                         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     | 0.5  |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Senna artemisioides</i> subsp. <i>helmsii</i>         |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Senna artemisioides</i> subsp. <i>petiolaris</i>      |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Senna artemisioides</i> subsp. <i>x artemisioides</i> |     |     |     |     |     |     | 0.1 |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Senna artemisioides</i> subsp. <i>x sturtii</i>       |     |     |     |     |     |     |     |     | 0.1 |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      | 0.1  |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Senna glaucifolia</i>                                 |     | 0.1 | 0.5 |     |     | 0.1 |     |     |     | 0.1 |     | 0.1  |      |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Senna</i> sp. <i>Meekatharra</i> (E. Bailey 1-26)     |     |     |     |     |     |     | 0.1 |     |     |     | 1   |      |      |      |      |      |      |      |      |      |     | 0.1  |      |      | 0.1  | 0.1  | 0.1  |      |      |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Seringia elliptica</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 0.1  |      |      |      |     |     |  |
| <i>Sida calyxhymenia</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Sida ectogama</i>                                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      | 1    |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     | 0.1 |  |
| <i>Sida fibulifera</i>                                   |     |     |     |     |     |     |     |     |     |     |     | 0.1  |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      | 0.1  |      |     | 0.1  |      |      |      |      |      |      |      |     |     |  |
| <i>Sida</i> sp.  |     |     |     |     |     |     | 0.1 |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     | 0.1  |      |      |      |      |      |      |      |     |     |  |
| <i>Sida</i> sp.  |     |     |     |     |     |     |     |     |     |     |     |      | 0.1  |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 226)  |     |     |     |     |     |     |     |     |     | 0.1 |     |      |      | 0.1  |      |      |      | 0.1  |      |      |     |      |      | 0.1  |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |     |  |
| <i>Sida</i> sp. dark green fruits (S. van Leeuwen 226)   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      | 0.1  |      |      |      |     |     |  |



| Species   | LD1 | MW1 | MW2 | MW3 | MW4 | MW5 | MW6 | MW7 | MW8 | MW9 | MW1 | MW11 | MW12 | MW13 | MW14 | MW15 | MW16 | MW17 | MW18 | MW19 | MW2 | MW21 | MW22 | MW23 | MW24 | MW25 | MW26 | MW27 | MW28 | MW29 | MW3 | MW31 | MW32 | MW33 | MWR1 | MWR2 | MWR4 | MWR6 | OPPS |     |  |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|------|------|------|-----|--|
| <i>Sida</i> sp. <i>Golden calyces glabrous</i> (H.N. Foote 32)  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      |     |      | 0.1  |      |      | 0.1  |      | 0.1  |      | 0.1 |  |
| <i>Sisymbrium</i> ? <i>irio</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Solanum lasiophyllum</i>                                     |     | 0.1 |     |     |     |     | 0.1 |     | 0.1 |     | 0.1 | 0.1  |      |      | 0.1  |      | 0.1  |      |      | 0.1  | 0.1 |      | 0.1  |      | 0.1  |      | 0.1  | 0.1  |      |      | 0.1 | 0.1  | 0.1  |      | 0.1  |      | 0.1  |      |      |     |  |
| <i>Solanum nummularium</i>                                      |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Sonchus</i> sp.  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| * <i>Spergula pentandra</i>                                     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      | 0.1  |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Stenopetalum</i> sp.   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      | 0.1  |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Streptoglossa liatroides</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      | 0.1  |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Stylidium longibracteatum</i>                                |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Teucrium</i> ? <i>racemosum</i>                              |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |  |
| <i>Thryptomene decussata</i>                                    |     |     |     |     |     |     |     |     |     | 0.1 |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1 |  |
| <i>Thysanotus manglesianus</i>                                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      |     |  |
| <i>Tragus australianus</i>                                      |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Trichanthodium exilis</i>                                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Triglochin</i> sp. A Flora of Australia (G.J. Keighery 2477) |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Trigonella suavissima</i>                                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Tripogonella loliiformis</i>                                 |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      | 0.1  |      |      |      |      |      |      |     |  |
| Unknown sp.   |     |     |     |     |     |     |     |     |     |     |     |      | 0.1  |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Velleia</i> ? <i>rosea</i>                                   |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      | 0.1  |      | 0.1 |      | 0.1  |      | 0.1  |      |      |      |      |     |  |
| <i>Velleia rosea</i>  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      | 0.1  |      | 0.1  |      |     |      | 0.1  |      |      |      |      |      |      |     |  |
| <i>Vittadinia eremaea</i>                                       |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | 0.1 |      |      |      |      |      |      |      | 0.1  |      |     |      |      |      |      |      |      |      |      |     |  |
| <i>Waitzia acuminata</i> var. <i>acuminata</i>                  |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |     |      |      |      |      |      |      |      |      | 0.1  |     |      |      |      |      |      |      |      |      | 0.1 |  |



## **Appendix K: Flora Survey Site Data**



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**Site:** MW01**Type:** Quadrat**Date:** 2018-10-10**Described by:** GM**MGA Zone:** 50**Easting:** 663588**Northing:** 7078047**Habitat:** Plain**Soil:** Reddish brown Silty loam**Rock type:** Ironstone

**Vegetation:** *Eucalyptus kingsmillii* scattered low trees over *Acacia* ?*caesaneura* (narrow phyllode variant), *Acacia pteraneura* and *Acacia ramulosa* var. *ramulosa* tall shrubland over *Eriachne helmsii* and *Eragrostis* sp. very open tussock grassland

**Veg Condition:** Very Good**Fire Age:** Very long unburnt**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia</i> ? <i>caesaneura</i> (narrow phyllode variant) | 7         | 3          |
| <i>Acacia mulganeura</i>                                    | 0.1       | 2          |
| <i>Acacia pteraneura</i>                                    | 3         | 3.5        |
| <i>Acacia ramulosa</i> var. <i>ramulosa</i>                 | 2         | 2.3        |
| <i>Aristida contorta</i>                                    | 0.1       | 0.1        |
| <i>Dodonaea</i> ? <i>pinifolia</i>                          | 0.1       | 0.4        |
| <i>Eragrostis</i> sp.                                       | 1         | 0.4        |
| <i>Eremophila</i> ? <i>forrestii</i>                        | 0.5       | 0.5        |
| <i>Eriachne</i> ? <i>helmsii</i>                            | 0.1       | 0.4        |
| <i>Eriachne helmsii</i>                                     | 1         | 0.4        |
| <i>Senna glaucifolia</i>                                    | 0.1       | 1.4        |
| <i>Solanum lasiophyllum</i>                                 | 0.1       | 0.2        |

? denotes unconfirmed



**Site:** MW02

**Type:** Quadrat

**Date:** 2018-10-10

**Described by:** GM

**MGA Zone:** 50

**Easting:** 662829

**Northing:** 7077820

**Habitat:** Plain

**Soil:** Dark reddish brown Silty clay loam

**Rock type:** Ironstone, Quartz

**Vegetation:** *Acacia ?caesaneura* (narrow phyllode variant) and *Acacia ramulosa* var. *ramulosa* tall shrubland over *Eremophila glutinosa*, *Senna glaucifolia* and *Eremophila ?forrestii* open shrubland over *Eriachne helmsii* and *Eragrostis* sp. very open tussock grassland

**Veg Condition:** Very Good

**Fire Age:** Very long unburnt



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia ?caesaneura</i> (narrow phyllode variant) | 12        | 3          |
| <i>Acacia ramulosa</i> var. <i>ramulosa</i>         | 2         | 2.5        |
| <i>Aristida contorta</i>                            | 0.1       | 0.1        |
| <i>Eragrostis</i> sp.                               | 1         | 0.4        |
| <i>Eremophila ?forrestii</i>                        | 0.5       | 1.4        |
| <i>Eremophila glutinosa</i>                         | 6         | 1.6        |
| <i>Eriachne helmsii</i>                             | 1         | 0.5        |
| <i>Senna glaucifolia</i>                            | 0.5       | 1.4        |

? denotes unconfirmed ID



**Site:** MW03

**Type:** Quadrat

**Date:** 2018-10-11

**Described by:** GM

**MGA Zone:** 50

**Easting:** 670247

**Northing:** 7075941

**Habitat:** Plain

**Soil:** Dark reddish brown Silty clay loam

**Rock type:** Quartz

**Vegetation:** *Acacia mulganeura* and *Acacia ayersiana* (hybrid) tall open shrubland over *Acacia cuthbertsonii* subsp. *linearis* scattered shrubs over *Eremophila ?forrestii* scattered low shrubs over *Eriachne helmsii* and *Eragrostis* sp. scattered tussock grasses

**Veg Condition:** Very Good

**Fire Age:** Very long unburnt



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia ayersiana</i> (hybrid)                   | 1.5       | 2.2        |
| <i>Acacia cuthbertsonii</i> subsp. <i>linearis</i> | 0.5       | 1.5        |
| <i>Acacia fuscanaura</i>                           | 0.1       | 3          |
| <i>Acacia mulganeura</i>                           | 6         | 4          |
| <i>Aristida contorta</i>                           | 0.1       | 0.1        |
| <i>Eragrostis</i> sp.                              | 0.5       | 0.4        |
| <i>Eremophila ?forrestii</i>                       | 1         | 0.6        |
| <i>Eriachne helmsii</i>                            | 1         | 0.6        |

? denotes unconfirmed ID



**Site:** MW04

**Type:** Quadrat

**Date:** 2018-10-11

**Described by:** LD

**MGA Zone:** 50

**Easting:** 672089

**Northing:** 7074573

**Habitat:** Risecrest

**Soil:** Light reddish brown Loam

**Rock type:** Calcrete, Dolomite

**Vegetation:** *Acacia quadrimarginea* and *Acacia incurvaneura* open shrubland over *Micromyrtus sulphurea* and *Calytrix uncinata* scattered low shrubs

**Veg Condition:** Very Good

**Fire Age:** No fire evident



**Species List:**

| Name                          | Cover (%) | Height (m) |
|-------------------------------|-----------|------------|
| <i>Acacia incurvaneura</i>    | 1         | 1.8        |
| <i>Acacia quadrimarginea</i>  | 2         | 1.9        |
| <i>Aristida contorta</i>      | 0.1       | 0.1        |
| <i>Calytrix uncinata</i>      | 0.5       | 0.3        |
| <i>Drummondita miniata</i> P3 | 0.1       | 1.2        |
| <i>Eragrostis eriopoda</i>    | 0.1       | 0.2        |
| <i>Eremophila glutinosa</i>   | 0.1       | 1.3        |
| <i>Eriachne ?helmsii</i>      | 0.1       | 0.2        |
| <i>Eriachne helmsii</i>       | 0.1       | 0.3        |
| <i>Marsdenia australis</i>    | 0.1       |            |
| <i>Micromyrtus sulphurea</i>  | 1         | 0.6        |
| <i>Mirbelia rhagodioides</i>  | 0.1       | 0.6        |

? denotes unconfirmed ID



**Site:** MW05

**Type:** Quadrat

**Date:** 2018-10-11

**Described by:** GM

**MGA Zone:** 50

**Easting:** 665044

**Northing:** 7075014

**Habitat:** Plain

**Soil:** Dark reddish brown Silty clay loam

**Rock type:** Dolerite, Ironstone, Quartz

**Vegetation:** *Ptilotus rotundifolius* scattered shrubs over *Ptilotus schwartzii* scattered low shrubs

**Veg Condition:** Good

**Fire Age:** Very long unburnt



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia tetragonophylla</i>                    | 0.1       | 1.4        |
| <i>Aristida contorta</i>                         | 0.1       | 0.1        |
| <i>Eragrostis</i> sp.                            | 0.1       | 0.2        |
| <i>Eremophila</i> ?forrestii                     | 0.1       | 0.3        |
| <i>Eremophila</i> ?jucunda subsp. <i>jucunda</i> | 0.1       | 0.2        |
| <i>Eriachne</i> ?helmsii                         | 0.1       | 0.2        |
| <i>Eriachne helmsii</i>                          | 0.1       | 0.1        |
| <i>Maireana</i> sp.                              | 0.1       | 0.2        |
| <i>Ptilotus rotundifolius</i>                    | 0.5       | 1.2        |
| <i>Ptilotus schwartzii</i>                       | 0.5       | 0.3        |
| <i>Senna glaucifolia</i>                         | 0.1       | 1.1        |

? denotes unconfirmed ID



**Site:** MW06**Type:** Quadrat**Date:** 2018-10-11**Described by:** LD**MGA Zone:** 50**Easting:** 670656**Northing:** 7076868**Habitat:** Plain**Soil:** Orange brown Sandy loam**Rock type:** Quartz, Shale**Vegetation:** *Acacia pteraneura* and *Acacia grasbyi* tall open shrubland over *Eremophila ?phyllopoda* and *Eremophila spathulata* open shrubland**Veg Condition:** Very Good**Fire Age:** No fire evident**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia craspedocarpa</i> (hybrid)                     | 0.1       | 1.5        |
| <i>Acacia grasbyi</i>                                    | 0.5       | 3          |
| <i>Acacia pteraneura</i>                                 | 5         | 3          |
| <i>Aristida contorta</i>                                 | 0.1       | 0.1        |
| <i>Eremophila ?phyllopoda</i>                            | 2         | 1.2        |
| <i>Eremophila spathulata</i>                             | 0.5       | 1.1        |
| <i>Maireana</i> sp.                                      | 0.1       | 0.1        |
| <i>Ptilotus obovatus</i>                                 | 0.1       | 0.3        |
| <i>Sclerolaena densiflora</i>                            | 0.1       | 0.1        |
| <i>Senna artemisioides</i> subsp. x <i>artemisioides</i> | 0.1       | 0.8        |
| <i>Sida</i> sp.  | 0.1       | 0.4        |
| <i>Solanum lasiophyllum</i>                              | 0.1       | 0.4        |

? denotes unconfirmed ID



**Site:** MW07

**Type:** Quadrat

**Date:** 2018-10-12

**Described by:** GM

**MGA Zone:** 50

**Easting:** 596334

**Northing:** 6994055

**Habitat:** Plain

**Soil:** Dark reddish brown Silty loam

**Rock type:** Ironstone, Quartz, Slate

**Vegetation:** *Acacia pruinocarpa* and *Acacia pteraneura* tall open shrubland over *Ptilotus rotundifolius* and *Eremophila linearis* scattered shrubs

**Veg Condition:** Good

**Fire Age:** Very long unburnt



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia pruinocarpa</i>                     | 3         | 4          |
| <i>Acacia pteraneura</i>                      | 1.5       | 2.2        |
| <i>Eragrostis kennedyae</i>                   | 0.1       | 0.1        |
| <i>Eragrostis tenellula</i>                   | 0.1       | 0.4        |
| <i>Eremophila galeata</i>                     | 0.1       | 0.8        |
| <i>Eremophila linearis</i>                    | 0.5       | 1.2        |
| <i>Maireana triptera</i>                      | 0.1       | 0.4        |
| <i>Ptilotus aervoides</i>                     | 0.1       |            |
| <i>Ptilotus obovatus</i>                      | 0.1       | 0.1        |
| <i>Ptilotus rotundifolius</i>                 | 0.5       | 1.2        |
| <i>Sclerolaena densiflora</i>                 | 0.1       | 0.1        |
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) | 0.1       | 0.4        |



**Site:** MW08**Type:** Quadrat**Date:** 2018-10-11**Described by:** LD**MGA Zone:** 50**Easting:** 670417**Northing:** 7078333**Habitat:** Minor drainage**Soil:** Orange brown Sandy clay

**Vegetation:** *Acacia pteraneura*, *Acacia tetragonophylla* and *Acacia synchronicia* (*Hakea preissii* and *Acacia ayersiana* (narrow phyllode variant)) tall shrubland over *Eremophila ?phyllopoda* scattered shrubs over *Ptilotus obovatus* and *Eremophila galeata* low open shrubland over *Aristida contorta* scattered tussock grasses

**Veg Condition:** Very Good**Fire Age:** No fire evident**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia ayersiana</i> (narrow phyllode variant) | 1         | 2.3        |
| <i>Acacia pteraneura</i>                          | 12        | 4          |
| <i>Acacia synchronicia</i>                        | 2         | 3.7        |
| <i>Acacia tetragonophylla</i>                     | 2         | 2.5        |
| <i>Alectryon oleifolius</i>                       | 0.1       | 4          |
| <i>Aristida contorta</i>                          | 1         | 0.1        |
| <i>Boeharvia</i> sp.                              | 0.1       |            |
| <i>Dactyloctenium radulans</i>                    | 0.1       | 0.1        |
| <i>Enchylaena tomentosa</i>                       | 0.5       | 0.4        |
| <i>Enteropogon ramosus</i>                        | 0.1       | 0.3        |
| <i>Eragrostis dielsii</i>                         | 0.1       | 0.1        |
| <i>Eragrostis tenellula</i>                       | 0.1       | 0.2        |
| <i>Eremophila ?phyllopoda</i>                     | 1         | 1.2        |
| <i>Eremophila flabellata</i>                      | 0.1       | 0.2        |
| <i>Eremophila galeata</i>                         | 0.5       | 1.5        |
| <i>Hakea preissii</i>                             | 1         | 3          |



| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Ptilotus obovatus</i>                           | 1         | 0.5        |
| <i>Rhagodia eremaea</i>                            | 0.1       | 1.6        |
| <i>Senna artemisioides</i> subsp. <i>x sturtii</i> | 0.1       | 1.4        |
| <i>Solanum lasiophyllum</i>                        | 0.1       | 0.5        |

? denotes unconfirmed ID



**Site:** MW09**Type:** Quadrat**Date:** 2018-10-12**Described by:** GM**MGA Zone:** 50**Easting:** 596594**Northing:** 6994745**Habitat:** Residual rise**Soil:** Dark reddish brown Silty loam**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia pruinocarpa*, *Acacia incurvaneura* and *Acacia ?aptaneura* tall shrubland**Veg Condition:** Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia ?aptaneura</i>                                 | 2         | 3          |
| <i>Acacia incurvaneura</i>                               | 5         | 3.5        |
| <i>Acacia pruinocarpa</i>                                | 5         | 5          |
| <i>Eragrostis</i> sp.                                    | 0.1       | 0.2        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i>        | 0.1       | 0.4        |
| <i>Euphorbia tannensis</i> subsp. <i>eremophila</i>      | 0.1       | 0.2        |
| <i>Ptilotus schwartzii</i>                               | 0.1       | 0.2        |
| <i>Senna glaucifolia</i>                                 | 0.1       | 1.2        |
| <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) | 0.1       | 0.4        |
| <i>Thryptomene decussata</i>                             | 0.1       | 0.3        |

? denotes unconfirmed ID



**Site:** MW10**Type:** Quadrat**Date:** 2018-10-11**Described by:** LD**MGA Zone:** 50**Easting:** 657929**Northing:** 7073237**Habitat:** Plain**Soil:** Orange brown Sandy loam**Rock type:** Dolomite, Ironstone, Quartz, Shale**Vegetation:** *Acacia fuscaneura* and *Acacia synchronicia* tall shrubland over *Eremophila spathulata*, *Senna* sp. Meekatharra (E. Bailey 1-26) and *Acacia tetragonophylla* open shrubland over *Aristida contorta* scattered grasses**Veg Condition:** Good**Fire Age:** No fire evident**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia fuscaneura</i>                      | 15        | 4.5        |
| <i>Acacia synchronicia</i>                    | 0.1       | 0.4        |
| <i>Acacia tetragonophylla</i>                 | 0.5       | 1.7        |
| <i>Aristida contorta</i>                      | 0.5       | 0.1        |
| <i>Enchylaena tomentosa</i>                   | 0.1       | 0.4        |
| <i>Eremophila ?platycalyx</i>                 | 0.1       | 0.5        |
| <i>Eremophila galeata</i>                     | 0.1       | 1.3        |
| <i>Eremophila spathulata</i>                  | 2         | 1.2        |
| <i>Exocarpos</i> sp.                          | 0.1       | 0.3        |
| <i>Marsdenia australis</i>                    | 0.1       |            |
| <i>Ptilotus obovatus</i>                      | 0.1       | 0.2        |
| <i>Rhagodia eremaea</i>                       | 0.1       | 0.2        |
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) | 1         | 1.2        |
| <i>Solanum lasiophyllum</i>                   | 0.1       | 0.3        |

? denotes unconfirmed ID



**Site:** MW11**Type:** Quadrat**Date:** 2018-10-12**Described by:** GM**MGA Zone:** 50**Easting:** 596238**Northing:** 6995105**Habitat:** Minor drainage**Soil:** Dark reddish brown Sandy clay loam**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia pruinocarpa* low open woodland over *Acacia craspedocarpa*, *Eremophila galeata* (*Acacia tetragonophylla*, *Acacia caesaneura* (narrow phyllode variant) and *Acacia xanthocarpa*) tall open scrub over *Ptilotus obovatus* low open shrubland**Veg Condition:** Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Abutilon cryptopetalum</i>                      | 0.1       | 0.3        |
| <i>Acacia caesaneura</i> (narrow phyllode variant) | 1         | 4.5        |
| <i>Acacia craspedocarpa</i>                        | 25        | 5          |
| <i>Acacia pruinocarpa</i>                          | 7         | 6          |
| <i>Acacia tetragonophylla</i>                      | 2         | 3          |
| <i>Acacia xanthocarpa</i>                          | 1         | 2.5        |
| <i>Alectryon oleifolius</i>                        | 0.1       | 0.5        |
| <i>Aristida contorta</i>                           | 0.1       | 0.1        |
| <i>Asteraceae</i> sp.                              | 0.1       | 0.2        |
| <i>Boerhavia</i> sp.                               | 0.1       | 0.1        |
| <i>Cynanchum viminale</i> subsp. <i>australe</i>   | 0.1       | 0.5        |
| <i>Enteropogon ramosus</i>                         | 0.1       | 0.2        |
| <i>Eremophila</i> ? <i>Macmillaniana</i>           | 0.1       | 1.1        |
| <i>Eremophila galeata</i>                          | 12        | 2.5        |
| <i>Euphorbia</i> sp.                               | 0.1       | 0.1        |



| Name                        | Cover (%) | Height (m) |
|-----------------------------|-----------|------------|
| <i>Goodenia</i> sp.         | 0.1       | 0.3        |
| <i>Psydrax rigidula</i>     | 0.1       | 0.6        |
| <i>Psydrax suaveolens</i>   | 0.1       | 0.4        |
| <i>Ptilotus obovatus</i>    | 3         | 0.5        |
| <i>Ptilotus</i> sp.         | 0.1       | 0.1        |
| <i>Rhagodia eremaea</i>     | 0.1       | 0.4        |
| <i>Senna glaucifolia</i>    | 0.1       | 1.3        |
| <i>Sida fibulifera</i>      | 0.1       | 0.1        |
| <i>Solanum lasiophyllum</i> | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW12

**Type:** Quadrat

**Date:** 2018-10-13

**Described by:** GM

**MGA Zone:** 50

**Easting:** 593864

**Northing:** 6967027

**Habitat:** Riseslope

**Soil:** Dark reddish brown Silty loam

**Rock type:** Ironstone

**Vegetation:** *Acacia ?caesaneura* x *incurvaneura* and *Acacia ramulosa* var. *linophylla* tall shrubland over *Eremophila ?forrestii* and *Eremophila georgei* scattered low shrubs

**Veg Condition:** Good

**Fire Age:** Very long unburnt



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia ?caesaneura</i> x <i>incurvaneura</i> | 25        | 4          |
| <i>Acacia ramulosa</i> var. <i>linophylla</i>   | 1         | 2.5        |
| <i>Aristida contorta</i>                        | 0.1       | 0.1        |
| <i>Eremophila ?forrestii</i>                    | 1         | 0.4        |
| <i>Eremophila georgei</i>                       | 0.5       | 0.8        |
| <i>Ptilotus schwartzii</i>                      | 0.1       | 0.4        |
| <i>Sida</i> sp.                                 | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW13**Type:** Quadrat**Date:** 2018-10-12**Described by:** GM**MGA Zone:** 50**Easting:** 596985**Northing:** 6996167**Habitat:** Plain**Soil:** Dark reddish brown Sandy loam**Rock type:** Ironstone, Quartz**Vegetation:** *Eremophila linearis*, *Acacia pteraneura* and *Acacia pruinocarpa* tall open shrubland**Veg Condition:** Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia pruinocarpa</i>                                | 1         | 4          |
| <i>Acacia pteraneura</i>                                 | 1.5       | 3          |
| <i>Acacia tetragonophylla</i>                            | 1         | 2.5        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i>        | 0.1       | 0.3        |
| <i>Eremophila linearis</i>                               | 2         | 2.2        |
| <i>Maireana planifolia</i>                               | 0.1       | 0.4        |
| <i>Maireana triptera</i>                                 | 0.1       | 0.2        |
| <i>Ptilotus obovatus</i>                                 | 0.1       | 0.3        |
| <i>Sclerolaena cuneata</i>                               | 0.1       | 0.1        |
| <i>Sclerolaena densiflora</i>                            | 0.1       | 0.1        |
| <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) | 0.1       | 0.3        |
| Unknown sp.  | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW14**Type:** Quadrat**Date:** 2018-10-13**Described by:** LD**MGA Zone:** 50**Easting:** 594198**Northing:** 6966651**Habitat:** Drainage depression**Soil:** Orange brown Sandy clay loam**Rock type:** Dolerite, Ironstone**Vegetation:** *Acacia craspedocarpa* (hybrid) (*Acacia craspedocarpa*, *Acacia pteraneura* and *Acacia tetragonophylla*) tall open scrub over *Sida ectogama* and *Eremophila ?forrestii* scattered shrubs**Veg Condition:** Good**Fire Age:** No fire evident**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia craspedocarpa</i>                       | 2         | 3.2        |
| <i>Acacia craspedocarpa</i> (hybrid)              | 28        | 4          |
| <i>Acacia pteraneura</i>                          | 2         | 3          |
| <i>Acacia tetragonophylla</i>                     | 1.5       | 3          |
| <i>Eremophila ?forrestii</i>                      | 0.5       | 1.2        |
| <i>Eremophila georgei</i>                         | 0.1       | 0.3        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i> | 0.1       | 1.2        |
| <i>Eremophila linearis</i>                        | 0.1       | 0.9        |
| <i>Maireana tomentosa</i>                         | 0.1       | 0.2        |
| <i>Ptilotus obovatus</i>                          | 0.1       | 0.3        |
| <i>Sida ectogama</i>                              | 1         | 1.2        |
| <i>Solanum lasiophyllum</i>                       | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW15

**Type:** Quadrat

**Date:** 2018-10-12

**Described by:** GM

**MGA Zone:** 50

**Easting:** 597350

**Northing:** 6995849

**Habitat:** Inundated area

**Soil:** Dark reddish brown Silty clay loam

**Rock type:** Ironstone, Quartz

**Vegetation:** *Hakea preissii* and *Pittosporum angustifolium* tall open shrubland over *Sclerolaena cuneata* low open shrubland over *Eragrostis australasica* open tussock grassland with *Eleocharis acuta* very open sedgeland

**Veg Condition:** Poor

**Fire Age:** Very long unburnt



**Species List:**

| Name                             | Cover (%) | Height (m) |
|----------------------------------|-----------|------------|
| <i>Atriplex codonocarpa</i>      | 0.1       | 0.1        |
| <i>Dissocarpus paradoxus</i>     | 0.1       | 0.1        |
| <i>Eleocharis acuta</i>          | 2         | 0.1        |
| <i>Eragrostis australasica</i>   | 0.1       | 0.4        |
| <i>Exocarpos aphyllus</i>        | 0.1       | 2.2        |
| <i>Hakea preissii</i>            | 2         | 3          |
| <i>Marsilea</i> sp.              | 0.1       | 0.1        |
| <i>Minuria integerrima</i>       | 0.1       | 0.1        |
| <i>Pittosporum angustifolium</i> | 0.5       | 3          |
| <i>Sclerolaena cuneata</i>       | 3         | 0.2        |
| <i>Streptoglossa liatroides</i>  | 0.1       | 0.1        |



**Site:** MW16

**Type:** Quadrat

**Date:** 2018-10-13

**Described by:** GM

**MGA Zone:** 50

**Easting:** 594130

**Northing:** 6966155

**Habitat:** Plain

**Soil:** Dark reddish brown Loam sand

**Rock type:** Ironstone, Quartz

**Vegetation:** *Acacia masliniana*, *Acacia synchronicia* and *Acacia pteraneura* tall open shrubland over *Maireana triptera*, *Ptilotus obovatus* and *Sclerolaena eriacantha* low open shrubland

**Veg Condition:** Good

**Fire Age:** Very long unburnt



**Species List:**

| Name                            | Cover (%) | Height (m) |
|---------------------------------|-----------|------------|
| ? <i>Maireana</i> sp.           | 0.1       | 0.1        |
| <i>Acacia masliniana</i>        | 3         | 2.8        |
| <i>Acacia pteraneura</i>        | 0.5       | 4          |
| <i>Acacia synchronicia</i>      | 1         | 2.5        |
| <i>Aristida contorta</i>        | 0.1       | 0.2        |
| <i>Cephalopterum drummondii</i> | 0.1       | 0.1        |
| <i>Enchylaena tomentosa</i>     | 0.1       | 0.3        |
| <i>Maireana appressa</i>        | 0.1       | 0.2        |
| <i>Maireana triptera</i>        | 2         | 0.3        |
| <i>Ptilotus obovatus</i>        | 0.5       | 0.4        |
| <i>Scaevola spinescens</i>      | 0.1       | 0.4        |
| <i>Sclerolaena eriacantha</i>   | 0.5       | 0.1        |
| <i>Solanum lasiophyllum</i>     | 0.1       | 0.1        |
| <i>Stenopetalum</i> sp.         | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW17**Type:** Quadrat**Date:** 2018-10-12**Described by:** GM**MGA Zone:** 50**Easting:** 596956**Northing:** 6995146**Habitat:** Plain**Soil:** Dark reddish brown Silty loam**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia pruinocarpa* low open woodland over *Acacia aptaneura* and *Acacia incurvaneura* tall open shrubland**Veg Condition:** Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia aptaneura</i>                                  | 5         | 2.5        |
| <i>Acacia incurvaneura</i>                               | 3         | 2.5        |
| <i>Acacia pruinocarpa</i>                                | 8         | 6          |
| <i>Acacia tetragonophylla</i>                            | 0.1       | 2          |
| <i>Eragrostis</i> sp.                                    | 0.1       | 0.2        |
| <i>Eremophila galeata</i>                                | 0.1       | 0.1        |
| <i>Maireana georgei</i>                                  | 0.1       | 0.3        |
| <i>Ptilotus obovatus</i>                                 | 0.1       | 0.3        |
| <i>Ptilotus rotundifolius</i>                            | 0.1       | 1.4        |
| <i>Senna glaucifolia</i>                                 | 0.1       | 0.4        |
| <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) | 0.1       | 0.2        |

? denotes unconfirmed ID



**Site:** MW18

**Type:** Quadrat

**Date:** 2018-10-13

**Described by:** LD

**MGA Zone:** 50

**Easting:** 584262

**Northing:** 6927124

**Habitat:** Plain

**Soil:** Orange brown Sandy loam

**Rock type:** Ironstone

**Vegetation:** *Acacia pruinocarpa* low open woodland over *Acacia incurvaneura* (*Acacia ramulosa* var. *linophylla*) tall shrubland over

**Veg Condition:** Very Good

**Fire Age:** No fire evident



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia craspedocarpa</i> (hybrid: narrow phyllodes) | 0.5       | 3.5        |
| <i>Acacia incurvaneura</i>                             | 14        | 4.2        |
| <i>Acacia pruinocarpa</i>                              | 4.5       | 5          |
| <i>Acacia ramulosa</i> var. <i>linophylla</i>          | 0.5       | 3          |
| <i>Eremophila galeata</i>                              | 0.1       | 0.4        |
| <i>Poaceae</i> sp.                                     | 0.1       | 0.3        |
| <i>Ptilotus obovatus</i>                               | 0.1       | 0.4        |



**Site:** MW19

**Type:** Quadrat

**Date:** 2018-10-12

**Described by:** GM

**MGA Zone:** 50

**Easting:** 598286

**Northing:** 6992610

**Habitat:** Plain

**Soil:** Dark reddish brown Silty clay loam

**Rock type:** Ironstone, Quartz

**Vegetation:** *Acacia craspedocarpa* and *Acacia tetragonophylla* tall shrubland over *Acacia ?aptaneura* and *Eremophila galeata* scattered shrubs

**Veg Condition:** Good

**Fire Age:** Very long unburnt



**Species List:**

| Name                          | Cover (%) | Height (m) |
|-------------------------------|-----------|------------|
| <i>Acacia ?aptaneura</i>      | 0.5       | 1.3        |
| <i>Acacia craspedocarpa</i>   | 12        | 3          |
| <i>Acacia tetragonophylla</i> | 2         | 2.1        |
| <i>Aristida contorta</i>      | 0.1       | 0.1        |
| <i>Duperreya commixta</i>     | 0.1       |            |
| <i>Eremophila galeata</i>     | 0.5       | 1.2        |
| <i>Ptilotus obovatus</i>      | 0.1       | 0.5        |
| <i>Sida</i> sp.               | 0.1       | 0.4        |
| <i>Solanum lasiophyllum</i>   | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW20

**Type:** Quadrat

**Date:** 2018-10-13

**Described by:** LD

**MGA Zone:** 50

**Easting:** 585600

**Northing:** 6926975

**Habitat:** calcrete plain

**Soil:** Pinkish white Sandy clay

**Rock type:** Calcrete, ronstone

**Vegetation:** *Salsola australis* and *Sclerolaena patenticuspis* scattered low shrubs over

**Veg Condition:** Very Good

**Fire Age:** No fire evident



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia synchronicia</i>                       | 0.1       | 0.6        |
| <i>Aristida contorta</i>                         | 0.1       | 0.1        |
| <i>Maireana tomentosa</i>                        | 0.1       | 0.05       |
| <i>Omphalolappula concava</i>                    | 0.1       | 0.05       |
| <i>Plantago</i> sp. Mt Magnet (A.S. George 6793) | 0.1       | 0.05       |
| <i>Ptilotus obovatus</i>                         | 0.1       | 0.1        |
| <i>Roepera eichleri</i>                          | 0.1       | 0.1        |
| <i>Salsola australis</i>                         | 1         | 0.1        |
| <i>Sclerolaena densiflora</i>                    | 0.1       | 0.1        |
| <i>Sclerolaena patenticuspis</i>                 | 0.5       | 0.1        |
| <i>Solanum lasiophyllum</i>                      | 0.1       | 0.1        |
| <i>Vittadinia eremaea</i>                        | 0.1       | 0.05       |



**Site:** MW21

**Type:** Quadrat

**Date:** 2018-10-13

**Described by:** GM

**MGA Zone:** 50

**Easting:** 583995

**Northing:** 6927426

**Habitat:** Plain

**Soil:** Dark reddish brown Sandy clay loam

**Rock type:** Ironstone, Quartz

**Vegetation:** *Acacia pruinocarpa* low open woodland over *Acacia ?fuscanaura* and *Acacia grasbyi* tall shrubs over *Acacia tetragonophylla* scattered shrubs over *Maireana tomentosa* and *Ptilotus obovatus* scattered low shrubs

**Veg Condition:** Very Good

**Fire Age:** Very long unburnt



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia ?fuscanaura</i>                     | 2         | 4.5        |
| <i>Acacia grasbyi</i>                         | 1.5       | 2.1        |
| <i>Acacia pruinocarpa</i>                     | 7         | 5          |
| <i>Acacia ramulosa</i> var. <i>linophylla</i> | 1         | 2.2        |
| <i>Acacia tetragonophylla</i>                 | 1.5       | 1.5        |
| <i>Enchylaena tomentosa</i>                   | 0.1       | 0.5        |
| <i>Eremophila galeata</i>                     | 0.5       | 0.5        |
| <i>Maireana tomentosa</i>                     | 0.5       | 0.4        |
| <i>Maireana triptera</i>                      | 0.1       | 0.2        |
| <i>Ptilotus obovatus</i>                      | 0.1       | 0.3        |
| <i>Ptilotus schwartzii</i>                    | 0.1       | 0.1        |
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) | 0.1       | 0.7        |

? denotes unconfirmed ID



**Site:** MW22**Type:** Quadrat**Date:** 2018-10-14**Described by:** LD**MGA Zone:** 50**Easting:** 580017**Northing:** 6928348**Habitat:** Minor drainage**Soil:** Light reddish brown Sandy clay**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia ?incurvaneura* x *mulganeura*, *Acacia craspedocarpa* and *Acacia tetragonophylla* tall shrubland over *Centipeda thespidioides* scattered herbs**Veg Condition:** Good**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| * <i>Citrullus colocynthis</i>                  | 0.1       |            |
| * <i>Cuscuta epithymum</i>                      | 0.1       |            |
| * <i>Lysimachia arvensis</i>                    | 0.1       | 0.1        |
| * <i>Spergula pentandra</i>                     | 0.1       | 0.1        |
| <i>Abutilon cryptopetalum</i>                   | 0.1       | 0.3        |
| <i>Acacia ?incurvaneura</i> x <i>mulganeura</i> | 6         | 4          |
| <i>Acacia craspedocarpa</i>                     | 4         | 4          |
| <i>Acacia ramulosa</i> var. <i>linophylla</i>   | 1.5       | 2.3        |
| <i>Acacia tetragonophylla</i>                   | 2         | 2.1        |
| <i>Alternanthera angustifolia</i>               | 0.1       | 0.1        |
| <i>Alternanthera nodiflora</i>                  | 0.1       | 0.2        |
| <i>Atriplex codonocarpa</i>                     | 0.1       | 0.1        |
| <i>Brachyscome ciliaris</i>                     | 0.1       | 0.1        |
| <i>Calandrinia ptychosperma</i>                 | 0.1       | 0.05       |
| <i>Calandrinia pumila</i>                       | 0.1       | 0.05       |
| <i>Calotis hispidula</i>                        | 0.1       | 0.1        |



| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Calotis multicaulis</i>                                      | 0.1       | 0.1        |
| <i>Centipeda thespidioides</i>                                  | 0.5       | 0.2        |
| <i>Dichanthium sericeum</i> subsp. <i>humilius</i>              | 0.1       | 0.1        |
| <i>Duperreya commixta</i>                                       | 0.1       |            |
| <i>Dysphania rhadinostachya</i>                                 | 0.1       | 0.2        |
| <i>Eragrostis dielsii</i>                                       | 0.1       | 0.1        |
| <i>Eragrostis tenellula</i>                                     | 0.1       | 0.1        |
| <i>Eremophila galeata</i>                                       | 0.1       | 0.4        |
| <i>Erodium</i> ? <i>cygnorum</i>                                | 0.1       | 0.1        |
| <i>Goodenia havilandii</i>                                      | 0.1       | 0.1        |
| <i>Lemooria burkittii</i>                                       | 0.1       | 0.05       |
| <i>Lepidium oxytrichum</i>                                      | 0.1       | 0.1        |
| <i>Maireana triptera</i>  | 0.1       | 0.1        |
| <i>Marsilea</i> sp.   | 0.1       | 0.1        |
| <i>Nicotiana occidentalis</i> subsp. <i>obliqua</i>             | 0.1       | 0.4        |
| <i>Phyllanthus erwinii</i>                                      | 0.1       | 0.1        |
| <i>Plantago turrifera</i>                                       | 0.1       | 0.1        |
| <i>Pogonolepis muelleriana</i>                                  | 0.1       | 0.1        |
| <i>Psydrax suaveolens</i>                                       | 0.1       | 0.6        |
| <i>Ptilotus aervoides</i>                                       | 0.1       | 0.1        |
| <i>Ptilotus obovatus</i>  | 0.1       | 0.2        |
| <i>Ranunculus pentandrus</i> var. <i>platycarpus</i>            | 0.1       | 0.1        |
| <i>Rhagodia eremaea</i>   | 0.1       | 0.4        |
| <i>Rhodanthe stricta</i>  | 0.1       | 0.2        |
| <i>Roepera ovata</i>  | 0.1       | 0.1        |
| <i>Sclerolaena cuneata</i>                                      | 0.1       | 0.3        |
| <i>Sida fibulifera</i>  | 0.1       | 0.2        |
| <i>Sisymbrium</i> ? <i>irio</i>                                 | 0.1       | 0.1        |
| <i>Solanum lasiophyllum</i>                                     | 0.1       | 0.3        |
| <i>Sonchus</i> sp.  | 0.1       | 0.3        |
| <i>Tragus australianus</i>                                      | 0.1       | 0.1        |
| <i>Trichanthodium exilis</i>                                    | 0.1       |            |
| <i>Triglochin</i> sp. A Flora of Australia (G.J. Keighery 2477) | 0.1       | 0.1        |
| <i>Trigonella suavissima</i>                                    | 0.1       | 0.1        |

\* denotes weed species

? denotes unconfirmed ID



**Site:** MW23**Type:** Quadrat**Date:** 2018-10-14**Described by:** GM**MGA Zone:** 50**Easting:** 580030**Northing:** 6929023**Habitat:** Plain**Soil:** Dark reddish brown Sandy loam**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia incurvaneura*, *Acacia ?incurvaneura* x *mulganeura* and *Acacia ramulosa* var. *linophylla* tall shrubland over *Eremophila galeata* scattered shrubs over *Ptilotus schwartzii* var. *schwartzii* scattered herbs**Veg Condition:** Very Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia ?incurvaneura</i> x <i>mulganeura</i>          | 4         | 4          |
| <i>Acacia incurvaneura</i>                               | 19        | 4          |
| <i>Acacia ramulosa</i> var. <i>linophylla</i>            | 2         | 2.5        |
| <i>Eremophila ?forrestii</i>                             | 0.1       | 0.4        |
| <i>Eremophila galeata</i>                                | 0.5       | 1.3        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i>        | 0.1       | 1.1        |
| <i>Eremophila linearis</i>                               | 0.1       | 1          |
| <i>Poaceae</i> sp.                                       | 0.1       | 0.2        |
| <i>Ptilotus schwartzii</i> var. <i>schwartzii</i>        | 0.1       | 0.3        |
| <i>Sida</i> ?sp. dark green fruits (S. van Leeuwen 2260) | 0.1       | 0.6        |

? denotes unconfirmed ID



**Site:** MW24**Type:** Quadrat**Date:** 2018-10-14**Described by:** LD**MGA Zone:** 50**Easting:** 579644**Northing:** 6929248**Habitat:** Plain**Soil:** Orange brown Sandy loam**Rock type:** Dolerite, Ironstone, Quartz**Vegetation:** *Acacia xiphophylla* and *Acacia grasbyi* tall shrubland over *Acacia tetragonophylla* scattered shrubs over *Eremophila latrobei* subsp. *latrobei*, *Scaevola spinescens* and *Sclerolaena* spp. scattered low shrubs**Veg Condition:** Very Good**Fire Age:** No fire evident**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia grasbyi</i>                             | 2         | 2.1        |
| <i>Acacia tetragonophylla</i>                     | 0.5       | 1.2        |
| <i>Acacia xiphophylla</i>                         | 15        | 3          |
| <i>Cynanchum viminale</i> subsp. <i>australe</i>  | 0.1       | 0.4        |
| <i>Eremophila</i> ? <i>platycalyx</i>             | 0.1       | 0.4        |
| <i>Eremophila galeata</i>                         | 0.1       | 0.5        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i> | 0.5       | 0.9        |
| <i>Maireana carnososa</i>                         | 0.1       | 0.1        |
| <i>Maireana planifolia</i>                        | 0.1       | 0.4        |
| <i>Maireana thesioides</i>                        | 0.1       | 0.5        |
| <i>Maireana triptera</i>                          | 0.1       | 0.2        |
| <i>Marsdenia australis</i>                        | 0.1       |            |
| <i>Pogonolepis muelleriana</i>                    | 0.1       | 0.05       |
| <i>Ptilotus obovatus</i>                          | 0.1       | 0.3        |
| <i>Ptilotus schwartzii</i> var. <i>schwartzii</i> | 0.1       | 0.2        |
| <i>Scaevola spinescens</i>                        | 0.5       | 0.8        |



| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Sclerolaena eriacantha</i>                      | 0.1       | 0.1        |
| <i>Sclerolaena fusiformis</i>                      | 0.1       | 0.2        |
| <i>Senna artemisioides</i> subsp. <i>x sturtii</i> | 0.1       | 0.1        |
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26)      | 0.1       | 0.3        |
| <i>Solanum lasiophyllum</i>                        | 0.1       | 0.4        |

? denotes unconfirmed ID



**Site:** MW25

**Type:** Quadrat

**Date:** 2018-10-14

**Described by:** GM

**MGA Zone:** 50

**Easting:** 579577

**Northing:** 6928973

**Habitat:** Plain

**Soil:** Dark reddish brown Silty loam

**Rock type:** Ironstone, Quartz

**Vegetation:** *Acacia pteraneura* scattered tall shrubs over *Acacia craspedocarpa*, *Acacia tetragonophylla* and *Eremophila galeata* open shrubland over *Ptilotus schwartzii* scattered herbs

**Veg Condition:** Very Good

**Fire Age:** Very long unburnt



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia craspedocarpa</i>                      | 2         | 1.6        |
| <i>Acacia grasbyi</i>                            | 0.1       | 0.4        |
| <i>Acacia pteraneura</i>                         | 1         | 3          |
| <i>Acacia tetragonophylla</i>                    | 0.5       | 1.5        |
| <i>Cynanchum viminale</i> subsp. <i>australe</i> | 0.1       | 1.4        |
| <i>Eremophila galeata</i>                        | 0.5       | 1.8        |
| <i>Ptilotus obovatus</i>                         | 0.1       | 0.4        |
| <i>Ptilotus schwartzii</i>                       | 0.5       | 0.4        |
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26)    | 0.1       | 0.4        |



**Site:** MW26**Type:** Quadrat**Date:** 2018-10-15**Described by:** LD**MGA Zone:** 50**Easting:** 588530**Northing:** 6931808**Habitat:** Plain**Soil:** Orange brown Sandy clay loam**Rock type:** Ironstone, Quartz**Vegetation:** *Acacia xiphophylla* tall open shrubland over *Ptilotus obovatus* and *Maireana triptera* scattered low shrubs**Veg Condition:** Very Good**Fire Age:** No fire evident**Species List:**

| Name                                     | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Acacia tetragonophylla</i>            | 0.1       | 0.5        |
| <i>Acacia xiphophylla</i>                | 2         | 3          |
| <i>Calandrinia Ptychosperma</i>          | 0.1       | 0.05       |
| <i>Cephalopterum drummondii</i>          | 0.1       | 0.1        |
| <i>Cymbopogon</i> sp.                    | 0.1       | 0.3        |
| <i>Eremophila</i> ? <i>macmillaniana</i> | 0.1       | 0.6        |
| <i>Eremophila exilifolia</i>             | 0.1       | 0.6        |
| <i>Eremophila galeata</i>                | 0.1       | 0.6        |
| <i>Hakea preissii</i>                    | 0.1       | 0.4        |
| <i>Maireana pyramidata</i>               | 0.1       | 0.6        |
| <i>Maireana triptera</i>                 | 0.5       | 0.3        |
| <i>Ptilotus aervoides</i>                | 0.1       | 0.05       |
| <i>Ptilotus obovatus</i>                 | 1.5       | 0.6        |
| <i>Roepera eichleri</i>                  | 0.1       | 0.05       |
| <i>Sclerolaena cuneata</i>               | 0.1       | 0.1        |
| <i>Sclerolaena densiflora</i>            | 0.1       | 0.1        |



| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Senna</i> sp. Meekatharra (E. Bailey 1-26) | 0.1       | 0.4        |
| <i>Solanum lasiophyllum</i>                   | 0.1       | 0.2        |
| <i>Velleia rosea</i>                          | 0.1       | 0.05       |

? denotes unconfirmed ID



**Site:** MW27**Type:** Quadrat**Date:** 2018-10-14**Described by:** GM**MGA Zone:** 50**Easting:** 587809**Northing:** 6931326**Habitat:** Plain**Soil:** Dark reddish brown Silty loam**Rock type:** Ironstone, Quartz**Vegetation:** *Hakea preissii* and *Acacia tetragonophylla* scattered tall shrubs over *Ptilotus obovatus*, *Eremophila galeata* and *Maireana triptera* scattered low shrubs**Veg Condition:** Very Good**Fire Age:** Very long unburnt**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>*Spergula pentandra</i>                     | 0.1       | 0.1        |
| <i>Acacia tetragonophylla</i>                  | 0.5       | 2          |
| <i>Calandrinia ptychosperma</i>                | 0.1       | 0.1        |
| <i>Calandrinia translucens</i>                 | 0.1       | 0.1        |
| <i>Crassula colorata</i> var. <i>acuminata</i> | 0.1       | 0.1        |
| <i>Enchylaena tomentosa</i>                    | 0.1       | 0.3        |
| <i>Eremophila galeata</i>                      | 0.5       | 0.5        |
| <i>Hakea preissii</i>                          | 1         | 2.8        |
| <i>Lemooria burkittii</i>                      | 0.1       | 0.2        |
| <i>Lepidium oxytrichum</i>                     | 0.1       | 0.1        |
| <i>Maireana tomentosa</i>                      | 0.1       | 0.2        |
| <i>Maireana triptera</i>                       | 0.5       | 0.2        |
| <i>Pogonolepis muelleriana</i>                 | 0.1       | 0.1        |
| <i>Ptilotus aervoides</i>                      | 0.1       | 0.1        |
| <i>Ptilotus obovatus</i>                       | 1         | 0.6        |
| <i>Rhagodia eremaea</i>                        | 0.1       | 0.4        |



| Name                          | Cover (%) | Height (m) |
|-------------------------------|-----------|------------|
| <i>Scaevola spinescens</i>    | 0.1       | 0.4        |
| <i>Sclerolaena cuneata</i>    | 0.1       | 0.1        |
| <i>Sclerolaena densiflora</i> | 0.1       | 0.1        |
| <i>Sida fibulifera</i>        | 0.1       | 0.1        |
| <i>Solanum lasiophyllum</i>   | 0.1       | 0.2        |

\* denotes weed species



**Site:** MW28**Type:** Quadrat**Date:** 2018-10-15**Described by:** LD**MGA Zone:** 50**Easting:** 589393**Northing:** 6932415**Habitat:** Drainage depression**Soil:** Orange brown Sandy clay loam**Rock type:** Calcrete, Ironstone, Quartz, Shale**Vegetation:** *Maireana pyramidata* and *Maireana glomerifolia* open shrubland**Veg Condition:** Very Good**Fire Age:** No fire evident**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| ? <i>Maireana</i> sp.                            | 0.1       | 0.05       |
| <i>Atriplex codonocarpa</i>                      | 0.1       | 0.1        |
| <i>Calandrinia ptychosperma</i>                  | 0.1       | 0.05       |
| <i>Calotis plumulifera</i>                       | 0.1       | 0.05       |
| <i>Dissocarpus paradoxus</i>                     | 0.1       | 0.05       |
| <i>Gunniopsis septifraga</i>                     | 0.1       | 0.05       |
| <i>Lemooria burkittii</i>                        | 0.1       | 0.05       |
| <i>Lepidium oxytrichum</i>                       | 0.1       | 0.05       |
| <i>Maireana appressa</i>                         | 0.1       | 0.2        |
| <i>Maireana eriosphaera</i>                      | 0.1       | 0.2        |
| <i>Maireana glomerifolia</i>                     | 0.5       | 0.3        |
| <i>Maireana pyramidata</i>                       | 5         | 1.1        |
| <i>Maireana triptera</i>                         | 0.1       | 0.2        |
| <i>Plantago</i> sp. Mt Magnet (A.S. George 6793) | 0.1       | 0.05       |
| <i>Podolepis capillaris</i>                      | 0.1       | 0.3        |
| <i>Pogonolepis muelleriana</i>                   | 0.1       | 0.05       |



| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Ptilotus obovatus</i>                            | 0.1       | 0.4        |
| <i>Scaevola spinescens</i>                          | 0.1       | 0.6        |
| <i>Sclerolaena cuneata</i>                          | 0.1       | 0.2        |
| <i>Sclerolaena densiflora</i>                       | 0.1       | 0.1        |
| <i>Sclerolaena eriacantha</i>                       | 0.1       | 0.1        |
| <i>Senna artemisioides</i> subsp. <i>helmsii</i>    | 0.1       | 0.2        |
| <i>Senna artemisioides</i> subsp. <i>petiolaris</i> | 0.1       | 0.2        |
| <i>Velleia rosea</i>                                | 0.1       | 0.05       |
| <i>Vittadinia eremaea</i>                           | 0.1       | 0.05       |

? denotes unconfirmed ID



**Site:** MW29**Type:** Quadrat**Date:** 2018-10-15**Described by:** GM**MGA Zone:** 50**Easting:** 583865**Northing:** 6870362**Habitat:** Plain**Soil:** Orange Sand

**Vegetation:** *Acacia mulganeura* (*Acacia ?cuthbertsonii*, *Acacia ramulosa* var. *ramulosa* and *Grevillea stenobotrya*) tall shrubland over *Eremophila forrestii* subsp. *forrestii* and *Eremophila spuria* scattered shrubs over *Eriachne helmsii* scattered grasses over *Gnephosis tenuissima* scattered herbs

**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>*Cuscuta epithymum</i>                                  | 0.1       |            |
| <i>Acacia ?cuthbertsonii</i>                               | 4         | 3.5        |
| <i>Acacia mulganeura</i>                                   | 20        | 3.5        |
| <i>Acacia ramulosa</i> var. <i>ramulosa</i>                | 1         | 2.2        |
| <i>Brunonia australis</i>                                  | 0.1       | 0.2        |
| <i>Eremophila forrestii</i> subsp. <i>forrestii</i>        | 1.5       | 1.1        |
| <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i> | 0.1       | 0.3        |
| <i>Eremophila spuria</i>                                   | 0.5       | 1          |
| <i>Eriachne helmsii</i>                                    | 0.5       | 0.3        |
| <i>Gilberta tenuifolia</i>                                 | 0.1       | 0.1        |
| <i>Gnephosis tenuissima</i>                                | 0.5       | 0.1        |
| <i>Goodenia occidentalis</i>                               | 0.1       | 0.1        |
| <i>Grevillea stenobotrya</i>                               | 1         | 2.5        |
| <i>Haloragis odontocarpa</i>                               | 0.1       | 0.1        |
| <i>Lobelia simulans</i>                                    | 0.1       | 0.1        |
| <i>Myrtaceae</i> sp.                                       | 0.1       | 0.1        |
| <i>Roebuckiella cheilocarpa</i> var. <i>cheilocarpa</i>    | 0.1       | 0.2        |



| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32) | 0.1       | 0.2        |
| <i>Teucrium</i> ?racemosum                              | 0.1       | 0.2        |
| <i>Thysanotus manglesianus</i>                          | 0.1       |            |
| <i>Velleia</i> ?rosea                                   | 0.1       | 0.2        |
| <i>Waitzia acuminata</i> var. <i>acuminata</i>          | 0.1       | 0.1        |

\* denotes weed species

? denotes unconfirmed ID



**Site:** MW30**Type:** Quadrat**Date:** 2018-10-16**Described by:** LD**MGA Zone:** 50**Easting:** 597326**Northing:** 6995194**Habitat:** Plain**Rock type:** Ironstone**Vegetation:** *Acacia macraneura* and *Acacia ?fusaneura* tall open shrubland over *Eragrostis xerophila* (*Eriachne flaccida*) tussock grassland**Veg Condition:** Good**Species List:**

| Name                          | Cover (%) | Height (m) |
|-------------------------------|-----------|------------|
| <i>Acacia ?fusaneura</i>      | 0.5       | 4          |
| <i>Acacia macraneura</i>      | 2         | 2.6        |
| <i>Asteraceae</i> sp.         | 0.1       | 0.05       |
| <i>Eragrostis xerophila</i>   | 60        | 0.4        |
| <i>Eremophila galeata</i>     | 0.1       | 0.4        |
| <i>Eremophila linearis</i>    | 0.1       | 0.6        |
| <i>Eriachne flaccida</i>      | 5         | 0.2        |
| <i>Hakea preissii</i>         | 0.1       | 0.6        |
| <i>Marsilea</i> sp.           | 0.1       | 0.1        |
| <i>Ptilotus aervoides</i>     | 0.1       | 0.05       |
| <i>Rhagodia eremaea</i>       | 0.1       | 0.5        |
| <i>Sclerolaena cuneata</i>    | 0.1       | 0.2        |
| <i>Sclerolaena densiflora</i> | 0.1       | 0.2        |
| <i>Sclerolaena fusiformis</i> | 0.1       | 0.2        |
| <i>Sida fibulifera</i>        | 0.1       | 0.1        |
| <i>Sida</i> sp.               | 0.1       | 0.1        |
| <i>Solanum lasiophyllum</i>   | 0.1       | 0.4        |

? denotes unconfirmed ID



**Site:** MW31**Type:** Quadrat**Date:** 2018-10-15**Described by:** GM**MGA Zone:** 50**Easting:** 583425**Northing:** 6870284**Habitat:** Plain**Soil:** Orange Sandy loam**Rock type:** Dolerite, Ironstone**Vegetation:** *Acacia pteraneura* and *Acacia craspedocarpa* (hybrid) tall open shrubland**Veg Condition:** Very Good**Fire Age:** Very long unburnt**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia craspedocarpa</i> (hybrid)              | 0.5       | 2.2        |
| <i>Acacia pteraneura</i>                          | 2         | 2.2        |
| <i>Actinobole uliginosum</i>                      | 0.1       | 0.1        |
| <i>Calandrinia translucens</i>                    | 0.1       | 0.05       |
| <i>Calocephalus multiflorus</i>                   | 0.1       | 0.1        |
| <i>Calotis multicaulis</i>                        | 0.1       | 0.3        |
| <i>Eremophila georgei</i>                         | 0.1       | 0.6        |
| <i>Eremophila latrobei</i> subsp. <i>latrobei</i> | 0.1       | 0.3        |
| <i>Eremophila pumicea</i>                         | 0.1       | 0.6        |
| <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i> | 0.1       | 0.2        |
| <i>Gnephosis brevifolia</i>                       | 0.1       | 0.1        |
| <i>Gnephosis tenuissima</i>                       | 0.1       | 0.1        |
| <i>Goodenia occidentalis</i>                      | 0.1       | 0.1        |
| <i>Menkea australis</i>                           | 0.1       | 0.2        |
| <i>Pogonolepis muelleriana</i>                    | 0.1       | 0.1        |
| <i>Ptilotus obovatus</i>                          | 0.1       | 0.1        |



| Name                            | Cover (%) | Height (m) |
|---------------------------------|-----------|------------|
| <i>Ptilotus schwartzii</i>      | 0.1       | 0.3        |
| <i>Rhodanthe ?laevis</i>        | 0.1       | 0.05       |
| <i>Solanum lasiophyllum</i>     | 0.1       | 0.3        |
| <i>Tripogonella loliiformis</i> | 0.1       | 0.1        |
| <i>Velleia ?rosea</i>           | 0.1       | 0.1        |
| <i>Velleia rosea</i>            | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MW32

**Type:** Quadrat

**Date:** 2018-10-16

**Described by:** LD

**MGA Zone:** 50

**Easting:** 671455

**Northing:** 7075349

**Habitat:** Stony plain

**Soil:** Orange Sandy loam

**Rock type:** Dolomite, Ironstone, Quartz, Shale

**Vegetation:** *Acacia incurvaneura* and *Acacia quadrimarginea* tall open shrubland over *Calytrix uncinata* and *Micromyrtus sulphurea* scattered low shrubs

**Veg Condition:** Very Good

**Fire Age:** No fire evident



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia incurvaneura</i>                        | 5         | 2.2        |
| <i>Acacia quadrimarginea</i>                      | 0.5       | 2.1        |
| <i>Aristida contorta</i>                          | 0.1       | 0.1        |
| <i>Calytrix uncinata</i>                          | 1         | 0.4        |
| <i>Eragrostis eriopoda</i>                        | 0.1       | 0.2        |
| <i>Eremophila glutinosa</i>                       | 0.1       | 0.6        |
| <i>Eriachne ?helmsii</i>                          | 0.1       | 0.2        |
| <i>Eriachne pulchella</i> subsp. <i>pulchella</i> | 0.1       | 0.1        |
| <i>Maireana tomentosa</i>                         | 0.1       | 0.2        |
| <i>Micromyrtus sulphurea</i>                      | 0.5       | 0.4        |
| <i>Solanum lasiophyllum</i>                       | 0.1       | 0.3        |

? denotes unconfirmed ID



**Site:** MW33**Type:** Quadrat**Date:** 2018-10-15**Described by:** GM**MGA Zone:** 50**Easting:** 583618**Northing:** 6870263**Habitat:** Drainage depression**Soil:** Orange Sand**Rock type:** Dolerite**Vegetation:** *Acacia mulganeura* and *Acacia aneura* tall open scrub over *Eremophila forrestii* subsp. *forrestii* and *Acacia ramulosa* var. *ramulosa* scattered low shrubs over *Eriachne helmsii* scattered tussock grasses**Veg Condition:** Very Good**Fire Age:** Very long unburnt**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia aneura</i>                                    | 5         | 4.1        |
| <i>Acacia mulganeura</i>                                | 30        | 4.2        |
| <i>Acacia ramulosa</i> var. <i>ramulosa</i>             | 0.1       | 0.6        |
| <i>Calocephalus multiflorus</i>                         | 0.1       | 0.1        |
| <i>Calotis multicaulis</i>                              | 0.1       | 0.3        |
| <i>Eremophila forrestii</i> subsp. <i>forrestii</i>     | 0.5       | 0.6        |
| <i>Eriachne helmsii</i>                                 | 0.5       | 0.3        |
| <i>Gilberta tenuifolia</i>                              | 0.1       | 0.1        |
| <i>Goodenia occidentalis</i>                            | 0.1       | 0.1        |
| <i>Lobelia simulans</i>                                 | 0.1       | 0.1        |
| <i>Menkea australis</i>                                 | 0.1       | 0.1        |
| <i>Plantago</i> sp. Mt Magnet (A.S. George 6793)        | 0.1       | 0.1        |
| <i>Ptilotus obovatus</i>                                | 0.1       | 0.2        |
| <i>Ptilotus schwartzii</i>                              | 0.1       | 0.2        |
| <i>Rhodanthe ?laevis</i>                                | 0.1       | 0.2        |
| <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32) | 0.1       | 0.2        |



| Name                  | Cover (%) | Height (m) |
|-----------------------|-----------|------------|
| <i>Velleia ?rosea</i> | 0.1       | 0.2        |

? denotes unconfirmed ID



**Site:** MWR01

**Type:** Relevé

**Date:** 2018-10-11

**Described by:** GM

**MGA Zone:** 50

**Easting:** 669902

**Northing:** 7075931

**Soil:** Dark reddish brown Silty clay loam

**Vegetation:** *Acacia ?caesaneura* (narrow phyllode variant), *Psyrax rigidula* and *Psyrax latifolia* tall open scrub over *Dodonaea petiolaris* open shrubland

**Veg Condition:** Very Good

**Fire Age:** Very long unburnt



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia ?caesaneura</i> (narrow phyllode variant)     | 15        | 4.5        |
| <i>Acacia ?sibilans</i>                                 | 5         | 5          |
| <i>Acacia pteraneura</i>                                | 5         | 4          |
| <i>Dodonaea petiolaris</i>                              | 3         | 1.6        |
| <i>Eremophila ?forrestii</i>                            | 0.1       | 0.4        |
| <i>Psyrax latifolia</i>                                 | 5         | 4          |
| <i>Psyrax rigidula</i>                                  | 6         | 3          |
| <i>Seringia elliptica</i>                               | 0.1       | 0.5        |
| <i>Sida</i> sp. dark green fruits (S. van Leeuwen 2260) | 0.1       | 0.4        |
| <i>Solanum lasiophyllum</i>                             | 0.1       | 0.1        |

? denotes unconfirmed ID



**Site:** MWR02

**Type:** Relevé

**Date:** 2018-10-13

**Described by:** LD

**MGA Zone:** 50

**Easting:** 593773

**Northing:** 6967094

**Habitat:** Plain

**Soil:** Orange brown Silty loam

**Rock type:** Dolerite, Ironstone, Quartz, Shale

**Vegetation:** *Acacia pteraneura* scattered tall shrubs over *Scaevola spinescens* and *Acacia grasbyi* open shrubland over *Maireana georgei* scattered low shrubs

**Veg Condition:** Good

**Fire Age:** No fire evident



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia grasbyi</i>                             | 1         | 1.5        |
| <i>Acacia pteraneura</i>                          | 1.5       | 3          |
| <i>Eremophila ?forrestii</i>                      | 0.1       | 0.5        |
| <i>Eremophila linearis</i>                        | 0.1       | 1.2        |
| <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i> | 0.1       | 0.1        |
| <i>Maireana georgei</i>                           | 0.5       | 0.3        |
| <i>Maireana tomentosa</i>                         | 0.1       | 1          |
| <i>Ptilotus obovatus</i>                          | 0.1       | 0.3        |
| <i>Scaevola spinescens</i>                        | 1         | 1.2        |

? denotes unconfirmed ID



**Site:** MWR04

**Type:** Relevé

**Date:** 2018-10-13

**Described by:** LD

**MGA Zone:** 50

**Easting:** 594298

**Northing:** 6965941

**Soil:** Orange brown Silty loam

**Rock type:** Ironstone

**Vegetation:** *Acacia incurvaneura* and *Acacia pruinocarpa* open shrubland over *Ptilotus obovatus* low open shrubland

**Veg Condition:** Very Poor

**Fire Age:** No fire evident

**Notes:** Historical pit cleared with some regrowth. Highly modified



**Species List:**

| Name  | Cover (%) | Height (m) |
|---|-----------|------------|
| <i>Acacia incurvaneura</i>                              | 3         | 1.2        |
| <i>Acacia pruinocarpa</i>                               | 0.5       | 1.2        |
| <i>Ptilotus divaricatus</i>                             | 0.1       | 0.2        |
| <i>Ptilotus obovatus</i>                                | 2         | 0.6        |
| <i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32) | 0.1       | 0.1        |
| <i>Solanum lasiophyllum</i>                             | 0.1       | 0.3        |



**Site:** MWR06

**Type:** Relevé

**Date:** 2018-10-14

**Described by:** LD

**MGA Zone:** 50

**Easting:** 588256

**Northing:** 6931478

**Habitat:** Clay plain

**Vegetation:** *Eragrostis eriopoda* scattered tussock grasses

**Veg Condition:** Poor

**Fire Age:** No fire evident



**Species List:**

| Name   | Cover (%) | Height (m) |
|--|-----------|------------|
| <i>Brassicaceae</i> sp.                          | 0.1       | 0.05       |
| <i>Convolvulus clementii</i>                     | 0.1       |            |
| <i>Eragrostis eriopoda</i>                       | 0.5       | 0.1        |
| <i>Goodenia havilandii</i>                       | 0.1       | 0.1        |
| <i>Plantago</i> sp. Mt Magnet (A.S. George 6793) | 0.1       | 0.05       |
| <i>Sclerolaena cuneata</i>                       | 0.1       | 0.1        |



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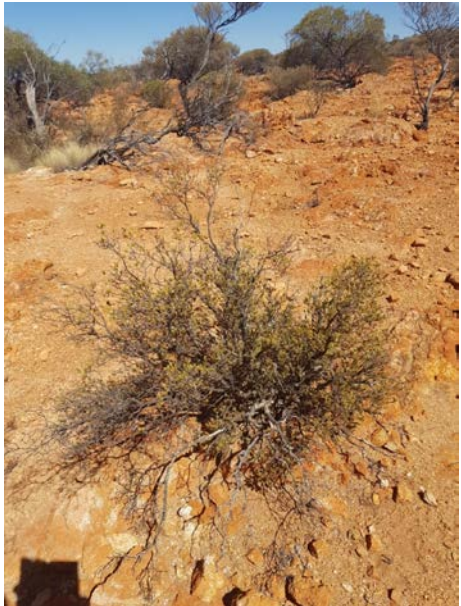
## **Appendix L: Conservation Significant Flora Species Locations and Descriptions, and Priority Flora Report Forms**



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Table L.1: Priority flora recorded in the survey area.

| Species  | Description <sup>1</sup>   | Habitat <sup>1</sup>                    |
|--|--|---|
| <i>Drummondita miniata</i> P3<br> | Divaricately branched shrub, 0.5-2 m high with orange-red flowers from July to August or November. | Grows in lateritic soils on breakaways. |

<sup>1</sup> – Florabase (Western Australian Herbarium 1998-2018).

Table L.2: Locations of conservation significant flora recorded within the survey area (GDA94, Zone50).

| Species                       | Abundance | Cover (%) | Easting (mE) | Northing (mN) |
|-------------------------------|-----------|-----------|--------------|---------------|
| <i>Drummondita miniata</i> P3 | 5         | 0.1       | 672079       | 7074586       |
|                               | 8         | 0.1       | 672515       | 7074312       |
|                               | 9         | 0.1       | 672273       | 7074587       |
|                               | 28        | 0.1       | 672338       | 7074565       |
|                               | 12        | 0.1       | 672523       | 7074210       |
|                               | 6         | 0.1       | 672089       | 7074573       |





# Threatened and Priority Flora Report Form

Version 1.3 August 2017

**Please complete as much of the form as possible, with emphasis on those sections bordered in black.** For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at <http://dpaw.wa.gov.au/> under *Standard Report Forms*

|  |   |
|--|---|
| <b>TAXON:</b> <u>Drummondita miniata</u>   | <b>TPFL Pop. No.:</b> _____   |
| <b>OBSERVATION DATE:</b> <u>08/10/2018</u> | <b>CONSERVATION STATUS:</b> <u>P3</u> New population <input type="checkbox"/> |
| <b>OBSERVER/S:</b> <u>Lucy Dadour</u>      | <b>PHONE:</b> <u>9421 9600</u>  |
| <b>ROLE:</b> <u>Botanist</u>               | <b>ORGANISATION:</b> <u>Astron Environmental Services</u>                     |

**DESCRIPTION OF LOCATION** (Provide at least nearest town/named locality, and the distance and direction to that place):  
20 km north east of Meekatharra

|   |  |  |   |  |
|---|--|--|---|--|
| <b>DBC DISTRICT:</b> <u>Geraldton</u>             |  | <b>LGA:</b> <u>Meekatharra</u>                     |   | <b>Land manager present:</b> <input type="checkbox"/>  |
| <b>Reserve No.:</b> _____                         |  |  |   |  |
| <b>DATUM:</b>                                     | <b>COORDINATES:</b> (If UTM coords provided, <b>Zone</b> is also required) |  | <b>METHOD USED:</b>                                 |  |
| GDA94 / MGA94 <input checked="" type="checkbox"/> | DecDegrees <input type="checkbox"/>  | DegMinSec <input type="checkbox"/>                 | UTMs <input checked="" type="checkbox"/>            | GPS <input checked="" type="checkbox"/> Differential GPS <input type="checkbox"/> Map <input type="checkbox"/> |
| AGD84 / AMG84 <input type="checkbox"/>            | <b>Lat / Northing:</b> <u>See attached data</u>                            |  | No. satellites: _____                               | Map used: _____  |
| WGS84 <input type="checkbox"/>                    | <b>Long / Easting:</b> _____   |  | Boundary polygon captured: <input type="checkbox"/> | Map scale: _____   |
| Unknown <input type="checkbox"/>                  | <b>ZONE:</b> _____   |  |   |  |
| <b>LAND TENURE:</b>                               |  |  |   |  |
| Nature reserve <input type="checkbox"/>           | Timber reserve <input type="checkbox"/>                                    | Private property <input type="checkbox"/>          | Rail reserve <input type="checkbox"/>               | Shire road reserve <input type="checkbox"/>  |
| National park <input type="checkbox"/>            | State forest <input type="checkbox"/>                                      | Pastoral lease <input checked="" type="checkbox"/> | MRWA road reserve <input type="checkbox"/>          | Other Crown reserve <input type="checkbox"/>   |
| Conservation park <input type="checkbox"/>        | Water reserve <input type="checkbox"/>                                     | UCL <input type="checkbox"/>                       | SLK/Pole _____ to _____                             | Specify other: _____   |

|  |  |                                     |  |   |
|--|--|-------------------------------------|--|---|
| <b>AREA ASSESSMENT:</b> Edge survey <input type="checkbox"/> Partial survey <input checked="" type="checkbox"/> Full survey <input type="checkbox"/> Area observed (m <sup>2</sup> ): _____              |  |                                     |  |   |
| <b>EFFORT:</b> Time spent surveying (minutes): _____ No. of minutes spent / 100 m <sup>2</sup> : _____   |  |                                     |  |   |
| <b>POP'N COUNT ACCURACY:</b> Actual <input type="checkbox"/> Extrapolation <input type="checkbox"/> Estimate <input checked="" type="checkbox"/> Count method: _____<br>(Refer to field manual for list) |  |                                     |  |   |
| <b>WHAT COUNTED:</b>   | Plants <input checked="" type="checkbox"/> | Clumps <input type="checkbox"/>     | Clonal stems <input type="checkbox"/>    |   |
| <b>TOTAL POP'N STRUCTURE:</b>  | <b>Mature:</b>                             | <b>Juveniles:</b>                   | <b>Seedlings:</b>                        | <b>Totals:</b>                                  |
| Alive  |  |                                     |  |   |
| Dead   |  |                                     |  |   |
| Area of pop (m <sup>2</sup> ): _____   |  |                                     |  |   |
| Note: Pls record count as numbers (not percentages) for database.  |  |                                     |  |   |
| <b>QUADRATS PRESENT:</b>   | No. _____                                  | Size _____                          | Data attached <input type="checkbox"/>   | Total area of quadrats (m <sup>2</sup> ): _____ |
| <b>Summary Quad. Totals: Alive</b>   |  |                                     |  |   |
| <b>REPRODUCTIVE STATE:</b>   | Clonal <input type="checkbox"/>            | Vegetative <input type="checkbox"/> | Flowerbud <input type="checkbox"/>       | Flower <input type="checkbox"/>                 |
|  | Immature fruit <input type="checkbox"/>    | Fruit <input type="checkbox"/>      | Dehiscent fruit <input type="checkbox"/> | Percentage in flower: _____%                    |

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

**COMMENT:** \_\_\_\_\_

| THREATS - type, agent and supporting information:  | Current impact (N-E) | Potential Impact (L-E) | Potential Threat Onset (S-L) |
|--|----------------------|------------------------|------------------------------|
| Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. <b>Specify agent</b> where relevant.<br>Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme<br>Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+) |                      |                        |                              |
| • Clearing   | M                    | H                      | M                            |
| • Fire   | L                    | M                      | M                            |
| • Weeds  | L                    | M                      | M                            |

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

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

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐





# Threatened and Priority Flora Report Form

Version 1.3 August 2017

## HABITAT INFORMATION:

|  |  |   |  |   |  |
|--|--|---|--|---|--|
| <b>LANDFORM:</b>                           | <b>ROCK TYPE:</b>  | <b>LOOSE ROCK:</b>                          | <b>SOIL TYPE:</b>                        | <b>SOIL COLOUR:</b>                       | <b>DRAINAGE:</b>                                 |
| Crest <input checked="" type="checkbox"/>  | Granite <input type="checkbox"/>   | (on soil surface; eg gravel, quartz fields) | Sand <input type="checkbox"/>            | Red <input checked="" type="checkbox"/>   | Well drained <input checked="" type="checkbox"/> |
| Hill <input checked="" type="checkbox"/>   | Dolerite <input type="checkbox"/>  |   | Sandy loam <input type="checkbox"/>      | Brown <input checked="" type="checkbox"/> | Seasonally inundated <input type="checkbox"/>    |
| Ridge <input type="checkbox"/>             | Laterite <input type="checkbox"/>  | 0-10% <input type="checkbox"/>              | Loam <input checked="" type="checkbox"/> | Yellow <input type="checkbox"/>           | Permanently inundated <input type="checkbox"/>   |
| Outcrop <input type="checkbox"/>           | Ironstone <input type="checkbox"/>   | 10-30% <input type="checkbox"/>             | Clay loam <input type="checkbox"/>       | White <input type="checkbox"/>            | Tidal <input type="checkbox"/>                   |
| Slope <input type="checkbox"/>             | Limestone <input type="checkbox"/>   | 30-50% <input checked="" type="checkbox"/>  | Light clay <input type="checkbox"/>      | Grey <input type="checkbox"/>             |  |
| Flat <input type="checkbox"/>              | Quartz <input type="checkbox"/>  | 50-100% <input type="checkbox"/>            | Peat <input type="checkbox"/>            | Black <input type="checkbox"/>            |  |
| Open depression <input type="checkbox"/>   | Specify other: _____   |   | Specify other: _____                     | Specify other: _____                      |  |
| Drainage line <input type="checkbox"/>     | Calcrete, dolomite   |   |  |   |  |
| Closed depression <input type="checkbox"/> |  |   |  |   |  |
| Wetland <input type="checkbox"/>           |  |   |  |   |  |
|  | Specific <b>Landform</b> Element:<br>(Refer to field manual for additional values) _____ |   |  |   |  |

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

## VEGETATION CLASSIFICATION\*:

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

1. Open shrubland (Acacia quadrimarginea, A. incurvaneura)
2. Scattered low shrubs (Micromyrtus sulphurea, Calytrix uncinata)
- 3.
- 4.

## ASSOCIATED SPECIES:

Other (non-dominant) spp \_\_\_\_\_

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

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

## COMMENT:

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

**FENCING:** Not required ☐ Present ☐ Replace / repair ☐ Required ☐ Length req'd: \_\_\_\_\_

**ROADSIDE MARKERS:** Not required ☐ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: \_\_\_\_\_

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

**DRF PERMIT/ LICENCE No:** SL012524 Note if only observing plants (i.e. no specimens or plant material is taken) then no permit/licence is required. For further information on permit and licensing requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under licence/permit should be recorded above in the OTHER COMMENTS section.

**SPECIMEN:** Collectors No: \_\_\_\_\_ WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other: \_\_\_\_\_

**ATTACHED:** Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: \_\_\_\_\_

**COPY SENT TO:** Regional Office ☐ District Office ☐ Other: \_\_\_\_\_

Submitter of Record: Lucy Dadour Role: Environmental Scientist Signed: \_\_\_\_\_ Date: / /

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

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

Record entered by: \_\_\_\_\_ Sheet No.: \_\_\_\_\_ Record Entered in Database ☐



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## **Appendix M: Introduced Flora Locations**




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Table M.1: Introduced flora recorded in the survey area.

| Species  | Description <sup>1</sup>   | Habitat <sup>1</sup>  |
|--|--|---|
| <p><i>*Citrullus colocynthis</i></p>              | Trailing perennial, herb or climber with yellow flowers in January to October.       | In disturbed areas and floodplains with sandy, rocky, stony loam, clay soils. |
| <p><i>*Cuscuta epithymum</i>(lesser dodder)</p>  | Parasitic, twining annual, herb or climber with white flowers in August to December. | Sandy soils over limestone or granite.  |
| <p><i>*Lysimachia arvensis</i> (Pimpernel)</p>   | Herb to 10 cm.   | Flat sandplain of shallow grey sandy soil. sandy clay                         |



| Species   | Description <sup>1</sup>   | Habitat <sup>1</sup>    |
|---|--|-------------------------|
| <p><i>*Sisymbrium ?irio</i> (London rocket)</p>  | Erect annual or biennial, herb, 0.1-0.6 m high with yellow flowers in July to December.    | Sandy and clayey soils. |
| <i>*Sonchus</i> sp.   | All <i>Sonchus</i> spp. that have been previously found in the Murchison are weed species. | N/A                     |
| <i>*Spergula pentandra</i> (five anther spurry)   | Spreading annual, herb, growing up to 0.3 m high with white flowers in May to October.     | N/A                     |

<sup>1</sup> – Florabase (Western Australian Herbarium 1998-2018).



Table M.2: Locations of introduced flora recorded within the survey area (GDA94, Zone50).

| Species                        | Abundance | Cover (%) | Easting (mE) | Northing (mN) |
|--------------------------------|-----------|-----------|--------------|---------------|
| * <i>Citrullus colocynthis</i> | 1         | 0.1       | 580017       | 6928348       |
| * <i>Cuscuta epithymum</i>     | 1         | 0.1       | 583865       | 6870362       |
| * <i>Lysimachia arvensis</i>   | 1         | 0.1       | 580017       | 6928348       |
| * <i>Sisymbrium ?irio</i>      | 1         | 0.1       | 580017       | 6928348       |
| * <i>Sonchus</i> sp.           | 1         | 0.1       | 580017       | 6928348       |
| * <i>Spergula pentandra</i>    | 1         | 0.1       | 580017       | 6928348       |
|                                | 1         | 0.1       | 587809       | 6931326       |



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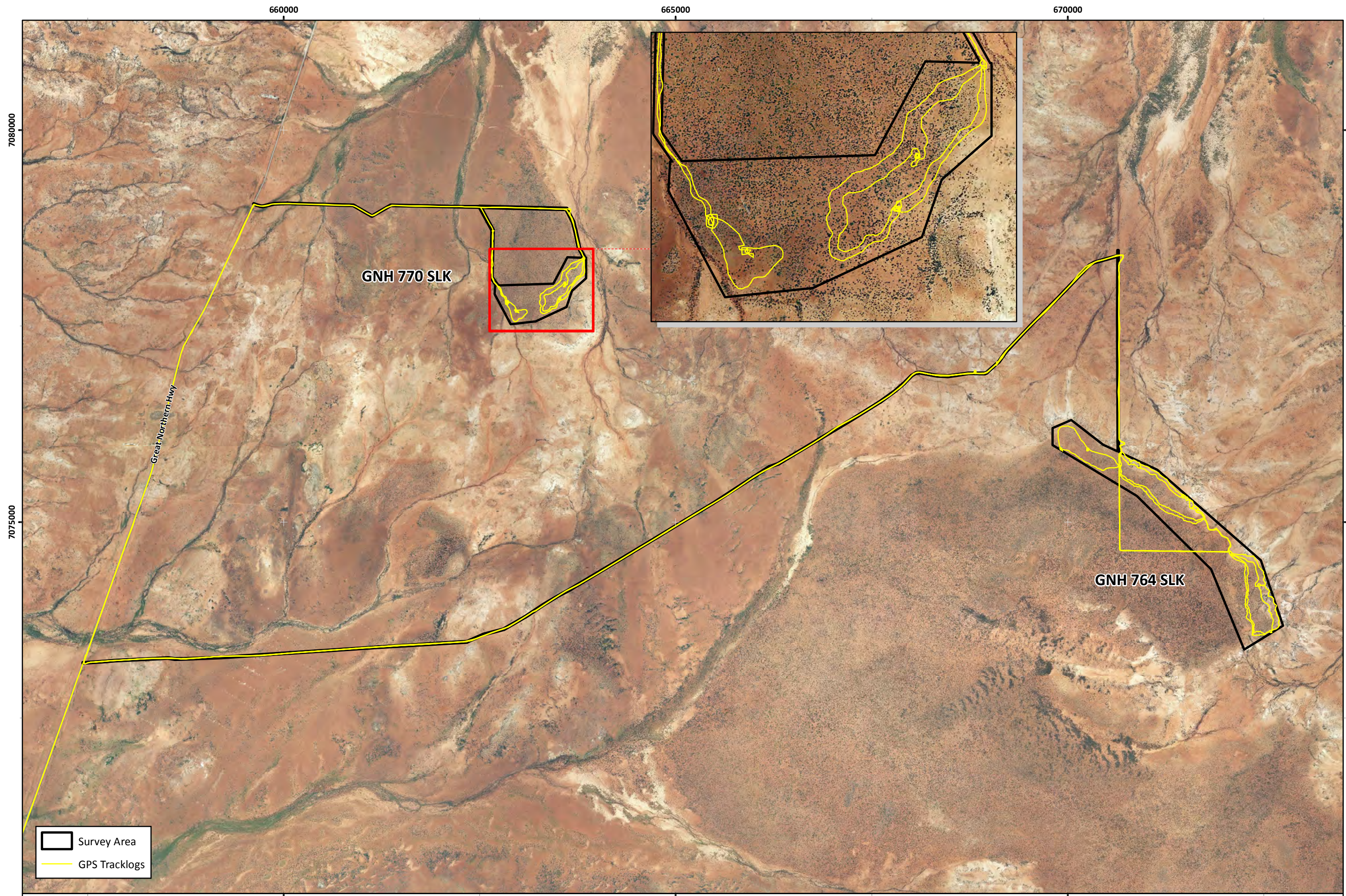


## **Appendix N: Survey Effort**



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Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure N.1: GNH 770 SLK and GNH 764 SLK Survey effort**

Author: L. Dadour

Drawn: C. Dyde

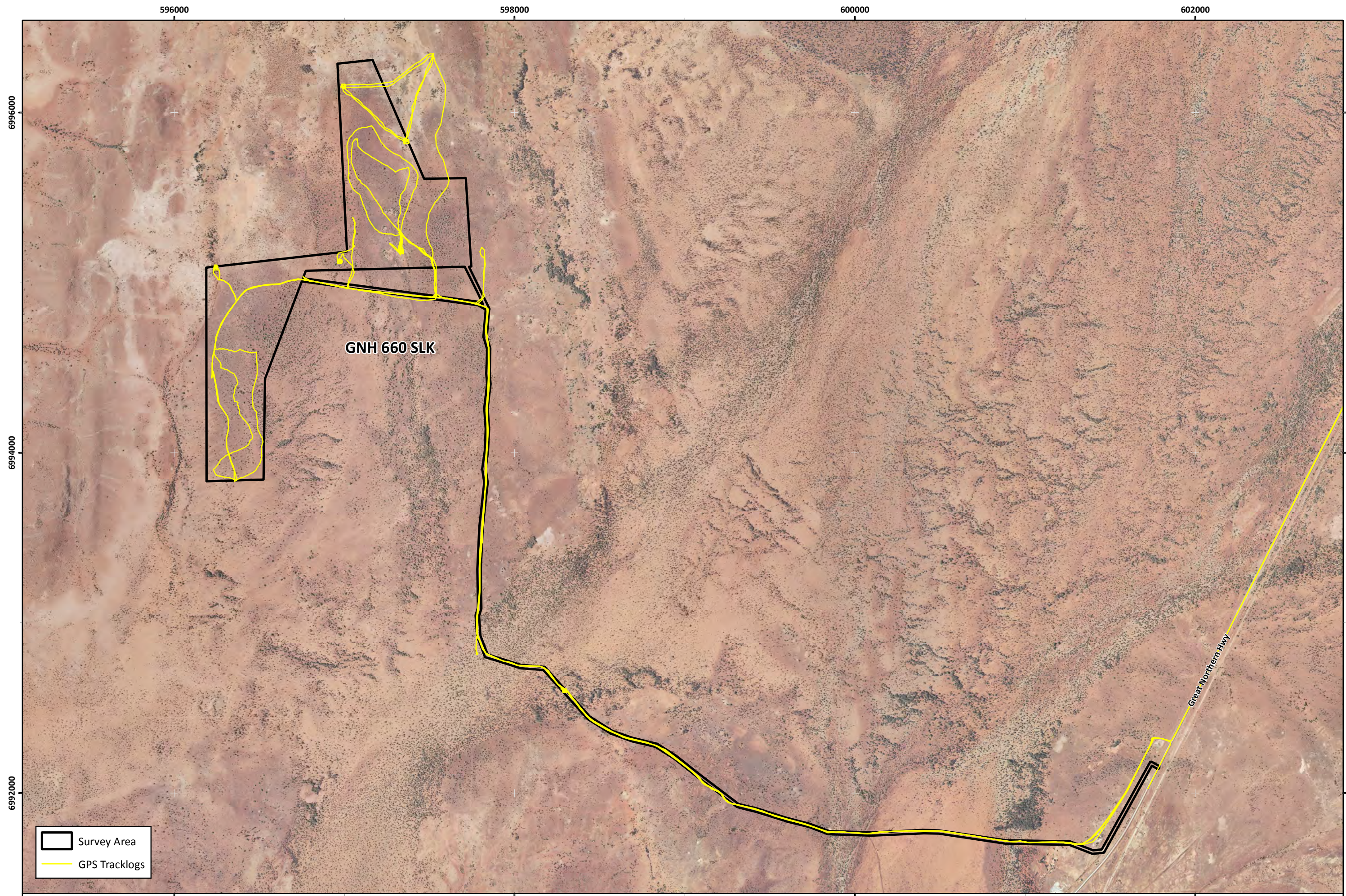
Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Tracklog\_FigN1

Coordinate System: GDA 1994 MGA Zone 50  
0 500 1,000 1,500 2,000 2,500 3,000 Metres





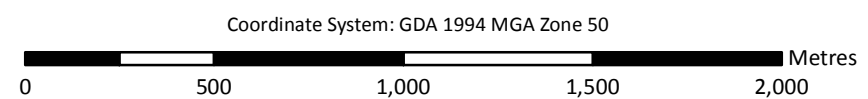


Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure N.2: GNH 660 SLK Survey effort**

Author: L. Dadour

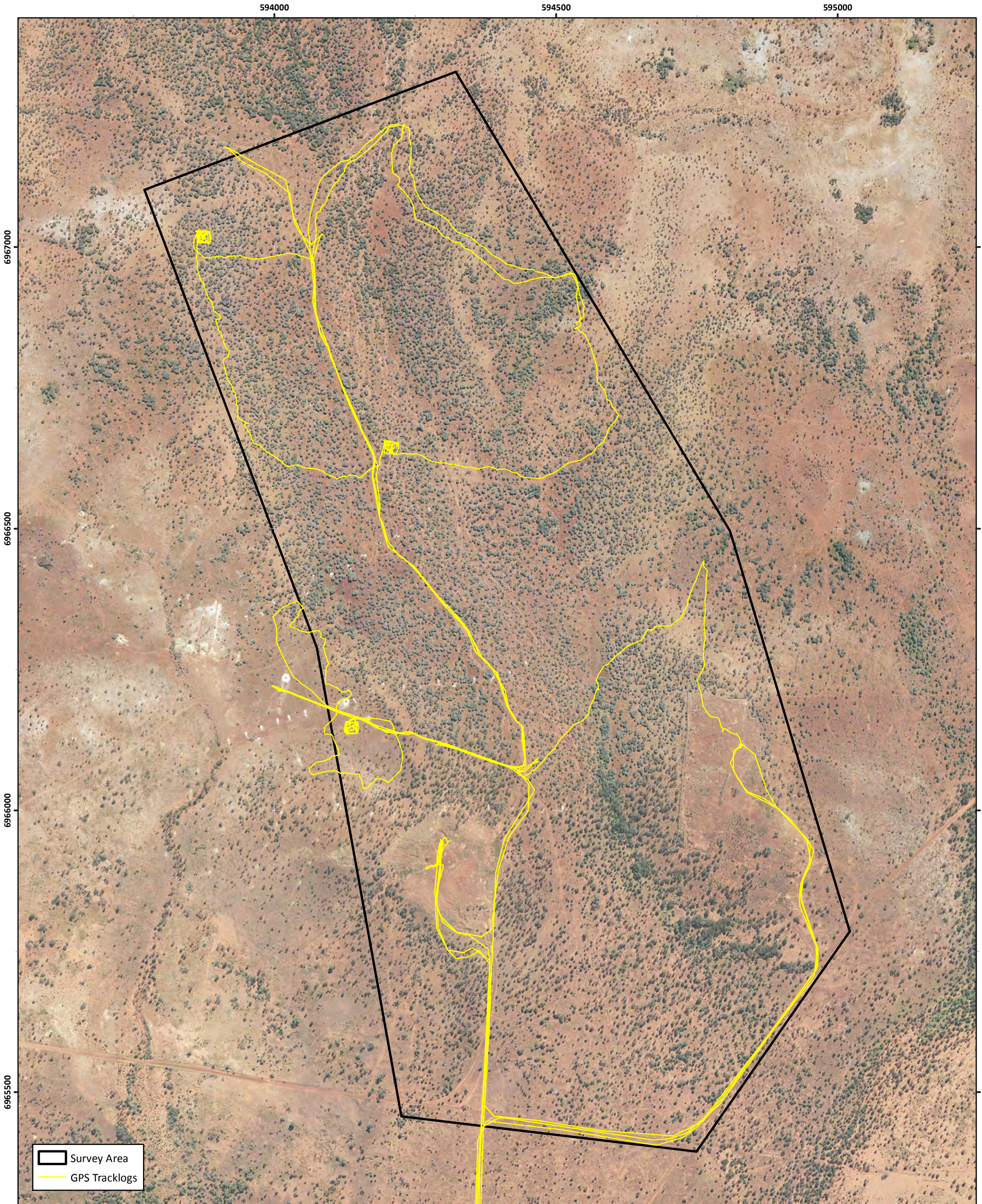
Drawn: C. Dyde



Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Tracklog\_FigN2





Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure N.3: Cue Wondinong 7.1 SLK Survey effort**

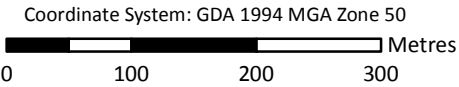


Author: L. Dadour

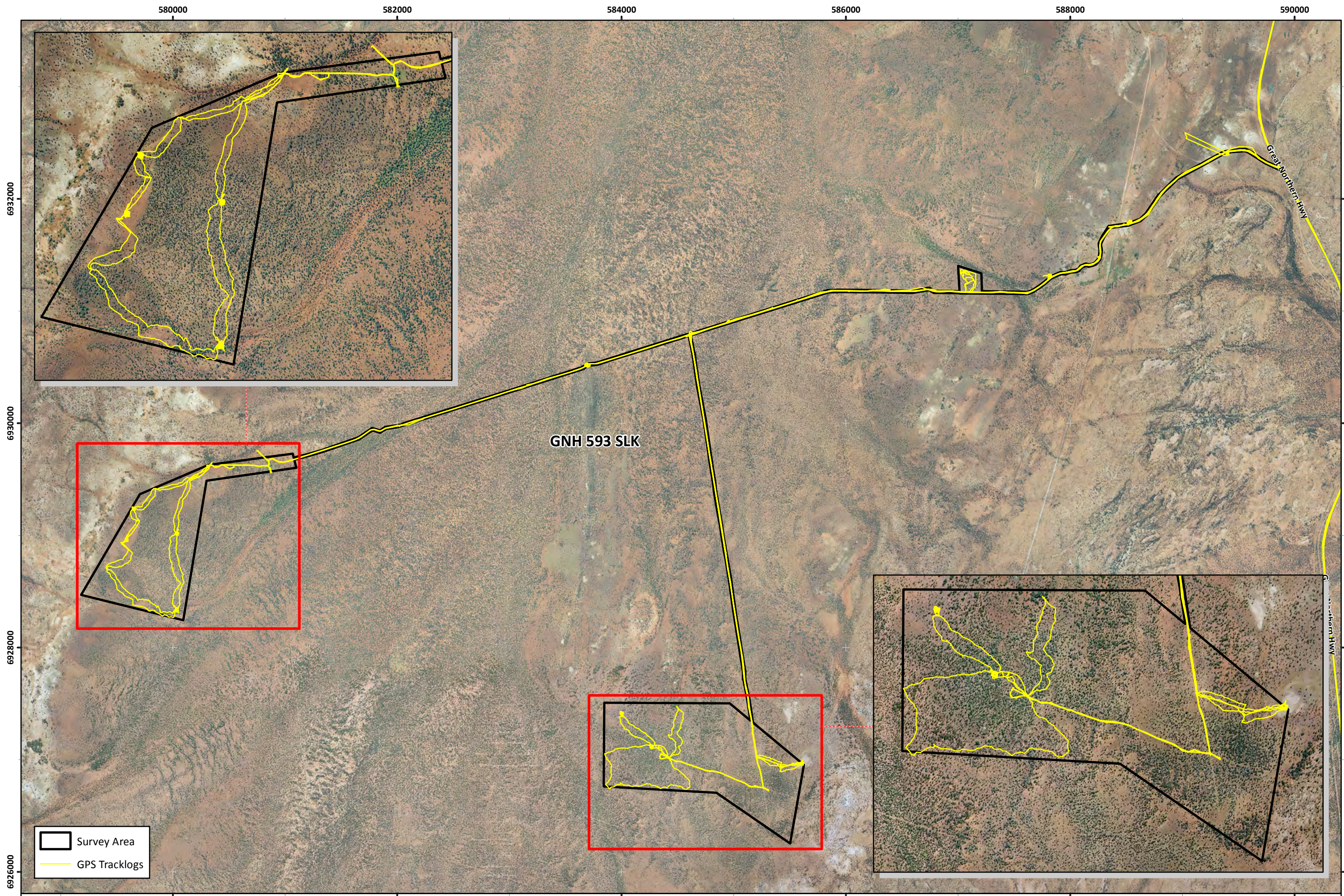
Date: 28-05-2019

Drawn: C. Dyde

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Tracklog\_FigN3







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

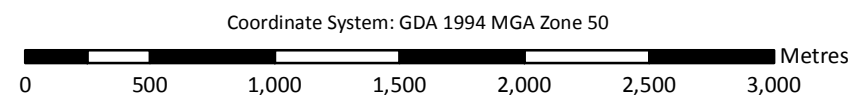
**Figure N.4: GNH 593 SLK Survey effort**

Author: L. Dadour

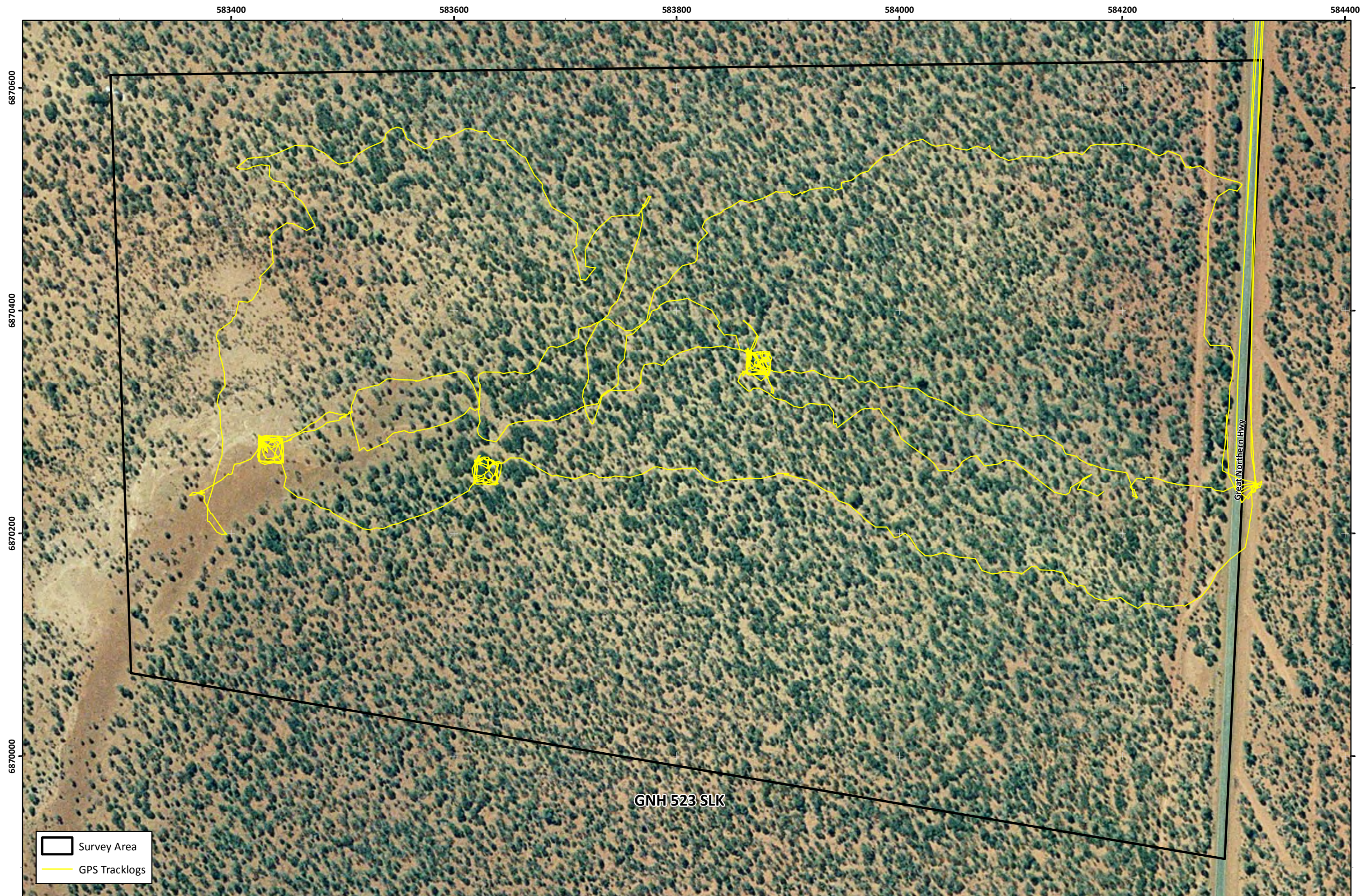
Drawn: C. Dyde

Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Tracklog\_FigN4







Main Roads WA  
Great Northern Highway 523 to 746 SLK and Cue Wondinong 7.1 SLK Biological Assessment

**Figure N.5: GNH 523 SLK Survey effort**

Author: L. Dadour

Drawn: C. Dyde

Date: 28-05-2019

Figure Ref: 8605-18-BIDR-1RevB\_190528\_Tracklog\_FigN5

Coordinate System: GDA 1994 MGA Zone 50

0 50 100 150 200 Metres





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