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MINERAL RESOURCES

FLORA AND VEGETATION ASSESSMENT

Wodgina Lithium Operation

FINAL

February 2025

FLORA AND VEGETATION ASSESSMENT

Wodgina Lithium Operation

FINAL

Prepared by
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on behalf of
Mineral Resources Limited

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Definitions

Term	Definition
ALA	Atlas of Living Australia
BAM Act	*Biosecurity and Agriculture Management Act 2007* (State of Western Australia)
BC Act	*Biodiversity Conservation Act 2016* (State of Western Australia)
BC Regs	Biodiversity Conservation Regulations 2018 (State of Western Australia)
BoM	Bureau of Meteorology
cm	Centimetres
Combined Detailed Survey Area	The combination of the Detailed Survey Area and the 2019 Wodgina Study Area, approximately 7,047.7 ha in size
DAWE	Department of Agriculture, Water and the Environment (currently DCCEEW)
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEC	Department of Environment and Conservation (currently DBCA)
Desktop Study Area	Area encompassing the Survey Area with a 40 km buffer. Used for the purposes of elements of the desktop assessment, including interrogation of databases and searches for relevant literature.
Detailed Survey Area	Area within which the detailed 2023 flora and vegetation assessment was conducted, approximately 2,036.5 ha in size.
EIA	Environmental Impact Assessment
EP Act	*Environmental Protection Act 1986* (State of Western Australia)
EPA	Environmental Protection Authority
EPBC Act	*Environment Protection Biodiversity Conservation Act 1999* (Commonwealth)
GDA94	Geocentric Datum of Australia 1994
GDE	Groundwater Dependent Ecosystem
GDV	Groundwater Dependent Vegetation
Geowater	Geowater Consulting Pty Limited
GIS	Geographic Information System
GPS	Global Positioning System
ha	Hectares
IBRA	Interim Biogeographic Regionalisation for Australia
IBSA	Index of Biodiversity Surveys for Assessments
INDVAL	Indicator taxon value, a measure of taxon fidelity to a given VT
IUCN	International Union for Conservation of Nature
km	Kilometres

Term	Definition
listed	Pertaining to listed taxa or vegetation – those that are formally listed as conservation significant under the EPBC or BC Act, and/or by DBCA. Refer to **Section 1.3** and **Section 3.9**
m	Metres
m^2	Metres squared
MARBL JV	MARBL Lithium Joint Venture
MinRes	Mineral Resources Limited
mm	Millimetres
MNES	Matters of National Environmental Significance (as defined by DCCEEW)
NVIS	National Vegetation Information System
P	Denotes a taxon listed as Priority 1 to 4 by DBCA (DBCA, 2020)
PCA	Principal Component Analysis
PEC	Priority Ecological Community, listed by DBCA (DEC, 2013)
Reconnaissance Survey Area	Area within which the 2023 reconnaissance flora and vegetation assessment was conducted, approximately 286.9 ha in size.
Significant flora	As defined in **Section 1.3** and **Section 3.9.1**
Significant vegetation	As defined in **Section 1.3** and **Section 3.9.2**
SPRAT	Species Profile and Threats database – a database produced by DCCEEW to enable identification of MNES listed under the EPBC Act within a given area
T	Denotes a taxon listed as Threatened under the BC and/or EPBC Acts (DBCA, 2020; TSSC, 2021)
TEC	Threatened Ecological Community, listed under the BC and/or EPBC Acts (DEC, 2013; TSSC, 2017)
TPFL	Threatened and Priority Flora Database
TSSC	Threatened Species Scientific Committee
Umwelt	Umwelt (Australia) Pty Limited
UPGMA	Unweighted Pair Group Method with Arithmetic Mean
VSA	Vegetation System Association
VT	Vegetation Type
WA	Western Australia
WA Herbarium, WA Herb	Western Australian Herbarium
Wodgina	Wodgina Lithium Operation
WoNS	Weeds of National Significance
Woodman Environmental	Woodman Environmental Consulting Pty Ltd (now Umwelt (Australia) Pty Limited)
2019 Wodgina Study Area	The area in which the Woodman Environmental (2020) survey was undertaken, approximately 6,745 ha in size

Executive Summary

Mineral Resources Limited (MinRes) manages all mining operations at the Wodgina Lithium Operation (Wodgina), located approximately 90 km south of Port Hedland in the Pilbara region of Western Australia. MinRes is proposing to increase future production of spodumene at Wodgina, which has resulted in scoping and design for expansions at the Wodgina mine site, as well as areas north and east of the mine site (the Project). There have been extensive previous flora and vegetation surveys undertaken at Wodgina, with the most recent being a detailed and targeted flora and vegetation survey involving consolidation of previous flora and vegetation assessments, as well as additional field survey, undertaken in 2023 by Umwelt (Australia) Pty Ltd (Umwelt) (2024). Umwelt was commissioned by MinRes to undertake flora and vegetation surveys for the Wodgina expansion areas in 2024. This report documents all methods from 2024 surveys and presents the desktop assessment and results of field surveys, and also consolidates the methods and results from the 2023 survey (Umwelt, 2024).

For the purposes of the flora and vegetation survey, a Survey Area has been defined, covering approximately 13,151 hectares (ha). The Survey Area includes the areas assessed during the 2023 survey (referred to as the 2023 Detailed Survey Area and the 2023 Reconnaissance Survey Area) and the areas assessed during the 2024 survey (the 2024 Survey Area). The field surveys included a primary survey and supplementary survey. The primary survey was undertaken over two site visits, from 24 May – 2 June 2023, and the 21 – 30 May 2024. The supplementary survey was undertaken over a single visit from 5–11 August 2024.

A total of 484 quadrats have been established in the Survey Area including 222 quadrats established and assessed during the 2023 and 2024 field survey, 110 quadrats established by various previous surveys which were re-assessed during the 2023 and 2024 field survey, and 152 previously established quadrats which were not assessed by the 2023/2024 survey. In addition, 65 relevés and 94 vegetation mapping notes have been recorded in the Survey Area by the 2023/2024 survey. Systematic targeted survey for significant flora taxa and vegetation was undertaken in 2023 within the 2023 Survey Areas at transect spacings of 50 meters. Targeted survey was not undertaken during the 2024 survey; however, significant flora taxa were recorded opportunistically.

A total of 400 discrete vascular flora taxa (including 14 introduced taxa), two known hybrids (as per WA Herbarium (1998-)) and eight putative hybrids have been recorded within the Survey Area (including data from the Woodman Environmental (2020) survey and the 2023/2024 survey). The taxa and hybrids represent 58 families and 156 genera. A total of 385 discrete vascular flora taxa (including 12 introduced taxa) and 10 hybrids were recorded within the Survey Area during the 2023 and 2024 surveys alone.

A total of 11 significant flora taxa have been recorded within the Survey Area by this current survey and previous surveys including nine Priority flora taxa (*Euphorbia clementii* (P3), *Euploca mutica* (P3), *Goodenia obscurata* (P3), *Gymnanthera cunninghamii* (P3), *Ptilotus mollis* (P4), *Terminalia supranitifolia* (P3), *Triodia basitricha* (P3), *Triodia chichesterensis* (P3) and *Vigna triodiophila* (P3)) and two potentially undescribed taxa (*Corchorus* aff. *incanus* and *Polymeria* sp.). No Threatened flora taxa have been recorded within the Survey Area.

A total of 16 Vegetation Types (VTs) have been defined and mapped within the Survey Area based on the results of the floristic classification analysis and subsequent examination of quadrat data. The 16 VTs defined represent four broad groups of vegetation, based on soils and topography:

- Group 1: Low woodlands and shrublands over hummock and occasionally tussock grasslands on low, undulating to flat plains and minor drainage lines with sandy to clay loams with granite or quartz stones (VTs 1, 2, 3, 4, 5, 6, 7, 8 and 9).
- Group 2: Low woodlands and shrublands over hummock and tussock grassland on clay to sandy loams in major drainage lines (VTs 10 and 11).
- Group 3: Shrublands over hummock grasslands on steep to moderate crests and slopes to stony outwash plains influenced by granite, ironstone and/or dolerite (VTs 12, 13 and 14).
- Group 4: Shrublands over hummock grasslands on low-lying flats, stony plains and minor drainage features with likely saline influence (VTs 15 and 16).

No significant vegetation is considered to occur in the Survey Area; none of the VTs mapped are considered to represent any formally listed Threatened or Priority Ecological Communities, nor are they considered to be significant for reasons other than formal listing. Although VTs 6, 11, 15 and 16 are locally restricted, all VTs mapped in the Survey Area are either known to, or are considered likely to, extend outside the survey areas to some extent.

Several VTs are considered to represent riparian vegetation; all are considered to be reliant on surface water to some extent. Of these, VT 11, which is comprised of all vegetation in the Turner River channel in the central portion of the Survey Area, is also considered to represent groundwater dependent vegetation (GDV); this VT is characterised by the presence of obligate and potentially facultative phreatophytes (in particular *Melaleuca argentea* and *Eucalyptus camaldulensis* subsp. *refulgens*. In addition, some occurrences of VT 10 in the Survey Area, may also be groundwater dependent vegetation.

The majority of the Survey Area (85.5%) was rated as being in 'Excellent' condition, with such areas generally free of introduced taxa, and no evidence of grazing or other disturbances to the vegetation noted. The vegetation occurring in drainage lines was often rated as 'Very Good' or 'Good', or less commonly 'Poor' or 'Degraded'. These areas were subject to impacts associated with cattle activity in the area, and the presence of weed taxa. There were parts of the north-eastern portion of the Survey Area subject to disturbances associated with historical mining, with the larger obvious cleared areas were mapped as cleared and the areas of vegetation subject to more minor ground disturbances mapped as 'Good'. Some areas within draining lines required mapping as mosaics of vegetation condition ratings (15.9 ha (0.1% of Survey Area) mapped as 'Excellent/Very Good', and 30 ha (0.2%) mapped as 'Good/Poor') as they were variable in condition depending on usage by cattle, and consequential weed infestations. Overall, 3.1% and 2.3% of the Survey Area was rated as Very Good and Good respectively, with 0.4% rated as Poor and Degraded.

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1.0 Introduction

1.1 Project Overview

The MARBL Lithium Joint Venture (MARBL JV) is an unincorporated joint venture between Mineral Resources Limited (MinRes) and Albemarle Corporation (Albemarle). MinRes manages all mining operations at the Wodgina Lithium Operation (Wodgina), located approximately 90 km south of Port Hedland in the Pilbara region of Western Australia (WA). To allow for continued operations at Wodgina, MinRes are planning for expansions to the operational footprint, as well as conducting exploration and installing water infrastruction in areas north and east of the operation (the Project).

There have been extensive previous flora and vegetation survey undertaken at Wodgina, including historical surveys dating back to 1989 (Dames & Moore, 1989) through to more recent surveys undertaken by numerous consultants from 2000 to 2023. The most recent detailed and targeted flora and vegetation survey for the Project was undertaken in 2023 by Umwelt (Australia) Pty Ltd (Umwelt) (2024).

Umwelt was commissioned by MinRes to undertake flora and vegetation surveys for the Wodgina expansion areas in 2024, to inform environmental approvals for the proposed expansions. This baseline report documents all methods from 2024 surveys and presents the desktop assessment and results of field surveys. This report also consolidates methods and results from the 2023 survey (Umwelt, 2024), and therefore supersedes that report.

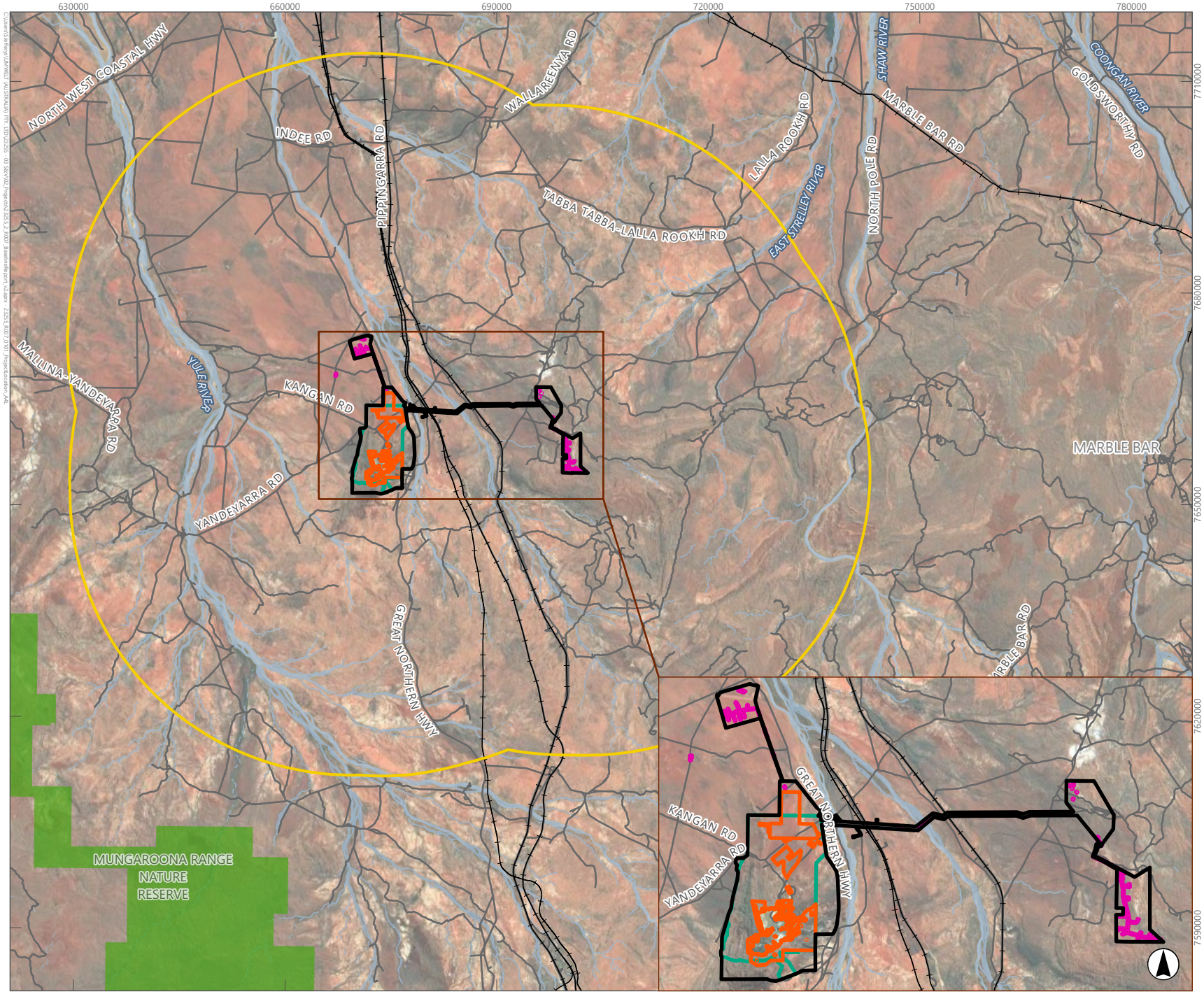
1.2 Survey Area Definitions

For the purposes of the flora and vegetation survey, a 2024 Survey Area has been defined as presented on **Figure 1.1**. The 2024 Survey Area is approximately 13,137 hectares (ha) in size and represents the area in which quadrat sampling and vegetation mapping was undertaken in 2024. **Figure 1.1** also presents the 2023 Detailed Survey Area, 2023 Reconnaissance Survey Area and the 2019 Wodgina Study Area. The 2023 Detailed Survey Area (2,036.5 ha) represents the area in which detailed and targeted survey was undertaken in 2023. The 2023 Reconnaissance Survey Area (286.9 ha) represents the area in which reconnaissance survey and targeted survey was undertaken in 2023 (refer to **Section 1.4** for further information on the level of survey).The 2019 Wodgina Study Area (6,745 ha) is the area assessed by Woodman Environmental (2020). The 2019 Wodgina Study Area, the 2023 Detailed Survey Area, and the majority of the 2023 Reconnaissance Survey Area are within the 2024 Survey Area. As this report consolidates this current flora and vegetation assessment and the 2023 flora and vegetation assessment (Umwelt, 2024), a combined survey area ('the Survey Area') is presented and referenced throughout the remainder of this report. The Survey Area is approximately 13,151 ha in size.

A Desktop Study Area was defined for the purposes of interrogation of elements of the desktop assessment, including database searches and review of other relevant literature. The Desktop Study Area encompasses the 2024 Survey Area with a 40 km buffer (**Figure 1.1**).

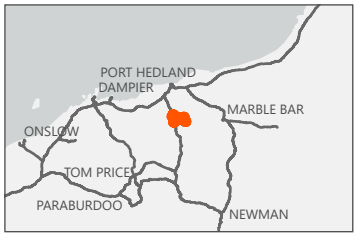
FIGURE 1.1

Survey Area and Desktop Study Area Location



Legend

- Desktop Study Area
- 2024 Survey Area
- 2023 Reconnaissance Survey Area
- 2023 Detailed Survey Area
- 2019 Wodgina Study Area
- Road
- Railway
- Waterbody
- Nature Reserve



0 15 30

Kilometres

Scale 1:750,000 at A4
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), Umwelt (2024), MRL (2024)

1.3 Aims and Objectives

The primary aim of this assessment was to characterise the flora and vegetation values of the Survey Area to the current regulatory standard.

The objectives of the assessment were:

- Compile an inventory of vascular flora taxa that occur in Survey Area.
- Opportunistically search for and identify the following taxa (hereafter referred to as significant flora taxa) within the Survey Area:
    - Listed Threatened species (T) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Commonwealth)
    - Listed Threatened flora (T) under the *Biodiversity Conservation Act 2016* (BC Act) (WA)
    - Priority flora taxa (P) as classified by the WA Department of Biodiversity, Conservation and Attractions (DBCA)
    - Other significant flora taxa as defined by Environmental Protection Authority (EPA) (2016a, 2016b).
- Identify locations and determine the extent of introduced vascular flora taxa, with particular focus on those that are Weeds of National Significance (WoNS) or Declared Pests under the *Biosecurity and Agriculture Management Act 2007* (BAM Act).
- Identify, map and describe Vegetation Types (VTs) that occur within the Survey Area.
- Identify potential groundwater dependent vegetation (GDV) and groundwater dependent ecosystems (GDEs) in the Survey Area.
- Identify, map and describe vegetation that occurs within the Survey Area that is one of the following (hereafter referred to as significant vegetation):
    - Listed Threatened Ecological Communities (TECs) under the EPBC Act
    - TECs as classified by DBCA and endorsed by the WA Minister for the Environment
    - Priority Ecological Communities (PECs) as classified by DBCA
    - Other significant vegetation as defined by EPA (2016a, 2016b).
- Map the condition of the vegetation in the Survey Area in accordance with EPA (2016b).
- Consolidate all methods and findings from the 2023 flora and vegetation assessment (Umwelt, 2024) in this assessment report.

The survey and reporting works comply with the following documents:

- *Environmental Factor Guideline – Flora and Vegetation* (EPA, 2016a).
- T*echnical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b).

1.4 Level of Assessment

The 2024 flora and vegetation survey involved a detailed survey as defined in Section 4.3 of the Technical Guidance for flora and vegetation surveys (EPA, 2016b). In addition, the 2023 surveys of the 2023 Detailed and Reconnaissance Survey Areas involved a detailed and targeted survey, and reconnaissance and targeted survey, respectively, as defined in Sections 4.1 and 4.2 of the relevant Technical Guidance (EPA, 2016b); however, targeted survey was undertaken in specific parts of 2023 Detailed Survey Area only (described in further detail in **Section 3.4.5**).

Detailed survey is considered appropriate for the Survey Area, which is located in an area (the Pilbara Region) that is known to support a moderate diversity of flora and vegetation relative to other areas of the state, including significant flora taxa and vegetation types (EPA, 2016b). Such survey is also undertaken when the scale and nature of the proposed impacts of a project are likely to be considered significant; the scale and nature of the of the proposed impacts of the Project within the Survey Area are considered sufficient to require this level of survey.

2.0 Background

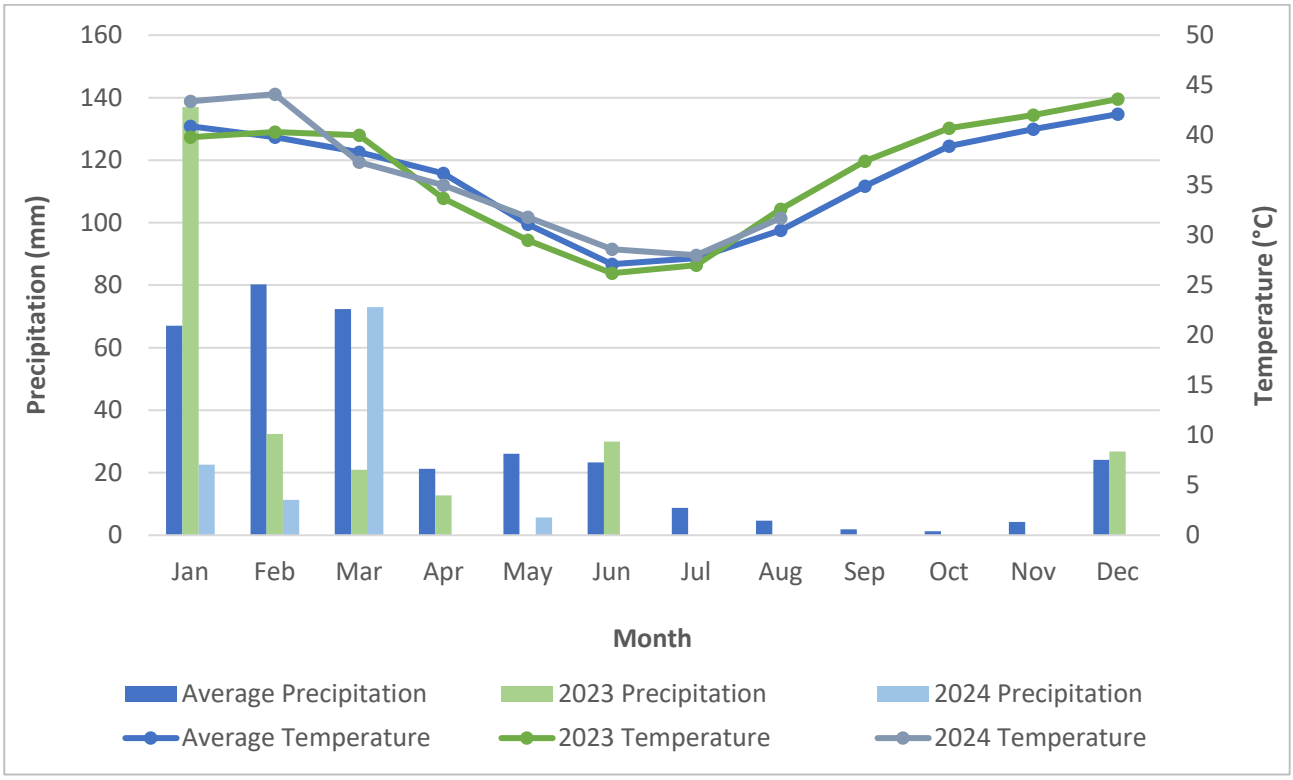
2.1 Climate

The Survey Area is located within the Pilbara region, where the climate is classified as arid tropical, with precipitation received mainly over the summer months. Average annual precipitation is 250–300 millimetres (mm), which is generally slightly higher than most of the Eremaean Province of WA due to the influence of relatively frequent tropical cyclones that occur from November to April (Beard, 2015; BoM, 2023).

Graph 2.1 displays monthly precipitation and monthly maximum temperature statistics for 2023 and 2024, as well as long-term average monthly maximum temperature and monthly precipitation data recorded at the Bureau of Meteorology (BoM) stations at Indee (precipitation) (station number 4016, data from 1909 to August 2024), and Marble Bar (temperature) (station number 4106, data from 2000 to August 2024) (BoM, 2024a). These stations represent the most relevant meteorological stations to the Survey Areas with long-term climate data, with Indee station being located approximately 35 km to the north-northeast and Marble Bar station approximately 110 km to the east (note that Indee Station does not record temperature data). Long-term average monthly maximum temperatures at Marble Bar Station peak from November to February (39.8°C to 42.1°C), and long-term average monthly precipitation peaks from January to March (a total of 219.7 mm received over this period on average at Indee Station) (**Graph 2.1**).

The precipitation received at Indee in the months preceding the 2023 survey and the primary 2024 field survey (i.e. January to May 2023/2024) was below the long-term average for this period for 2023 and 2024 (203 mm and 113 mm respectively, compared to the average of 267 mm). Temperatures at Marble Bar Station prior to the 2023 field survey and the primary 2024 field survey (i.e. January to May 2023/2024) were slightly below average prior to the 2023 field survey and slightly above average prior to the 2024 survey (36.7°C and 38.3°C respectively, compared to the long-term average of 37.3°C) (**Graph 2.1**).

A supplementary survey was conducted in August, a time where a suite of taxa in the Pilbara region flower (see **Section 3.4.2**). Rainfall recorded from June to July in 2024, was below the long-term average for these months (0 mm compared to 32 mm). The temperatures for these months were slightly above average (28.3°C compared to 27.4°C).



Graph 2.1 Temperature and Precipitation for Survey Area (BoM, 2024a)

2.2 Geology, Landforms and Soils

The Survey Area is located in the Pilbara region (Fortescue Botanical District) as defined by Beard (1975, 2015). This is equivalent to the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) region (Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2020)).

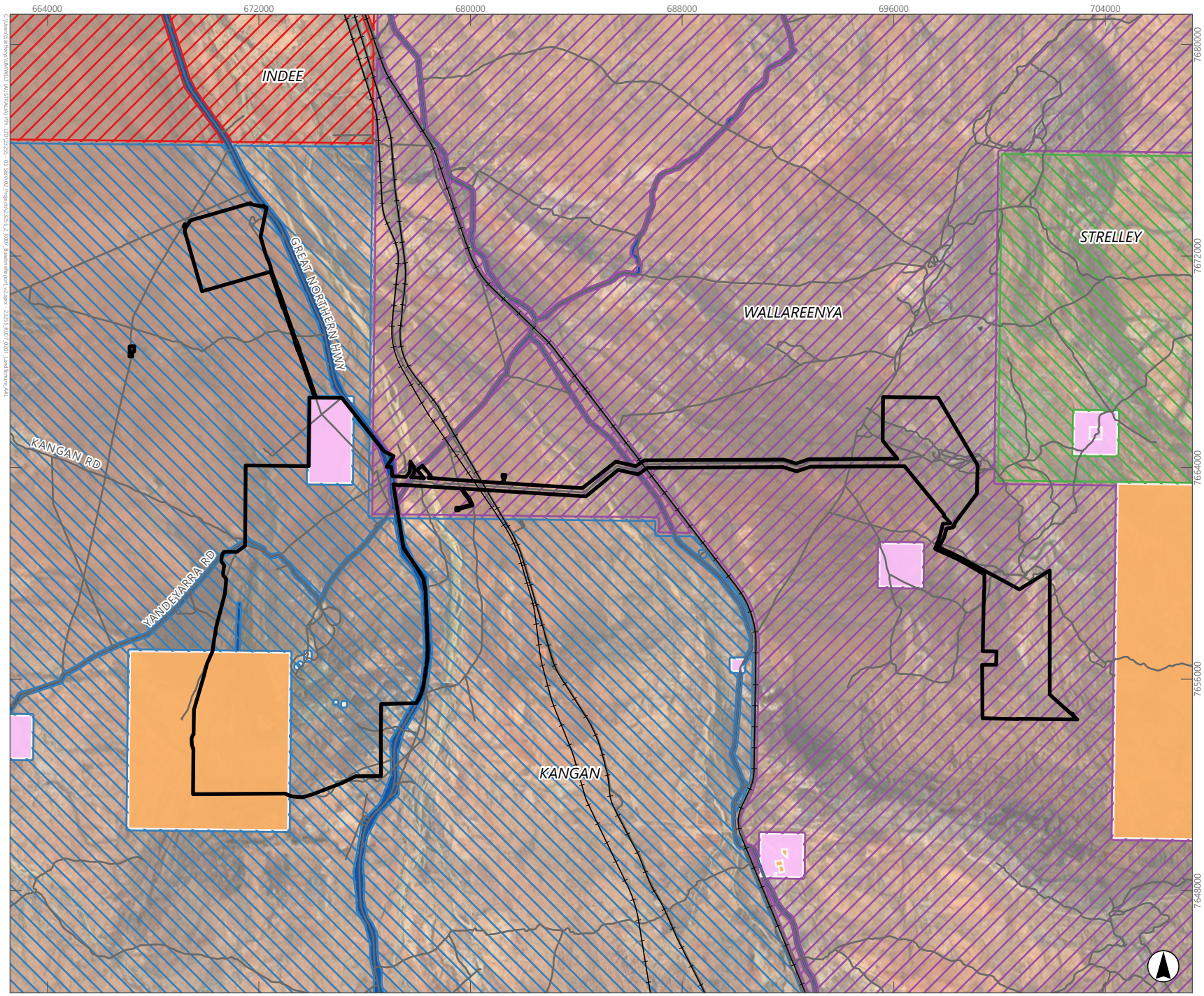
The Pilbara region is formed of a basement of Archaean granite and volcanics, overlain by massive deposits of Proterozoic sediments and volcanics (Beard, 2015). This region is generally mountainous, rising to 1,250 m, with hard alkaline red soils on plains and pediments, and shallow and skeletal soils on ranges. The Survey Area traverses one physiographic region as defined by Beard (1975), being the Abydos Plain, and occurs within the geological province of the Wodgina Greenstone Belt.

The Abydos Plain is alluvial in origin near the coast while further inland is of Archaean granite origin. It consists of a variety of features including alluvial plains, pediplains, low stony hills and dissected pediments, low granite outcrops and tors, and basic dykes. It is divided into a number of isolated sections by the Gorge Ranges. The main soils are hard alkaline red soils, with some areas of coarse-textured A horizons to 45 cm thick, while other areas have shallow stony A horizons. Patches of calcrete also occur. On the eastern part of the plain near the De Grey River, the soils are chiefly neutral and acidic red earths, while on the inland plains behind the Gorge Ranges, chief soils are earthy loams and coarse sands overlying granite within 90 cm of the soil surface. The alluvial plains along the coast generally consist of red earthy sands with extensive areas of red earths, and hard red soils along creek lines. Deep cracking clays occur in the vicinity of residuals of basic and ultrabasic rocks in the Roebourne area (Beard, 1975).

2.3 Land Tenure

The Survey Area is located on the Kangan and Wallareenya pastoral leases, Unallocated Crown Land (UCL) and Other Crown Reserves (R10303, R12069 and R22895) (**Figure 2.1)**. The Survey Area is surrounded by extensive areas of pastoral lease and some UCL. The nearest DBCA-reserved land, Mungaroona Range Nature Reserve, is located approximately 50 km south-west of the Survey Area.

FIGURE 2.1
Land Tenure of the Survey Area



Legend

- Survey Area
- Road
- Railway

Pastoral Station

- Indee
- Kangan
- Strelley
- Wallareenya

Land Tenure

- Other Interests
- Crown Reserve
- Public Road
- Unallocated Crown Land

0 4 8

Kilometres

Scale 1:200,000 at A4
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), Umwelt (2024), MRL (2024)

2.4 Fire History

Fire is a natural phenomenon in Western Australia and is accepted to be a key ecological process in many Australian ecosystems. In the Northen Province (which includes the Pilbara region), the prevalence of dense grassy ground layers makes in the majority of vegetation fire prone, with *Triodia* grasslands historically burnt on a regular basis as part of cultural practices, as well as fire caused by lightening (Beard, 2015). Fire is well known to be a strong driver of floristic composition in the Pilbara, and also influences the structure of vegetation.

The DBCA Fire History dataset (DBCA, 2023a) contains spatial data of fire events (including prescribed burns and bushfires) captured on DBCA-managed land, and where available non-department managed land in WA. Fires recorded by DBCA within the last five years (since 2019) are presented on **Figure 2.2**. The Survey Area has been subject to various fires in the last five years according to this dataset, with the most recent burn occurring in 2021 in the polygons north-west of the Survey Area. A large portion of the eastern part of the Survey Area was burnt in 2019. The portion of the Survey Area surrounding Wodgina mine site itself has almost no record of fire in the last five years (**Figure 2.2**). However, it is important to note that this dataset is updated annually, and there appears to be a lag in the capture of fire extents; it is therefore not comprehensive. This was confirmed by a review of aerial photography, which indicates that almost all of the western part of the Survey Area was burnt in early 2022, with the Turner River forming the eastern boundary of the fire; this fire has not been added to DBCA's dataset, and therefore is not indicated in **Figure 2.2**. A number of relatively small patches of vegetation were not burnt by this fire; these areas appear as different patterns on aerial imagery, with examples shown on the inset of **Figure 2.2.**

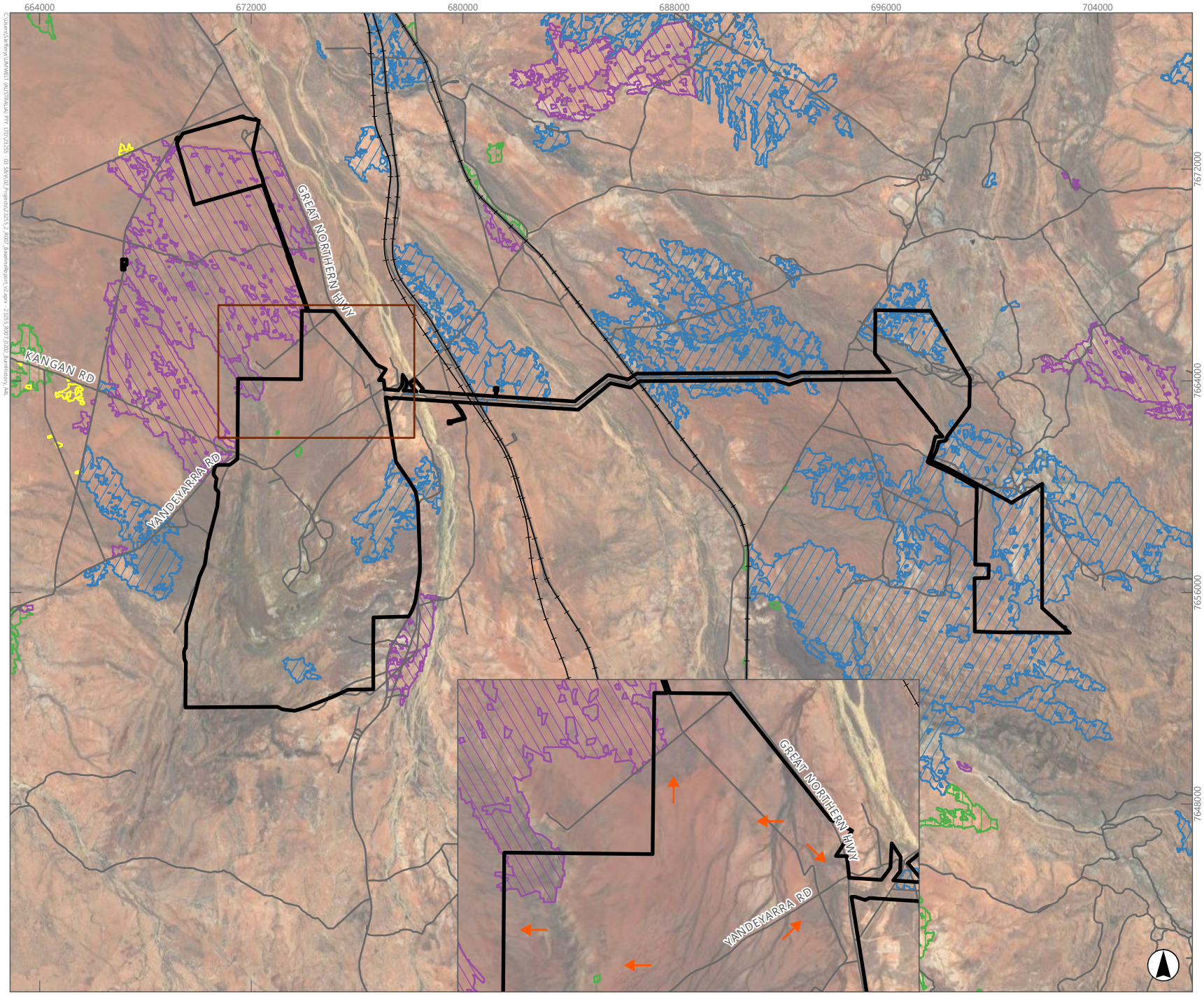


FIGURE 2.2

Burn History of the Survey Area

Legend

- Survey Area
- Road
- Railway

Burn History (DBCA, 2024)

- 2019
- 2020
- 2021
- 2023
- Indicates unburnt patch

0 4 8

Kilometres

Scale 1:200,000 at A4
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), DBCA (2024), Umwelt (2024), MRL (2024)

3.0 Methods

3.1 Desktop Assessment Methods

Prior to commencement of the 2023 and 2024 field surveys, a review of all publicly available flora and vegetation data relevant to the Survey Area was undertaken. This included obtaining and reviewing copies of reports of previous biological surveys relevant to the Survey Area (where available) (including interrogation of the Index of Biodiversity Surveys for Assessments (IBSA) database) as listed in **Table 3.1**.

Table 3.1 Searches Undertaken for the Desktop Assessment

Source	Search Attributes	Search Purpose
Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (DCCEEW, 2024)	Database interrogated using Desktop Study Area boundary. No additional buffer applied.	Identify Matters of National Environmental Significance (MNES), including Threatened flora and TECs listed under the EPBC Act, that occur or have the potential to occur within the Desktop Study Area.
DBCA Significant Flora Database (WA Herbarium Specimen Database and Threatened and Priority Flora (TPFL) Database) (DBCA, 2024b)	Database interrogated using Desktop Study Area boundary. No additional buffer applied. Reference 50-0224FL.	Obtain records of DBCA-listed significant flora within the Desktop Study Area.
DBCA Threatened and Priority Ecological Communities Database (DBCA, 2024a)	Database interrogated using Desktop Study Area boundary. No additional buffer applied. Reference 42-0224EC.	Obtain records of DBCA-classified TECs and/or PECs within the Desktop Study Area.
DBCA NatureMap (WA Herbarium and TPFL records) (DBCA, 2007-)	Database interrogated using Desktop Study Area boundary. No additional buffer applied. Reference 34-0224NM.	Obtain records of introduced flora within the Desktop Study Area.
DBCA TEC and PEC lists (DBCA, 2023c, 2023d)	Review of DBCA-classified TECs and PECs mapped in proximity to the Desktop Study Area.	Identify whether there are any additional DBCA-classified TECs or PECs that could occur within the Desktop Study Area.
Previous flora and vegetation surveys conducted within or in the vicinity of the Survey Area (various sources); including interrogation of the IBSA database	Desktop Study Area.	Identify previous flora and vegetation surveys which are relevant to the 2024 survey.
2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (DBCA, 2019; DPIRD, 2019)	Survey Area.	Identify extent of Vegetation System Associations (pre-European vegetation mapping) within the Survey Area.

3.2 Personnel and Licensing

Table 3.2 lists the personnel involved in fieldwork and plant identifications for the flora and vegetation assessment. The Project Manager has considerable previous experience (>15 years) in conducting flora and vegetation surveys in the Pilbara, including previous experience in managing field surveys at Wodgina. Field team leaders all have previous experience (> 3 years) in undertaking flora and vegetation surveys in the Pilbara. Other personnel have previous experience in assisting with flora and vegetation surveys in the region.

All plant material was collected under the relevant Flora Taking (Biological Assessment) Licence (under Regulation 62 of the Biodiversity Conservation Regulations 2018 (BC Regs)) and Authorisation to Take or Disturb Threatened Species (pursuant to Section 40 of the BC Act) as outlined in **Table 3.2**. Personnel managing plant identifications have had extensive previous experience (>15 years) in plant identifications of flora of the Pilbara and checked plant identifications undertaken by less experienced personnel for accuracy.

Table 3.2 Personnel and Licensing Information

Personnel and Qualifications	Experience	Flora Collecting Licence/Permit	Role
David Coultas **BSc (Environmental Biology) (Hons)**	>15 years	FB62000051-2 TFL 131-2122	Project manager Field manager – team leader 2023/2024 Plant identifications 2023/2024 (including review)
Catherine Godden **BSc (Biology)**	>15 years	FB62000050-2 TFL 130-2122	Field survey – team leader 2024
Diana Barrie **BSc (Agricultural Science, Conservation Biology)**	>3 years	FB62000443-2 TFL 2223-0143	Field survey – team leader 2024
Emalyn Loudon **BSc (Agribusiness) (Hons)**	>8 years	-	Field survey – 2024
Jaroslav Hruban **Mgr (MSc equivalent; Botany), BSc (Botany) (Hons)**	>4 years	FB62000251-3 TFL044-2122	Field survey – 2023, team leader - 2024
Kelli McCreery **MSc (Environmental Management)**	>15 years	FB62000185-2 TFL27-1920	Field survey – team leader 2023
Kyler Rowson **BSc (Marine Biology, Biological Sciences)**	3 years	FB62000399 TFL 2223-0139	Field survey – team leader 2024
Liam Chirio **BSc (Environmental Science & Wildlife Biology)**	>2 years	FB62000413-1b TFL 2223-0138	Field survey 2023/2024

Personnel and Qualifications	Experience	Flora Collecting Licence/Permit	Role
Lovisa Thambert **BSc (Environmental Management and Sustainability & Conservation and Wildlife)**	3 years	FB62000468	Field survey 2024
Marco Pratissoli **PostGrad. Dip. Sc. (Environmental Biology and Management)**	>5 years	FB62000057-2 TFL-2425-0035	Field survey – team leader 2024
Matthew Mullaney **BSc (Environmental Science & Ecology)**	3 years	FB62000564	Field survey 2023
Melissa White **BSc (Botany)**	1 year	FB62000612	Field survey 2024
Monika Hrubanova **BSc (Botany) (Hons)** **Mgr (MSc equiv.) (Botany)**	3 years	FB62000375-2	Field survey – team leader 2023
Peter Zuvich **BSc (Marine science)**	1 year	-	Field survey 2024
Rene Hill **BSc (Animal Ecology) (Hons)**	1 year	-	Field survey 2024
Tom Jones **BSc (Botany and Zoology)**	1 year	FB62000537	Field survey 2023/2024
Bethea Loudon **BSc (Biology)**	>15 years	NA	Plant identifications 2023
Shibi Ullas Chandran **BSc (Zoology) Masters (Fisheries Biology and Aquaculture)**	>5 years	NA	Plant identifications 2024

3.3 Aerial Photography Interpretation and Survey Design

The design of the 2023 and 2024 surveys complies with the requirements of EPA Technical Guidance (EPA, 2016b) and is consistent with the methods used for other similar flora and vegetation assessments conducted within the vicinity of the Survey Area (**Section 5.1.4**) and the wider Pilbara Bioregion.

A large proportion of the Survey Area has received considerable recent survey effort by Woodman Environmental (2020). This survey included the assessment of a number of quadrats and relevés and VT mapping. The quadrat and VT datasets were utilised to inform survey design. Initial interpretation of ortho-rectified aerial photography at a scale of 1:10,000 was conducted to determine preliminary vegetation patterns present within the Survey Area (including areas of restricted or unusual landforms and types). This review considered the size of vegetated areas and visible vegetation patterns.

Sampling of the Survey Area was designed to ensure that a minimum of three quadrats (including either previously established quadrats to be re-assessed or new quadrats) sampled each major discernible vegetation pattern where possible. For spatially smaller patterns, fewer quadrats were allocated based on the size of the pattern; while for widespread vegetation patterns, quadrats were also allocated across their geographic range. Final quadrat locations and number of quadrats was determined in the field based on vegetation diversity observed. The most recent dataset as recorded and updated by Woodman Environmental (2020) was reviewed during the desktop assessment (**Section 5.1.4**), with a number of previously established quadrats nominated for re-sampling to ensure data currency and taxonomic consistency between these surveys and the current survey (discussed in further detail in **Section 3.4.4**).

All initially proposed quadrats were sampled during the primary surveys in 2023 and 2024; additional quadrats were sampled during the supplementary survey in 2024 depending on the outcome of the primary surveys, as well as climatic conditions (i.e. recent rainfall).

3.4 Field Survey Methods

3.4.1 Primary Survey Timing

Primary flora and vegetation field surveys were undertaken during two survey periods as listed below:

- 24 May – 2 June 2023
- 21 May – 30 May 2024

The timing of the field surveys was selected to coincide with what is considered to be the most appropriate time to survey in the Pilbara Bioregion; as per EPA Technical Guidance (2016b), being approximately six to eight weeks post wet season (generally March to June); most of the taxa in this region flower at this time. This includes the majority of significant taxa that potentially occur in the Survey Area (see **Section 5.1.5**).

3.4.2 Supplementary Survey Timing

A supplementary survey was undertaken during one site visit, from 5–11 August 2024.

The timing of the supplementary survey was selected to coincide with a secondary peak in flowering of taxa in the Pilbara region. Ideally, such a survey would follow a late Autumn or early Winter rainfall event (as per EPA (2016b)); however, such events do not occur regularly in the Survey Area. The absence of such a rainfall event does not preclude the flowering of late-Winter flowering taxa in the Pilbara, with such taxa generally flowering irrespective of rainfall received during this period.

3.4.3 Survey Area Access

The Survey Area was accessed by vehicle using existing access tracks and via foot traverses. Appropriate landholder/manager permissions were obtained prior to undertaking the field survey.

3.4.4 Sample Sites

3.4.4.1 Quadrats

Following field survey in 2024, a total of 484 non-permanent flora and vegetation survey quadrats have now been established and assessed in the Survey Area, of which 332 were surveyed during the 2023 and 2024 field survey as outlined below:

- 212 quadrats established and assessed in 2024 (199 during the primary survey, 13 during the supplementary survey)
- 10 quadrats established and assessed in 2023
- 176 quadrats established for the Woodman Environmental (2020) assessment of the Wodgina Project (established late June – early July 2018 and mid-June 2019), 18 of which were re-assessed in 2023, and 40 re-assessed in 2024
- 68 quadrats established for the Hercules DSO Project (Woodman Environmental, 2013b) (established May-June 2011), eight of which were re-assessed in 2023, and 14 re-assessed in 2024
- 5 quadrats established for the Great Northern Highway Upgrade Project (Woodman Environmental, 2013a) (established May 2013), three of which were re-assessed in 2024
- 13 quadrats established for the Turner River Hub Project (Woodman Environmental, 2011a) (established May 2010) which were re-assessed in 2018 by Woodman Environmental (2020), and four re-assessed again in 2023.

The quadrat size utilised for the flora and vegetation survey of the Survey Area is the indicative size for flora and vegetation surveys in the Pilbara IBRA Bioregion, as outlined in Table 1 of the EPA Technical Guidance (EPA, 2016b). All quadrats encompassed a total area of 2,500 metres squared (m^2); most were 50 m × 50 m squares; however, occasionally rectangular quadrats with different dimensions (e.g. 100 m × 25 m) were established in narrower vegetation patterns such as those along creek lines. Quadrat boundaries were demarcated using handheld Global Positioning System (GPS) units and surveying tape measures. Quadrat locations were selected to ensure that at least three quadrats sampled each vegetation pattern initially identified from aerial photography interpretation, where possible (as per **Section 3.3**). Vegetation boundaries or transition zones were avoided. Additional quadrats were established in areas that were not identified by the initial aerial photography interpretation but were observed in the field to differ from pre-identified areas, or areas of unusual habitat. The final quadrat locations were adjusted from the initial proposed locations where:

- variations in floristic patterning were observed, including placing additional quadrats in areas of unusual habitat
- the vegetation had been obviously recently disturbed
- the vegetation had been recently burnt (< 2 years) (where possible)
- access or safety issues were encountered.

All vascular flora taxa (native and introduced) that were visually identifiable within each quadrat were recorded. At least one reference specimen of most taxa encountered (excluding common, distinctive taxa) was collected for verification and identification purposes (see **Section 3.5**).

The following information was recorded at each quadrat:

- personnel
- unique quadrat number
- survey date
- GPS coordinates at start corner of quadrat (recorded using handheld GPS units) (Geocentric Datum of Australia 1994 (GDA2020), Zone 50) (note that all four corners of newly-established quadrats were recorded in this fashion)
- size and dimensions of quadrat
- site photograph, taken diagonally into quadrat from start corner
- compass bearing for two sides of quadrat that commence at start corner of quadrat
- topography (including landform type and slope class)
- soil colour and type (including the presence of any rock outcropping and surface stones)
- vegetation condition (as per EPA Technical Guidance (EPA, 2016b) for the Eremaean and Northern Provinces; scale presented in **Appendix A**) and a description of disturbances (where relevant)
- approximate time since fire
- foliage cover (%) (for each taxon, native and introduced, including cover within the quadrat of individuals rooted outside of the quadrat)
- height (m) (average for each taxon, native and introduced, excluding climbers/aerial shrubs)
- additional flora taxa present immediately outside of the quadrat.

As mentioned above, a selection of previously surveyed quadrats from previous Woodman Environmental surveys were re-sampled; it was expected that change to vegetation composition and/or vegetation condition within these quadrats would have been negligible over the time since initial sampling. Such quadrats were primarily selected based on their location (providing an adequate representation of previously mapped VTs), as well as quadrats with potential data compatibility issues (e.g. taxonomic identification issues). Previous quadrat data was reviewed and updated to reflect current taxonomic nomenclature and knowledge prior to survey (as required), and taken in the field, with taxon presence, percentage cover and average height confirmed or updated and additional taxa (including height and cover) added where necessary, to reflect the current state of the vegetation present. Fire history and condition of the vegetation was also updated where necessary. Representative collections were made where required to confirm taxon identities. Quadrat parameters were also reviewed and updated as required, and new quadrat photos were also taken.

In addition, changes to taxon nomenclature were also made to quadrats that were not re-visited where it was considered clear that a nomenclatural issue had been consistently repeated throughout the survey, based on the results of re-visits to other quadrats.

The locations of all quadrats detailed above, as well as traverses to these quadrats (as track logs), are presented in **Figure 3.1**.

3.4.4.2 Relevés

Flora and vegetation survey quadrats are not considered to be the most appropriate sampling method in all instances. Where areas of vegetation in relatively degraded condition are encountered, or if areas of vegetation are too narrow to allow for the establishment of quadrats (e.g. narrow road verges), the establishment and survey of relevés rather than quadrats is considered more appropriate. A total of 50 non-permanent flora and vegetation survey relevés were surveyed in the Survey Area in 2023, and 15 relevés were surveyed in 2024. Relevés surveyed an area within a radius of approximately 20 m around a central point. All data recorded for quadrats (as listed above) was also recorded for relevés; however, only dominant taxa of each stratum level were recorded, as well as any taxa not previously observed elsewhere. The locations of all relevés detailed above, as well as traverses to these relevés (as track logs), are presented in **Figure 3.1**.

3.4.4.3 Vegetation Mapping Notes

Notes on vegetation pattern boundaries and distribution were also taken while traversing the Survey Area. These notes included a GPS location at the point where the notes were taken and a brief description of the vegetation, including dominant and characteristic taxa and landform information. The notes were used to aid in mapping polygons of vegetation patterns that were not allocated quadrats. Not all vegetation pattern polygons receive quadrats or relevés due to a combination of accessibility, survey method parameters and time constraints; however, such polygons can be allocated to a final vegetation type (VT) using a combination of vegetation mapping notes and aerial photograph interpretation. A total of 94 vegetation mapping notes were recorded in the Survey Area in 2023, with 67 recorded in 2024. Vegetation mapping note locations, as well as traverses to these locations (as track logs) are presented in **Figure 3.1**.

3.4.5 Targeted Survey for Significant Flora Taxa and Vegetation

Systematic targeted survey for significant flora taxa and vegetation was undertaken in 2023 within the 2023 Detailed and 2023 Reconnaissance Survey Areas. All taxa and vegetation identified by the desktop assessment as potentially occurring within the survey areas were considered to be identifiable during the survey, and therefore all such taxa and vegetation were targeted (**Section 5.1.5** and **Section 5.1.7**). Information relating to identifying characteristics, flowering period and habitat of these taxa, and relating to dominant taxa, soil and landform characteristics for significant vegetation, was reviewed by all field team members prior to undertaking targeted survey.

Targeted survey was undertaken in a grid pattern via traverses spaced approximately 50 m apart in all areas within the 2023 Detailed Survey Area which had not been subject to targeted survey 2019 by Woodman Environmental (Woodman Environmental, 2020). Targeted survey was also undertaken throughout the entirety of the 2023 Reconnaissance Survey Area, with the area grid searched via traverses spaced approximately 50 m apart.

Where plants of significant flora taxa were encountered, or where traverses intersected habitat of less conspicuous flora, survey was also undertaken between traverses. However, it is worthy of note that due to the grid spacing used, numbers of plants recorded are not considered to be a full census of each taxon within the Survey Areas, but instead provide a conservative estimate of the numbers of individuals present, and their distributions.

The following information was recorded along traverses (where significant flora taxa and/or significant vegetation was encountered):

- location (including GPS coordinates and datum, recorded using handheld GPS units), taxon and count of any significant flora encountered at location within a radius of approximately 25 m from GPS coordinates
- location (including GPS coordinates and datum, recorded using handheld GPS units), community name and extent of any significant vegetation encountered within a radius of approximately 25 m from GPS coordinates
- comments on habitat, including landform and soils, vegetation condition, description of disturbances and any apparent correlation between vegetation and landform features, as necessary.

Large portions of the western part 2024 Survey Area (including the 2023 Detailed Survey Area) have been the subject of targeted survey for significant flora taxa, with searching undertaken in 2019 (Woodman Environmental, 2020). For areas of the 2023 Detailed Survey Area where targeted survey was undertaken in 2019, with the exception of the short-lived taxon *Euphorbia clementii* (P3) (discussed further below), it is expected that there has been negligeable change to population dynamics of the remaining significant flora taxa since survey in 2019. To test this assumption, a sample of significant flora populations recorded by Woodman Environmental (2020) were revisited during the 2023 survey to document any changes to significant flora populations and / or presence of impacting processes. The previous flora data for these populations was taken in the field and the presence, population boundaries and number of individuals (based on estimates) was verified and new data recorded if changes to these populations was observed.

Of the significant taxa previously recorded in the 2023 Detailed Survey Area, populations of the three significant flora taxa known to be long-lived and/or persistent long-term in the vegetation (*Terminalia supranitifolia*, *Triodia chichesterensis* and *Vigna triodiophila* (all P3)) were prioritised for revisits; *Euphorbia clementii* (P3), a species known to be short-lived and only persistent for a short period following fire (Woodman Environmental, 2020), was considered a lower priority for revisits, as it was considered unlikely to be present at previously recorded locations unless they were affected by recent fire. However, investigation of previously surveyed suitable habitat for this taxon that had been recently burnt was undertaken while revisiting other significant flora locations and existing quadrats in the Detailed Survey Area, as it may have established in such areas where it was not detected previously.

Some targeted survey was undertaken outside the survey areas in 2023, to provide additional contextual data for particular significant flora taxa, with foot traverses undertaken in suitable habitat. Such survey was also undertaken outside the 2019 Wodgina Study Area during the Woodman Environmental (2020) survey. Information recorded at identified locations of these taxa was the same as that recorded during targeted searching.

No counts of taxa were made where hitherto unknown significant flora taxa were identified from plant collections taken at quadrat/relevé locations or opportunistically. Similarly, boundaries of hitherto unknown significant vegetation communities were not recorded during the field survey.

All traverses made as part of targeted survey are mapped as track logs in **Figure 3.1**.

Systematic targeted survey was not undertaken during the 2024 survey.

3.4.6 Opportunistic Survey

Significant flora taxa, introduced flora taxa, additional flora taxa and occurrences of significant vegetation were opportunistically recorded while traversing the survey areas during both the 2023 survey and 2024 survey. GPS locations of such taxa and vegetation were recorded (either via point locations or a track-logged boundary of a group of individuals or area of vegetation), along with other relevant information such as habitat and an estimate of the number of individuals present. For introduced flora taxa, particular emphasis was given to WoNS and Declared Pests. All traverses associated with opportunistic survey are mapped as track logs in **Figure 3.1**.

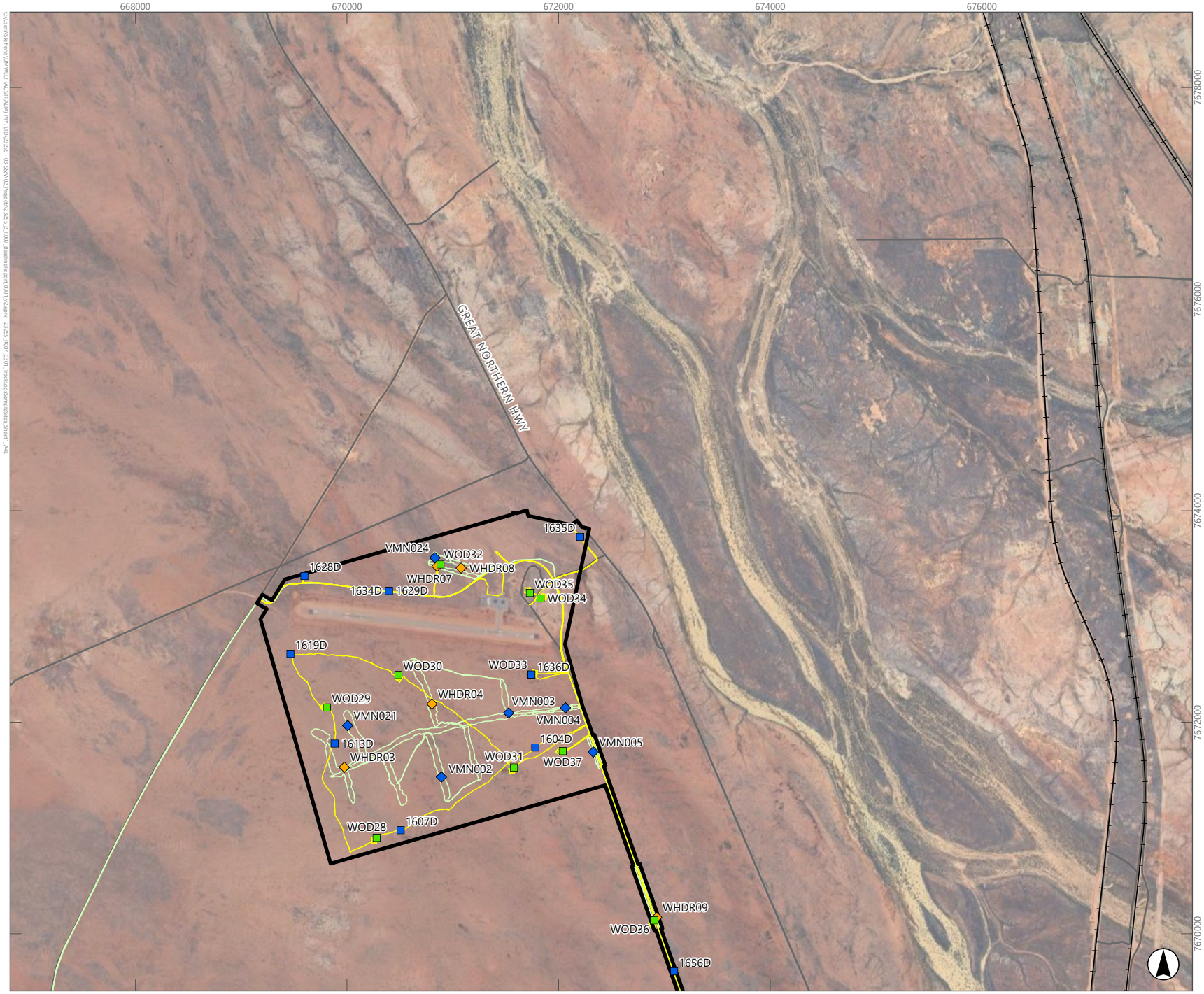
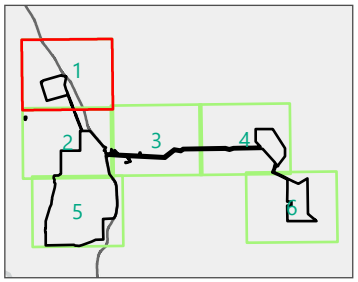


FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 1

Legend

- Survey Area
- Road
- Railway
- 2024 Quadrat
- 2024 Vegetation Mapping Note
- 2023 Relevé
- 2023 Vegetation Mapping Note
- 2024 Primary Survey Track Log
- 2023 Survey Track Log



0 1 2

Kilometres

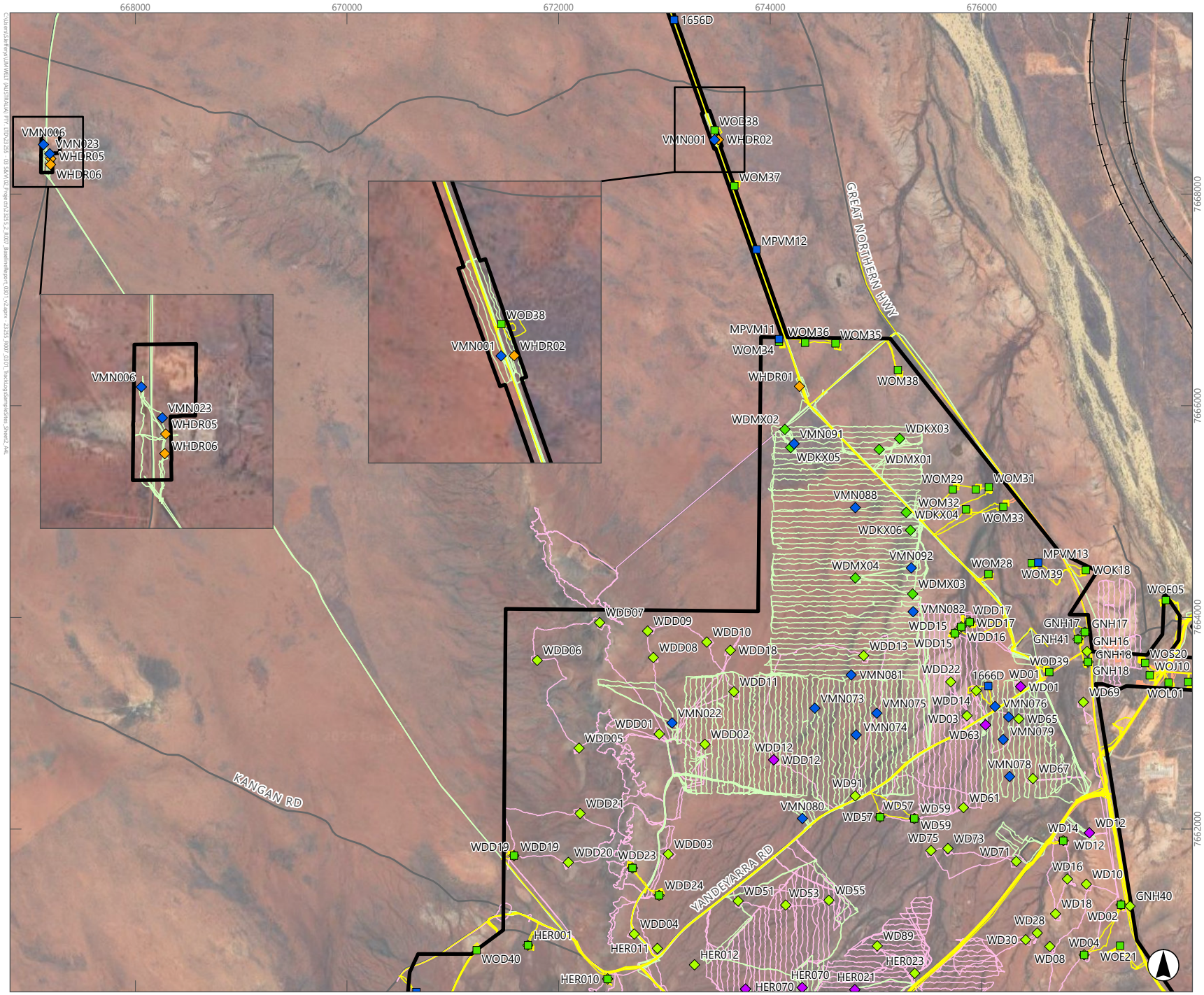
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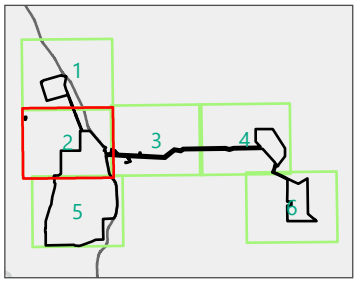
FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 2



Legend

- Survey Area
- Road
- Railway
- 2024 Quadrat
- 2024 Vegetation Mapping Note
- 2023 Quadrat
- 2023 Reassessed Quadrat
- 2023 Relevé
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat
- 2024 Primary Survey Track Log
- 2024 Supplementary Survey Track Log
- 2023 Survey Track Log
- 2018/2019 Survey Track Log



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Kilometres

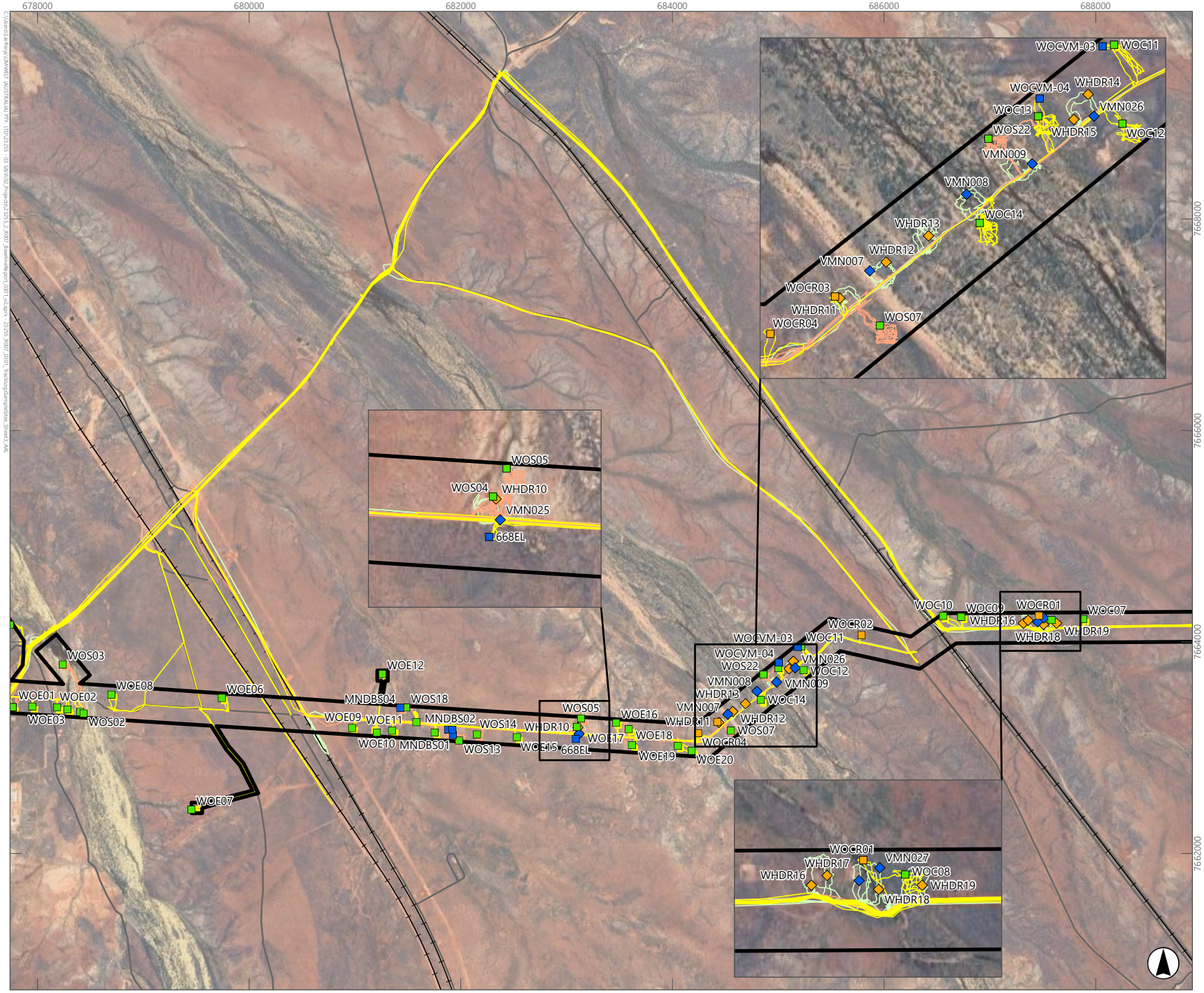
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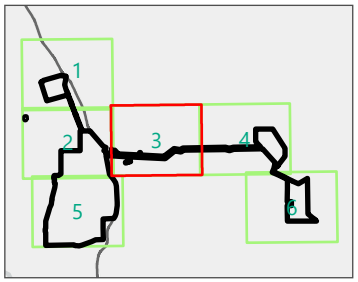
FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 3



Legend

- Survey Area
- Road
- Railway
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note
- 2023 Relevé
- 2023 Vegetation Mapping Note
- 2024 Primary Survey Track Log
- 2024 Supplementary Survey Track Log
- 2023 Survey Track Log



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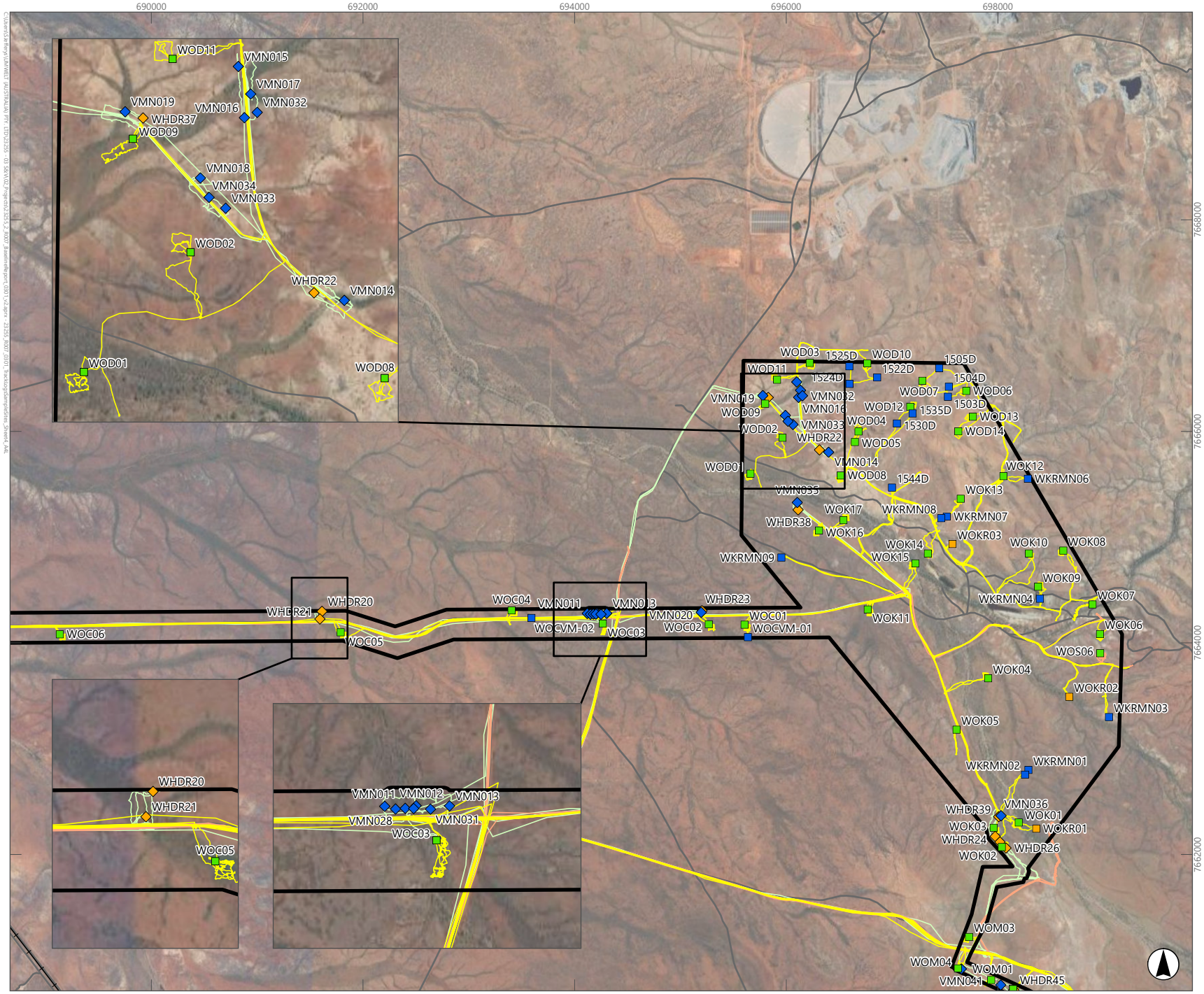
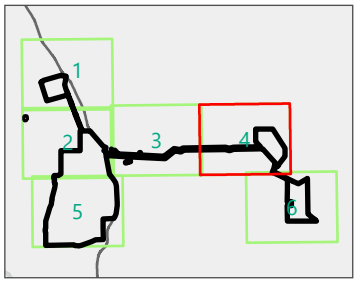


FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 4

Legend

- Survey Area
- Road
- Railway
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note
- 2023 Relevé
- 2023 Vegetation Mapping Note
- 2024 Primary Survey Track Log
- 2024 Supplementary Survey Track Log
- 2023 Survey Track Log



0 1 2

Kilometres

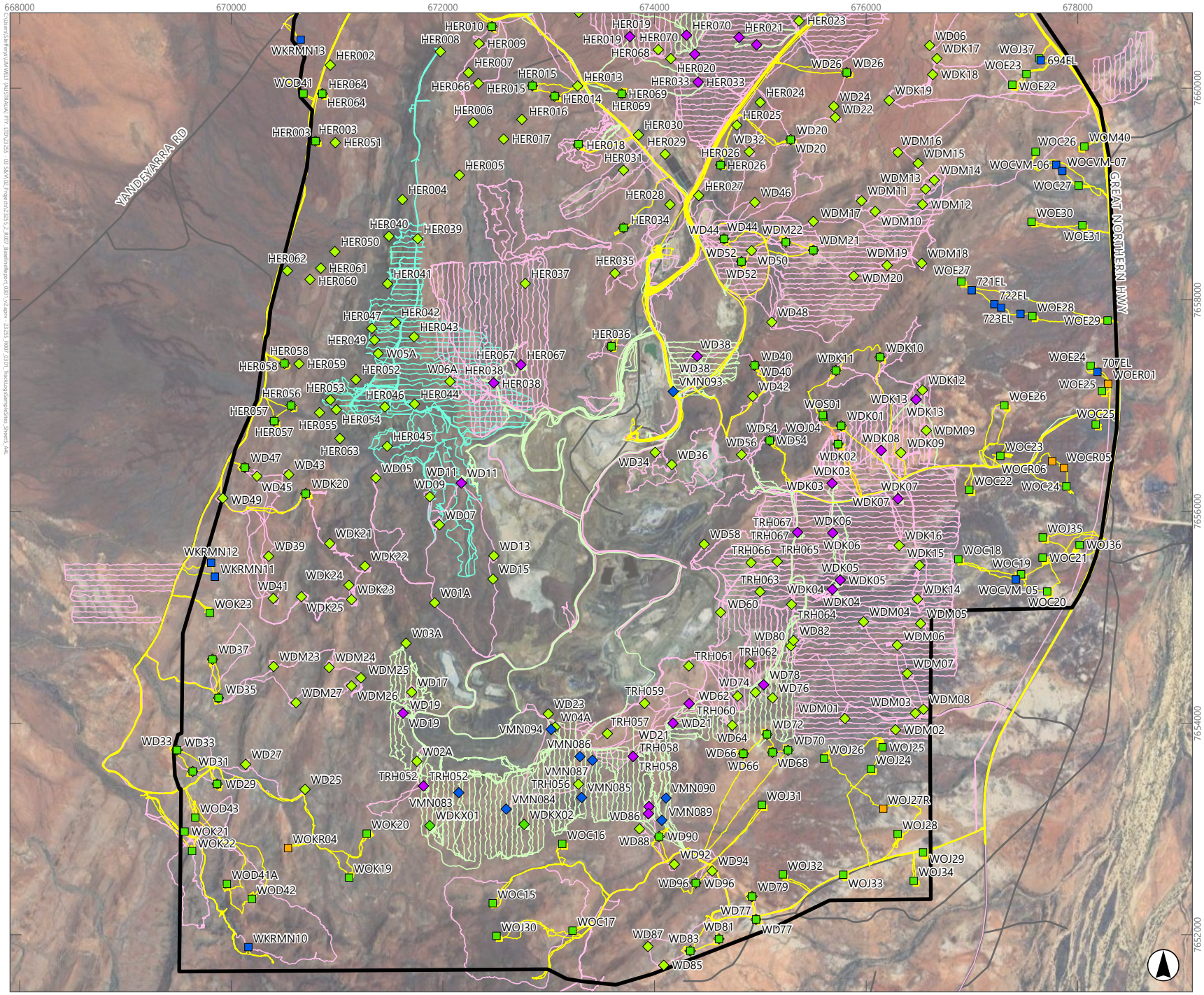
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FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 5



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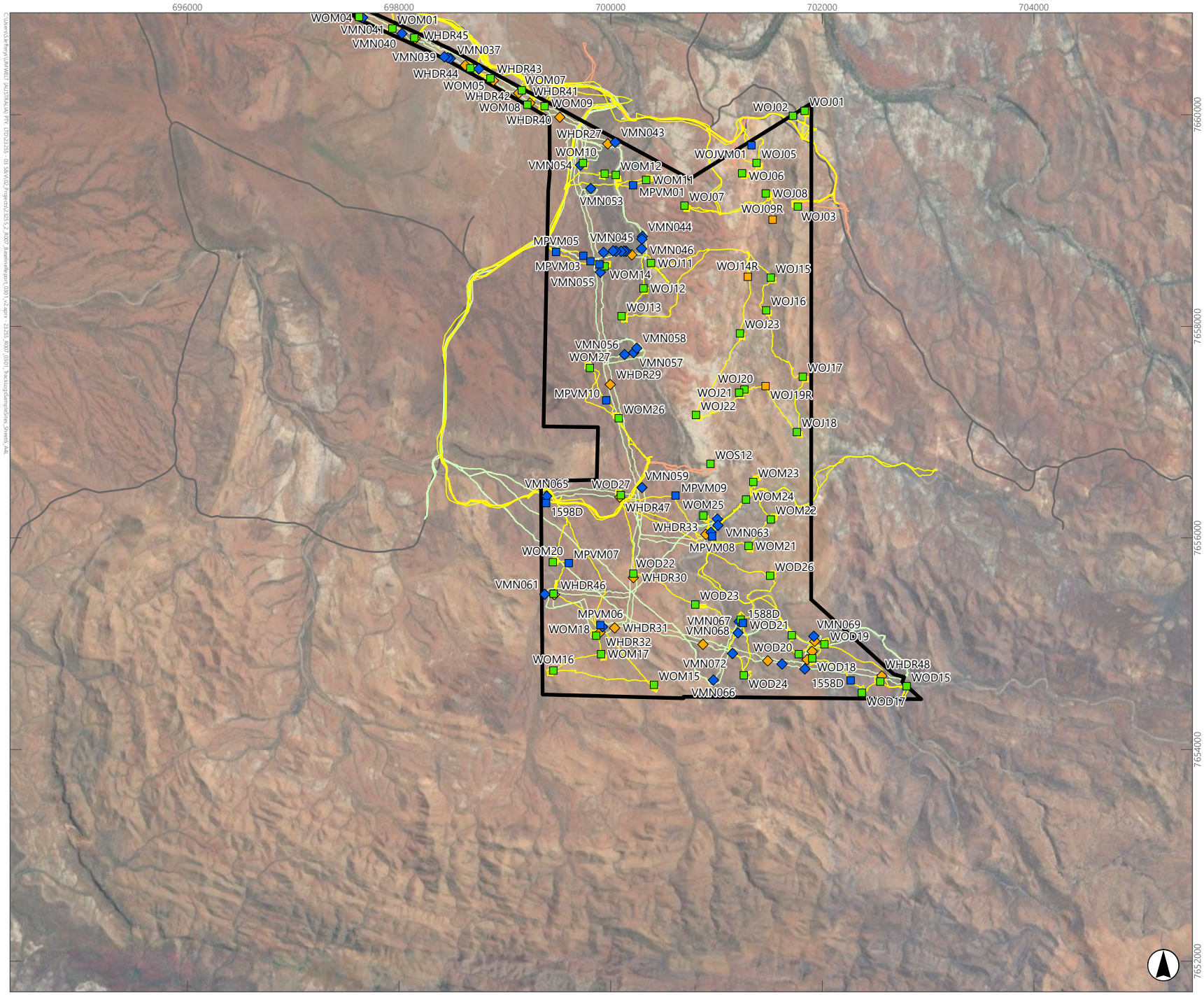
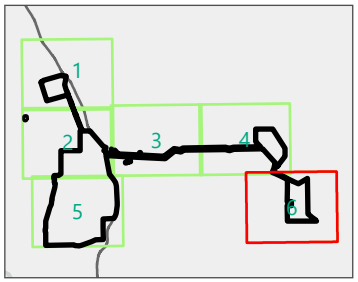


FIGURE 3.1

Track Logs and Sample Sites in the Survey Area – Sheet 6

Legend

- Survey Area
- Road
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note
- 2023 Relevé
- 2023 Vegetation Mapping Note
- 2024 Primary Survey Track Log
- 2024 Supplementary Survey Track Log
- 2023 Survey Track Log



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3.5 Plant Collection and Identification

Specimens of any unknown flora taxa encountered during the field survey were collected and pressed as per Western Australian Herbarium (WA Herbarium) guidelines (WA Herbarium, 2020). Plant identifications were undertaken at the WA Herbarium and were overseen by a Principal Ecologist – Botanist with extensive previous experience (>15 years) in plant identifications for flora of the Pilbara (**Section 3.2**). The identification of all flora taxa (including significant taxa) used the most up to date information available, including taxonomic keys published in books, journals and online, comparison with herbarium specimens, and consultation with taxonomic experts. External experts of particular families or genera were consulted for any specimens considered to be difficult to identify or of taxonomic interest, including botanists at the WA Herbarium.

Taxon nomenclature generally follows Florabase (WA Herbarium, 1998-), with all names checked against the current DBCA Max database to ensure their validity. However, in cases where names of plant taxa have been published recently in scientific literature but have not yet been adopted on Florabase due to time constraints, nomenclature in the published literature is followed. The conservation status of each taxon was checked against Florabase, which provides the most up-to-date information regarding the conservation status of flora taxa in WA.

As per section 7.2 of EPA Technical Guidance (EPA, 2016b), specimens of interest, including significant flora taxa, taxa representing range extensions, potential new taxa, and key species in new occurrences of TECs and PECs, will be sent to the WA Herbarium for consideration for vouchering as soon as practicable. However, this process is via donation, and the WA Herbarium may not voucher all specimens, in accordance with its own requirements. The specimen vouchering will be supported by completed Threatened and Priority Flora Report Forms submitted to DBCA (Species and Communities Branch) in the case of listed significant flora (i.e. Threatened and Priority flora taxa).

3.6 Floristic Classification Analysis

Floristic classification analysis of data from 484 quadrats established in the Survey Area was performed. This quadrat dataset is larger than that used for the floristic classification analyses undertaken by Woodman Environmental (2020) and Umwelt (2024), and includes quadrats from a wider geographical area. As such, it was expected that there would be significant change to the classification results relative to those presented in Woodman Environmental (2020) and Umwelt (2024). The classification presented in this report is therefore independent of those presented in Woodman Environmental (2020) and Umwelt (2024), with discussion of the relationships between the classifications presented in **Section 5.2.10**.

Data for all quadrats used in the classification analysis was reviewed and updated to reflect current taxonomic nomenclature and conceptual knowledge (as required) prior to analysis (see **Section 5.2.1** for further details). The final dataset analysed included quadrat data as below:

- 212 newly established quadrats – established and surveyed in 2024 by the current survey.
- 10 quadrats established and surveyed in 2023 by the 2023 survey (Umwelt, 2024).
- 176 quadrats established and surveyed in 2018 and 2019 by Woodman Environmental for the Wodgina Lithium Project (Woodman Environmental, 2020) (58 re-sampled in 2023/2024).

- 13 quadrats established in 2011 for the Turner River Hub Project (Woodman Environmental, 2011a) (re-sampled in in 2018/2019 by Woodman Environmental (2020)) (four re-sampled in 2023).
- 68 quadrats established in 2011 for the Hercules DSO Project (Woodman Environmental, 2013b) (22 re-sampled in 2023/2024.
- Five quadrats established in 2013 for the Great Northern Highway Upgrade Project (Woodman Environmental, 2013a) (re-sampled in 2018/2019 by Woodman Environmental (2020) (three re-sampled in 2024).

As mentioned above (and also in **Section 3.4.4**), 30 of the previously established quadrats were re-sampled in 2023, and a further 57 previously established quadrats were re-sampled in 2024. However, the majority of the Detailed Survey Area was burnt approximately 18 months prior to the 2023 survey (see **Section 4.2**), which affected the majority of the quadrats that were re-sampled. As such, the majority of quadrats re-assessed in 2023 and 2024 contained numerous, short-lived 'fire responder' taxa not previously recorded at these quadrats (although there was no other significant change to the previously recorded data observed at any of the re-assessed quadrats (see **Section 5.2.9**)). It was therefore considered undesirable to include 2023 and 2024 re-assessment quadrat data, given that re-assessment of all quadrats used in the classification analysis was not undertaken in either year (see **Section 5.2.9**), and introduction of a relatively large volume of data from recently burnt quadrats could influence the classification results. Therefore, previously recorded data for the re-assessed quadrats was utilised in the classification analysis, rather than the 2023 and 2024 data, as it was considered appropriate to attempt to minimise potential skewing of classification results. It is worthy of note, however, that a number of recently burnt quadrats were included in the classification analysis, including several quadrats established in 2023 and 2024, as well as previously surveyed quadrats that were not re-assessed in 2023 or 2024; this is often an unavoidable issue in Pilbara surveys (see **Sections 4.2** and **Section 5.2.10** for further discussion).

The floristic classification analysis was undertaken by a botanist with extensive previous experience (>15 years) in undertaking and interpreting floristic analysis results including in Pilbara analyses.

Taxa belonging to the below categories were removed prior to the classification analysis as per the methods for the previous classification analyses for the Project (Umwelt, 2024; Woodman Environmental, 2019b):

- Ephemeral taxa –the presence of ephemeral taxa is strongly influenced by seasonal conditions, and these taxa can be variably distributed across an area even after above-average rainfall. Furthermore, the presence of many ephemeral taxa is linked to fire history, with greater taxa and individuals present in the first one or two years since fire.
- Introduced taxa – introduced taxa were removed as their distributions in the Pilbara are considered to be often defined by the disturbance history (e.g. clearing, grazing) rather than natural ecological drivers. Including introduced taxa in the classification analysis introduces the risk of the classification results being influenced by the disturbance history of sampled vegetation.
- Hybrids – hybrids are usually the result of random reproductive events that produce small numbers (often only one) of sterile offspring, and are not likely to be a persistent feature of vegetation.

- Taxa where identification was unclear – taxa were removed from the analysis where identification was unclear due to poor available material in the field. However, if such a taxon was known to be unique within the dataset (i.e. although not identifiable to species level, there was enough material to indicate it representing a unique taxon), and the taxon had multiple records in the dataset, it was included in the analysis (e.g. Polymeria sp. nov.).
- Singletons – taxa that occur only once in the dataset were removed, as published studies indicate that they provide little information in the dataset (e.g. Markey & Dillon (2008)).

All taxa removed from the classification analysis (excluding taxa belonging to the abovementioned categories) are presented in **Appendix B**. Also presented in **Appendix B** are taxa that were amalgamated in the classification analysis; this was done, for example, where different infra-taxa could not be consistently positively identified at all quadrats due to inadequate material.

The final dataset contained 206 taxa following the removal and/or amalgamation of the above-noted taxa.

Prior to undertaking agglomerative hierarchical clustering, a Principal Components Analysis (PCA) using R Statistical Software (R Core Team, 2023) was undertaken on a single-layer data matrix consisting of presence/absence species data. Two analyses were then undertaken to determine the optimal number of clusters, with the minimum of these two metrics being considered to capture the majority of variation in the quadrat data:

- The point where the principal components contribute 5% of the standard deviation and the principal components cumulatively contribute 90% of the standard deviation.
- The point where the percent change in variation between consecutive principal components is less than 0.1%.

The same presence-absence data matrix was then used in the classification analysis, with the classification and ordination analysis of the data matrix undertaken using the 'vegan' (Oksanen et al., 2022) and 'cluster' (Maechler et al., 2021) R packages using R Statistical Software (R Core Team, 2023). The Bray-Curtis coefficient was used to generate an association matrix for the classification analysis. This association matrix consisted of pairwise coefficients of similarities between quadrats based on floristic data. Agglomerative hierarchical clustering, using flexible Unweighted Pair Group Method with Arithmetic Mean (UPGMA) (ß = -0.1), was used to generate a quadrat classification dendrogram using the 'factoextra' R package (Kassambara & Mundt, 2020).

3.7 Vegetation Type Definition, Mapping and Description

The classification analysis of quadrat data from the Survey Area aggregated quadrats into clusters (**Section 3.6**). The resulting dendrogram was reviewed to determine the plausibility of clusters in the context of field observations.

VT descriptions have been adapted from the National Vegetation Information System (NVIS) Australian Vegetation Attribute Manual Version 6.0 (ESCAVI, 2003), as stipulated by EPA Technical Guidance (EPA, 2016b). This model follows nationally-agreed guidelines to describe and represent VTs, so that comparable and consistent data are produced nation-wide. It should be noted that the NVIS system utilises vegetation descriptions derived from structural characteristics of the individual community units, while Survey Area VTs presented in this report are defined based on the results of a floristic classification analysis, excluding any structural data. Such VTs therefore may include multiple structural types.

It should also be noted that this report describes VTs at the NVIS Sub-Association level, rather than the Association level as recommended by EPA (2016b). This level is considered more appropriate for the vegetation of the Survey Area, as often the vegetation possessed one or more additional strata to the traditional three-stratum classification system used at the Association level.

For each Survey Area VT, indicator taxa were defined via Indicator Taxon Analysis (INDVAL). This was conducted using the 'labdsv' R package (Roberts, 2019) via the method of Dufrêne and Legendre (1997). This generates INDVAL values (a measure of taxon fidelity to a given VT) that range from 0 to 100; an INDVAL value of 100 indicates that a taxon is present in all quadrats within a particular VT and absent from all other quadrats included in the analysis. The INDVAL values were then tested for significance of the indicator taxa using a Monte Carlo permutation test. Indicator taxa were defined as taxa with a significance *p* value of either <0.05, <0.01 or <0.001. The same taxa exclusions (i.e. annual/ephemeral taxa, introduced taxa and hybrids) and amalgamations (as per **Appendix B**) were employed for the indicator species analysis as per the floristic classification analysis (**Section 3.6**). Note that only VTs sampled with more than one quadrat can be analysed for indicator species.

Locations of quadrats within each VT were used in conjunction with aerial photograph interpretation and relevé and vegetation mapping note locations taken during the field survey to develop VT mapping polygon boundaries. Mapping boundaries were developed using aerial photography on a scale of 1:10,000 and reflected changes in vegetation patterns visible at this scale. The VT mapping polygon boundaries were then digitised using Geographic Information System (GIS) software. Existing VT mapping boundaries in the Survey Area (Umwelt, 2024; Woodman Environmental, 2020) were utilised where appropriate.

3.8 Vegetation Condition Mapping

Vegetation condition was described using the vegetation condition scale presented in EPA (2016b) for the Eremaean and Northern Botanical Provinces (as per **Appendix A**). Notes on vegetation condition were taken during the field survey via vehicle traverses along access tracks, and during foot traverses undertaken within the survey areas. Vegetation condition was also recorded at all quadrats and relevés. Vegetation condition category polygon boundaries were developed using this information in conjunction with introduced flora taxa location data and were digitised using GIS software as for VT polygon boundaries. As per the VT mapping, existing condition mapping boundaries in the Detailed Survey Area (Umwelt, 2024; Woodman Environmental, 2020) were utilised where appropriate.

3.9 Significant Flora and Vegetation Definitions

3.9.1 Significant Flora Taxa

As per EPA definitions (EPA, 2016a, 2016b), flora taxa may be significant for a range of reasons, including, but not limited to the following:

- being identified as a Threatened or Priority species (formally listed significant taxa – includes taxa listed under both State and Commonwealth legislation, and classified as Priority by DBCA)
- being locally endemic or associated with a restricted habitat type (e.g. surface water or groundwater dependent ecosystems (GDEs))
- being a new species or having anomalous features that indicate a potential new species

- being representative of the range of a species (particularly at the extremes of range, recently discovered range extensions, or isolated outliers of the main range)
- being an unusual species, including restricted subspecies, varieties or naturally occurring hybrids
- having a relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.

Significant flora taxa recorded within the Survey Area are discussed in **Section 5.2.1** with reference to the above categories. Data including point locations and individuals of significant flora taxa known from the Survey Area are also presented in this section. Note that the values for number of locations and individuals of significant flora taxa of the Survey Area as presented in **Section 5.2.1** includes data collected by the current survey, by the 2023 survey (Umwelt, 2024) and by Woodman Environmental (2020); as noted in **Section 3.4.5**, a sample of locations recorded by Woodman Environmental (2020) were revisited and verified during the 2023 survey.

DBCA (2020) presents conservation codes for DBCA-listed taxa. Further information about Commonwealth conservation categories is provided in Threatened Species Scientific Committee's (TSSC) 'Guidelines for assessing the conservation status of native species according to the *Environment Protection and Biodiversity Conservation Act 1999* and Environment Protection and Biodiversity Conservation Regulations 2000' (TSSC, 2021).

3.9.2 Significant Vegetation

As per EPA definitions (EPA, 2016a, 2016b), vegetation may be significant for a range of reasons, including, but not limited to the following:

- being identified as a TEC or PEC (formally listed significant vegetation – includes vegetation listed under Commonwealth or State legislation, or classified as a PEC by DBCA)
- having restricted distribution
- having a degree of historical impact from threatening processes
- playing a role as a refuge
- providing an important function required to maintain ecological integrity of a significant ecosystem.

To determine the presence of TECs and PECs defined from quadrat-derived data, EPA Technical Guidance (EPA, 2016b) requires comparison of the quadrat data with that of the survey in which the TEC or PEC was originally described. However, limited information is available for TECs and PECs of the Pilbara region. Generally, only broad descriptions are provided in the respective TEC and PEC lists to allow for diagnosis. The vegetation of the Survey Area was therefore manually compared to such descriptions to determine whether any vegetation may represent a TEC or PEC; specifically, comparisons of dominant taxa, soils, topography and geographical distribution of VTs were made to those of any relevant TEC or PEC. A similar process was followed for TECs listed under the EPBC Act, with comparisons made to the appropriate listing and conservation advice for any TECs likely to occur in the Survey Area.

The remaining significant vegetation criteria other than “being identified as a TEC and PEC” were applied to VTs mapped in the Survey Area to determine whether a VT was significant in a local or regional context. However, in a regional context, limited information is available for comparison with VTs in the Survey Area. This is discussed further in **Section 5.2.13**.

Definitions, categories and criteria for WA TECs and PECs are presented by Department of Biodiversity, Conservation and Attractions (DBCA, 2023b). Further information about Commonwealth conservation categories is provided in TSSC’s ‘Guidelines for nominating and assessing the eligibility for listing of ecological communities as threatened according to the Environment Protection and Biodiversity Conservation Act 1999 and the EPBC Regulations 2000’ (TSSC, 2017).

4.0 Adequacy and Limitations of Survey

4.1 Adequacy of Survey

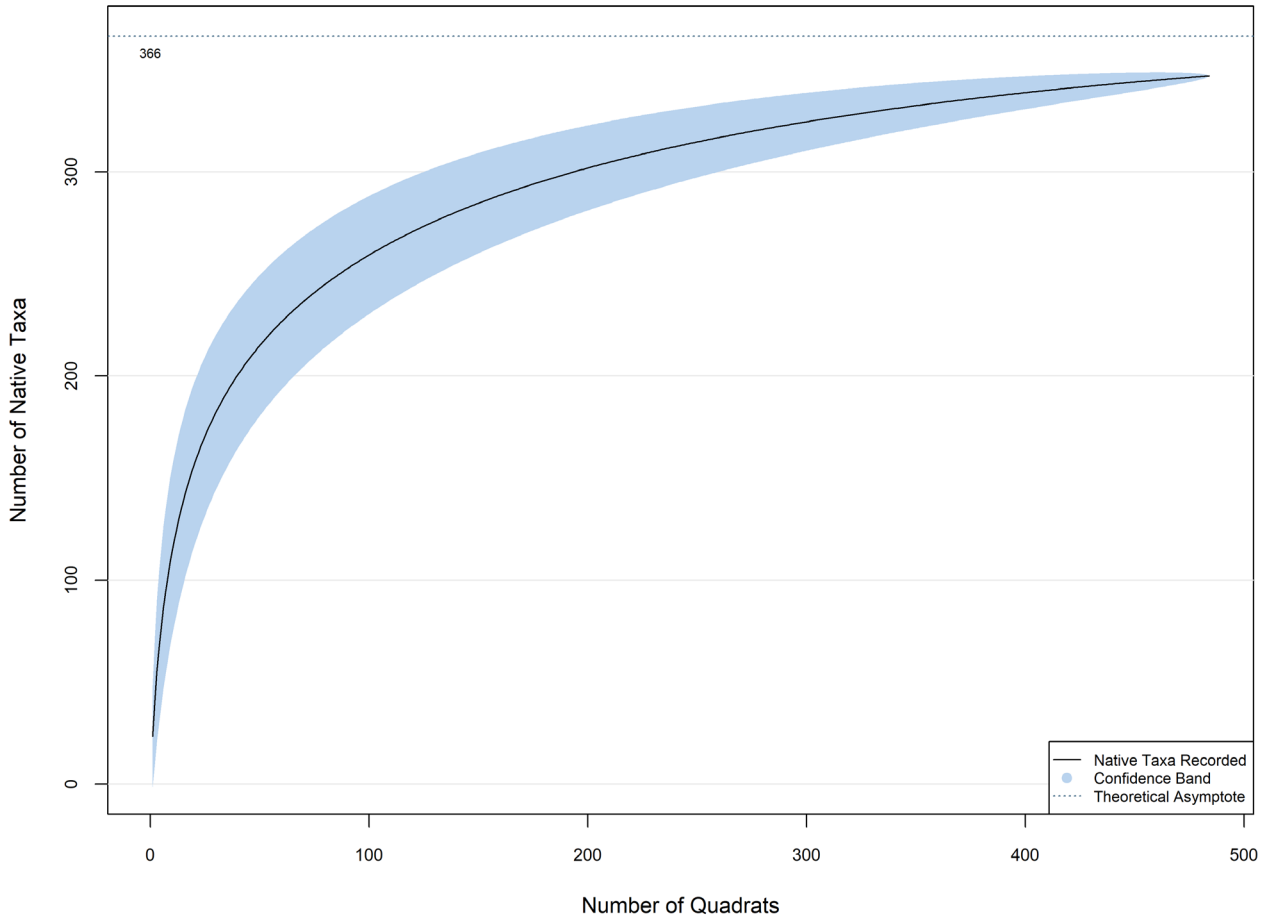
The Survey Area covers approximately 13,137 ha, with 484 quadrats established within it during the 2023/2024 field surveys and relevant previous surveys. Quadrats were established in all preliminary vegetation patterns discernible by initial aerial photograph interpretation (**Section 3.3** and **Section 3.4.4**), both to adequately sample variation in vegetation, and to ensure adequacy of sampling for vascular plant taxa.

The number of quadrats established in the Survey Area is considered to be acceptable given the reasonable diversity of topography and soil types present, as well as the size of the Survey Area. Approximately 1 quadrat was established per 27 ha of the Survey Area.

To provide an indication of the adequacy of this survey, a taxon accumulation curve was produced with the 'vegan' R package (Oksanen et al., 2022) using R Statistical Software (R Core Team, 2023). Taxon accumulation curves represent a theoretical model of the relationship between sampling intensity and taxon accumulation; when sampling intensity is increased, taxon accumulation is reduced, and the taxon accumulation curve becomes asymptotic.

The taxon accumulation curve was generated using all native taxa (both annual and perennial) recorded within each quadrat. Taxon accumulation calculations were then undertaken using the 'SpadeR' R package (Chao et al., 2016), utilising the Chao-2 estimator for native species richness (bias corrected form) (Chao, 1987) and compared to the actual number of native taxa recorded in the Survey Area. This provides an indication as to whether sufficient quadrats were surveyed to adequately sample the native species richness in the Survey Area. As the generation of taxon accumulation curves includes quadrat data only, and not opportunistically recorded taxa or taxa recorded at relevés, the indication of adequacy of survey is considered to be conservative.

Graph 4.1 presents the taxon accumulation curve generated from quadrat data from the Survey Area. Using the Chao-2 estimator, the recorded number of native taxa within quadrats (366 taxa) is equivalent to 95% of the estimated native taxon richness in the Survey Area. This accumulation curve indicates that the Survey Area was well-sampled.



Graph 4.1 Survey Area Quadrat Taxon Accumulation Curve

Another adequacy of survey measure is that developed by Mueller-Dombois & Ellenberg (1974), who suggest that a cut-off point might be when a 10% increase in quadrats surveyed results in a ≤5% increase in taxa recorded. This measure was also calculated using all native flora taxa recorded within each quadrat. The number of quadrats established by the field survey satisfies this adequacy measure for both the Survey Area, with the final taxon increase value of 1.2% for the Survey Area, recorded following a 10% increase in quadrats.

4.2 Limitations of Survey

Table 4.1 presents the limitations of the flora and vegetation assessment of the Survey Area in accordance with EPA Technical Guidance (EPA, 2016b). This includes limitations associated with the previous surveys for the Project conducted by Umwelt (2024) and Woodman Environmental (2020) (where relevant), as data from these surveys in has been incorporated into this assessment.

Table 4.1 Limitations of the Flora and Vegetation Survey of the Survey Area

Limitation	Determination	Comment
Effort and extent	Partial limitation	A detailed survey of the Survey Area was undertaken. Overall, 484 quadrats have been established in the Survey Area, of which 222 were newly established (established in 2023 / 2024) and 87 were previously established quadrats that were re-sampled by the 2023/2024 surveys. The number of quadrats is considered adequate to characterise the flora and vegetation of the Survey Area, with at least three quadrats allocated to each vegetation pattern identified pre-survey. Adequacy of survey measures also indicate that the Survey Area was well sampled. The supplementary survey in 2024 allowed for the establishment of further quadrats in vegetation patterns that were considered to have been under-sampled following the primary survey. Targeted survey for significant vegetation and flora taxa identified by the desktop assessment was not undertaken during the 2024 survey. However, targeted survey was conducted in parts of the Survey Area during previous surveys. Much of the 2023 Detailed Survey Area has been the subject of targeted survey in 2019 by Woodman Environmental (2020); all areas not previously subject to targeted survey in 2019 by Woodman Environmental (2020) were subject to targeted survey in 2023, as was the entirety of the 2023 Reconnaissance Survey Area. Significant flora populations identified by Woodman Environmental (2020) were also revisited and verified during the 2023 survey by Umwelt as discussed in **Section 3.4.5**. Opportunistic targeted survey for significant flora taxa was undertaken while traversing the Survey Area to establish quadrats and relevés in 2024. Two potentially significant entities (*Corchorus* aff. *incanus* and *Polymeria* sp.) were identified post-survey in 2023; targeted survey for these entities has not been conducted anywhere in the Survey Area. No constraints prevented appropriate sampling techniques (quadrat/relevé establishment, foot traverses) being employed within the Survey Area. Most areas were relatively accessible using available access tracks. Data reliability is therefore considered to be high.
Competency / experience of the team carrying out the survey	Not a limitation	The Project Manager has previous experience (> 15 years) in conducting flora and vegetation assessments in the Pilbara Region and conducting systematic sampling and analysis, including within the Survey Area. Other field team leaders have previous experience (> 2 years) in conducting flora and vegetation surveys in the Pilbara Region, and field team personnel have previous experience assisting in flora and vegetation surveys. Senior personnel provided guidance to less experienced botanists throughout the survey where necessary, with the Project Manager in the field for the duration of the field survey. Information relating to identifying characteristics, flowering period and habitat of significant flora taxa identified by the desktop assessment as potentially occurring in the Survey Area was provided to all field team members prior to undertaking the field surveys, and all field personnel observed in situ locations of significant flora taxa known to occur in the Survey Area prior to surveys commencing. Personnel overseeing plant identifications have >15 years' experience in plant identification in flora of the Pilbara Region. Relevant taxonomic experts (including botanists at the WA Herbarium) were consulted for any specimens considered to be difficult to identify or of taxonomic interest. Personnel undertaking survey of quadrats established in the Survey Area for Woodman Environmental (2020) are considered to have been adequately experienced.

Limitation	Determination	Comment
Proportion of flora recorded and/or collected and identified	Not a limitation	All vascular groups that were present in the Survey Area were sampled via quadrat and/or relevé assessment (in 2018, 2019, 2023 and 2024). The 2024 survey included a primary survey to capture the flowering period of the majority of taxa in this region, as well as a supplementary survey to identify further taxa that may not have been detectable during the primary survey. A high proportion of perennial vascular taxa were recorded based on the intensity and method of survey, and almost all could be positively identified. A high proportion of annual vascular taxa were recorded based on the timing, intensity and method of survey, despite below-average rainfall received in 2018/2019, 2023 and 2024 (see timing/weather/season/cycle below). Unknown vascular taxa were collected, with specimens identified at the WA Herbarium. Adequacy of survey measures indicate that the Survey Area was well sampled (**Section 4.1**).
Sources of information e.g. previously available information (whether historic or recent) as distinct from new data	Not a limitation	Good contextual information for the Survey Area was available prior to the survey. Sources of information used included federal and state government databases, with state government databases known to have been populated with data from numerous surveys conducted in the general vicinity of the Survey Area, as well as numerous general sources pertaining to the climate, geomorphology, flora and vegetation of the region, and numerous surveys previously conducted within, or in close proximity to the Survey Area (**Section 5.1.4**). Review of BoM climate data for Indee and Marble Bar stations revealed a small number of gaps in the daily datasets for temperature and precipitation; however, this data was used in an indicative manner only, and therefore this is not considered to be a limitation of this survey.
Survey timing and weather/ season/ cycle	Not a limitation	The 2023 survey and the 2024 primary survey were conducted within what is considered to be the most appropriate time to survey in the Pilbara Bioregion, with the 2024 supplementary survey undertaken during a period that coincides with a secondary peak in flowering in the Pilbara region, as per Section 6.4 of EPA (2016b). The 2023/2024 flowering periods appeared to be reasonable, despite below-average precipitation prior (from January to May) to the 2023 and 2024 survey (203 mm and 113 mm respectively, compared to the average of 267 mm for this period) (BoM, 2024a). In addition, there was no late Autumn or Winter rainfall prior to the 2024 supplementary survey; however, this was not considered to be a limitation of the survey. Although the 2018/2019 rainfall was below-average, this was not considered to be a limitation of the 2018/2019 survey (Woodman Environmental, 2020). There was no limitation on the ability to survey for any significant flora taxon known to occur or potentially occurring in the Survey Area based on the weather or season of survey.

Limitation	Determination	Comment
Disturbances (e.g. fire, flood, accidental human intervention etc.) that may have affected results of survey	Partial limitation	The majority of the 2023 Detailed Survey Area was impacted by fire approximately 18 months prior to the 2023 survey, and therefore sampling of recently burnt vegetation was unavoidable; this is a frequent and often unavoidable occurrence during biological surveys in the Pilbara region. Despite this, all taxa, including significant flora taxa, were mature enough to be positively identified and this did not prevent the establishment and assessment of new quadrats or the re-assessment of previously established quadrats, or targeted survey. However, the majority of the quadrats re-assessed in 2023 and 2024 included numerous taxa which are well known to be fire responders. Therefore, the previously recorded data from existing quadrats was utilised in the classification analysis rather than the 2023/2024 data. Quadrats established in 2023/2024 and during previous surveys (but not re-assessed in 2023 / 2024) in recently burnt areas because of the absence of similar unburnt areas were included in the classification analysis, and were assigned to VTs manually as required (see **Section 5.2.9**). Although sampling of recently burnt areas may have affected the results of the classification analysis to a certain extent, critical review of the classification analysis dendrogram is considered to have adequately addressed this issue, and the results of the survey are not considered to have been affected significantly. Some of the north-western polygons of the Survey Area were observed to be impacted by fire approximately 18 months prior to the 2023 survey; however, as per the 2023 Detailed Survey Area, all taxa were mature enough to be identified and this did not prevent the establishment of quadrats, relevés or targeted survey. The remainder of the Survey Area was generally not impacted by fire or any other disturbances. In addition, a portion of the 2019 Wodgina Study Area in the north-west corner was affected by a fire within 6 months of the 2019 survey, preventing the establishment of quadrats within the area during the Woodman Environmental (2020) survey due to the difficulty in identification of regrowth taxa. There was also a fire within the 2019 Wodgina Study Area within one to two years of the 2018 field survey. However, taxa were usually mature enough to be identified and therefore this did not affect the results of the previous survey significantly, with the vegetation able to be confidently assigned to a VT. The examination of aerial photography of different ages mitigated potential impacts of fire history on the ability to accurately map VTs across the survey areas. Fire history is well known to drive the presence of many taxa in the Pilbara, including some significant taxa. Therefore, the fire history of an area may influence whether a particular significant taxon is detected or not, and if detected, in what abundance it is present at – of particular importance is that some taxa may not be present in long-unburnt areas but may establish in the area en masse following fire. Several significant taxa already known to occur in the Survey Area (e.g. *Euphorbia clementii* (P3)) are known to establish en masse following fire and are short-lived; they therefore may be completely absent from long unburnt areas except for soil-stored seed, and consequently would not have been detected by the surveys. This issue is unavoidable, although an assessment of potential presence based on habitat may overcome this to an extent. This is discussed in **Section 5.2.4.1** and **Section 5.2.7**. This was considered to be a partial limitation of the 2023 survey and 2024 survey.
Remoteness and/or access restrictions	Not a limitation	The western and central parts of the Survey Area were accessed either via tracks or on foot, with no impediment to access in these areas. The eastern part of the Survey Area, particularly the south-east area, was somewhat difficult to reach due to large distances from available access tracks; however, quadrat sampling in this area was undertaken adequately with the combined effort of the 2023 and 2024 survey and is not considered to have affected the results of the survey.

5.0 Results and Discussion

5.1 Desktop Assessment

5.1.1 Regional Significant Flora

The interrogation of the DBCA WA Herbarium specimen database and TPFL database (DBCA, 2024b) returned a total of 24 significant vascular flora taxa that have records within the Desktop Study Area. Of these, one species (*Quoya zonalis*) is listed as Threatened under the *Biodiversity Conservation Act 2016* and the EPBC Act, and 23 are DBCA-classified Priority flora (**Table 5.1)**.

Eragrostis crateriformis was listed as Priority 3 at the time of all previous surveys (DBCA, 2024b) and was consequently surveyed for as part of targeted surveys. However, in August 2024 this taxon was removed from the Priority Flora list, and is therefore no longer considered to be significant (DBCA, 2024c). Therefore, this taxon is not considered further in this assessment.

The interrogation of relevant DCCEEW databases to search for MNES listed under the EPBC Act using the PMST (DCCEEW, 2024), did not identify any additional flora taxa listed as Threatened Species under the EPBC Act, or habitat for such species, that are known, are likely to, or may occur within the Desktop Study Area. The full results of the DCCEEW database search are presented in **Appendix C**.

Table 5.1 Listed Significant Flora Taxa Returned from DBCA Searches

Taxon	Status (WA)	Source*		
		WA Herb	TPFL	DCCEEW
***Abutilon* sp. Pritzelianum (S. van Leeuwen 5095)**	P3	X	X	
Acacia leeuweniana	P1	X	X	
Acacia levata	P3	X	X	
Bulbostylis burbidgeae	P4	X	X	
Cochlospermum macnamarae	P1	X		
***Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)**	P3	X		
Eragrostis crateriformis	P3^	X	X	
Euphorbia clementii	P3	X	X	
Euphorbia inappendiculata* var. *inappendiculata	P2	X		
Euploca mutica	P3	X		
Gomphrena leptophylla	P3	X		
Goodenia obscurata	P3	X		
Gymnanthera cunninghamii	P3	X	X	
Nicotiana umbratica	P3	X		
Phyllanthus hebecarpus	P3	X		
Ptilotus mollis	P4	X		

Taxon	Status (WA)	Source*		
		WA Herb	TPFL	DCCEEW
Quoya zonalis	T	X	X	X
Rothia indica subsp. australis	P3	X		
Stylidium weeliwolli	P3	X		
Terminalia supranitifolia	P3	X		
***Themeda* sp. Panorama (J. Nelson et al. NS 102)**	P1	X		
Triodia basitricha	P3	X		
Triodia chichesterensis	P3	X		
Vigna triodiophila	P3	X		

**Sources are: WA Herb / TPFL (DBCA, 2024b) and DCCEEW (DCCEEW, 2024)*
^No longer listed - listed as Priority 3 at the time of the surveys

5.1.2 Regional Vegetation

As previously mentioned, the Survey Area is located in the Pilbara IBRA region, specifically within the Abydos Plain (Beard, 1975). Of the four main associations described on the Abydos Plain, shrub steppe is predominant in the Survey Area (Beard, 1975). This is the main community of the granite plain and is dominated by *Acacia pyrifolia-Triodia pungens* associations, with hummock grasses and widely-spaced shrubs. The Survey Area occurs within the Chichester Subregion of the Pilbara IBRA region (DCCEEW, 2020). The Chichester Subregion is comprised of undulating Archaean granite and basalt plains with significant areas of basaltic ranges. Plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Eucalyptus leucophloia* tree steppes occur on ranges. Grazing of native pastures by stock and mining activity are the main impacts on biodiversity within the region (Kendrick & McKenzie, 2001).

The vegetation of WA as it was presumed to have existed prior to European settlement has been mapped at a scale of 1:250,000 as vegetation system associations (VSAs), with the Pre-European Vegetation spatial database created (Beard et al., 2013; DPIRD, 2019). Four vegetation system associations occur in the Survey Area as summarised in **Table 5.2** and presented on **Figure 5.1**. **Table 5.2** also presents the current extent of each VSA in relation to its pre-European extent and the percentage of the current extent of each vegetation system association currently protected for conservation within the state (as per report 1b of DBCA (2019)). The VSAs within the Survey Area all have over 99% of their pre-European extent remaining. The Abydos Plain – Chichester 93, Abydos Plain – Chichester 619 and George Ranges 82 VSAs have very little (<1%) reserved for conservation, whereas the Abydos Plain – Chichester_626 VSA has over 15% reserved for conservation.

Table 5.2 Vegetation System Associations within the Survey Area (DBCA, 2019)

Vegetation System Association	Description	Current Extent (ha)	Pre-European Extent Remaining (%)	Current Extent Protected for Conservation (%)
Abydos Plain – Chichester 93	Hummock grasslands, shrub steppe; kanji over soft spinifex	2,478,504	99.9	0.5

Vegetation System Association	Description	Current Extent (ha)	Pre-European Extent Remaining (%)	Current Extent Protected for Conservation (%)
Abydos Plain – Chichester 619	Medium woodland; river gum (*Eucalyptus camaldulensis*)	71,201	99.9	0.3
Abydos Plain – Chichester 626	Hummock grasslands, shrub-steppe; kanji over soft spinifex and *Triodia brizoides*	117,198	99.6	15.6
George Ranges 82	Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*	316,855	99.9	0

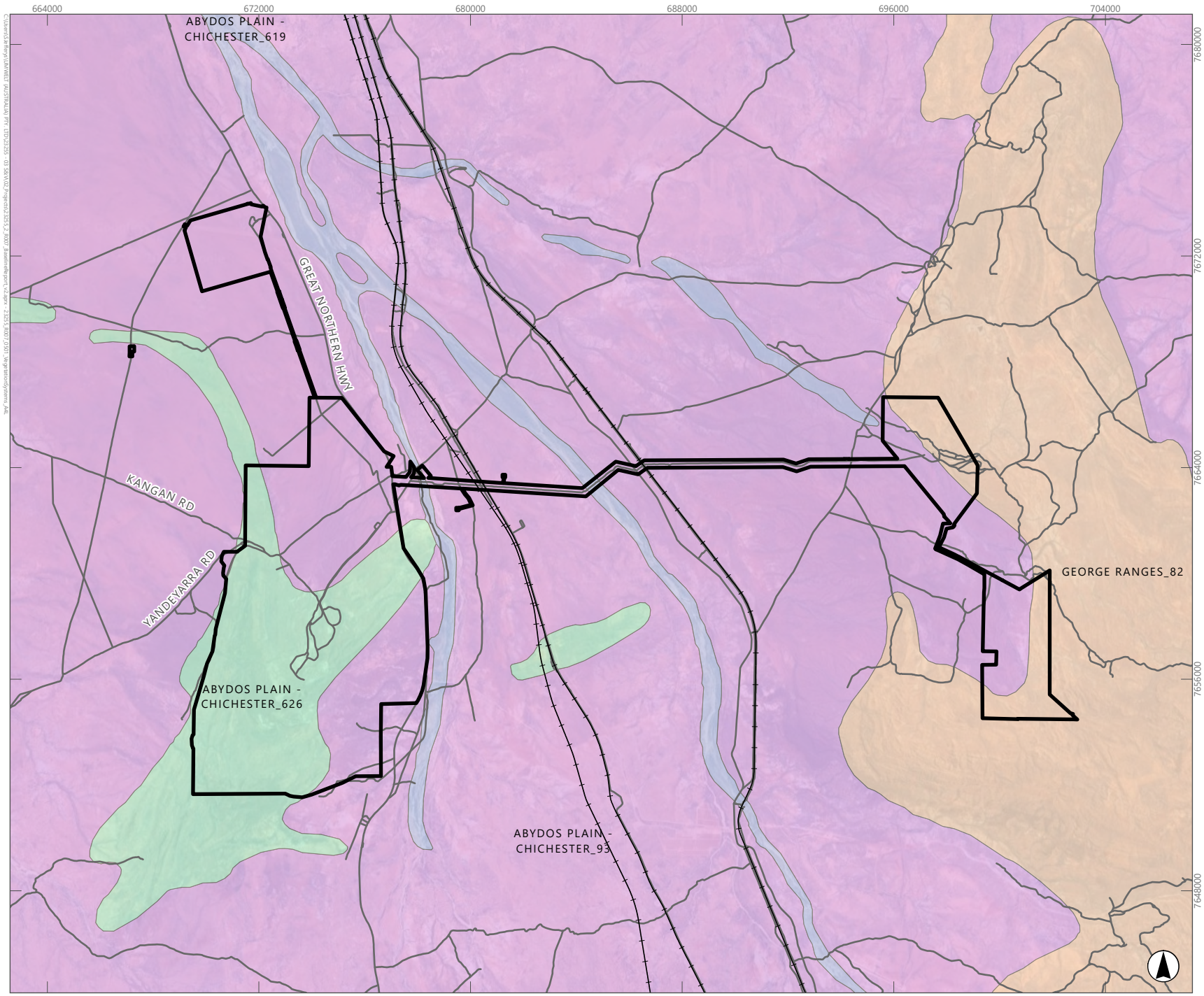


FIGURE 5.1

Vegetation System Associations of the Survey Area

Legend

- Survey Area
- Road
- Railway

Vegetation System Associations

- ABYDOS PLAIN - CHICHESTER_93
- ABYDOS PLAIN - CHICHESTER_619
- ABYDOS PLAIN - CHICHESTER_626
- GEORGE RANGES_82

0 4 8

Kilometres

Scale 1:200,000 at A4
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), DPIRD (2019), Umwelt (2024), MRL (2024)

In 2004, the Department of Agriculture described land systems (now referred to as soil landscape units) within the Pilbara IBRA region, considering general ecological information, vegetation physiognomy and composition, patterns of variation, conservation status, gradational association and land system representation (van Vreeswyk et al., 2004). A total of nine land systems occur within the Survey Area as summarised in **Table 5.3** and presented on **Figure 5.2**. None of these land systems are listed as TECs or PECs (DBCA, 2023c, 2023d). The mapped extent of one of these landforms (Platform) covered <1% (0.9%) of the Pilbara Study Area of van Vreeswyk et al. (2004).

The Capricorn, Rocklea and Talga Land Systems are largely represented by VSA Abydos Plain-Chichester_626, corresponding to areas of higher relief including hills and ridges. The Boolgeeda, Macroy, Platform, Robe and Uaroo Land Systems are represented by VSA Abydos Plain-Chichester_93, corresponding to areas of lower relief including stoney plains, and dissected slopes to raised plains. The River Land System corresponds to Abydos Plain-Chichester_619 (**Figure 5.1**; **Figure 5.2**).

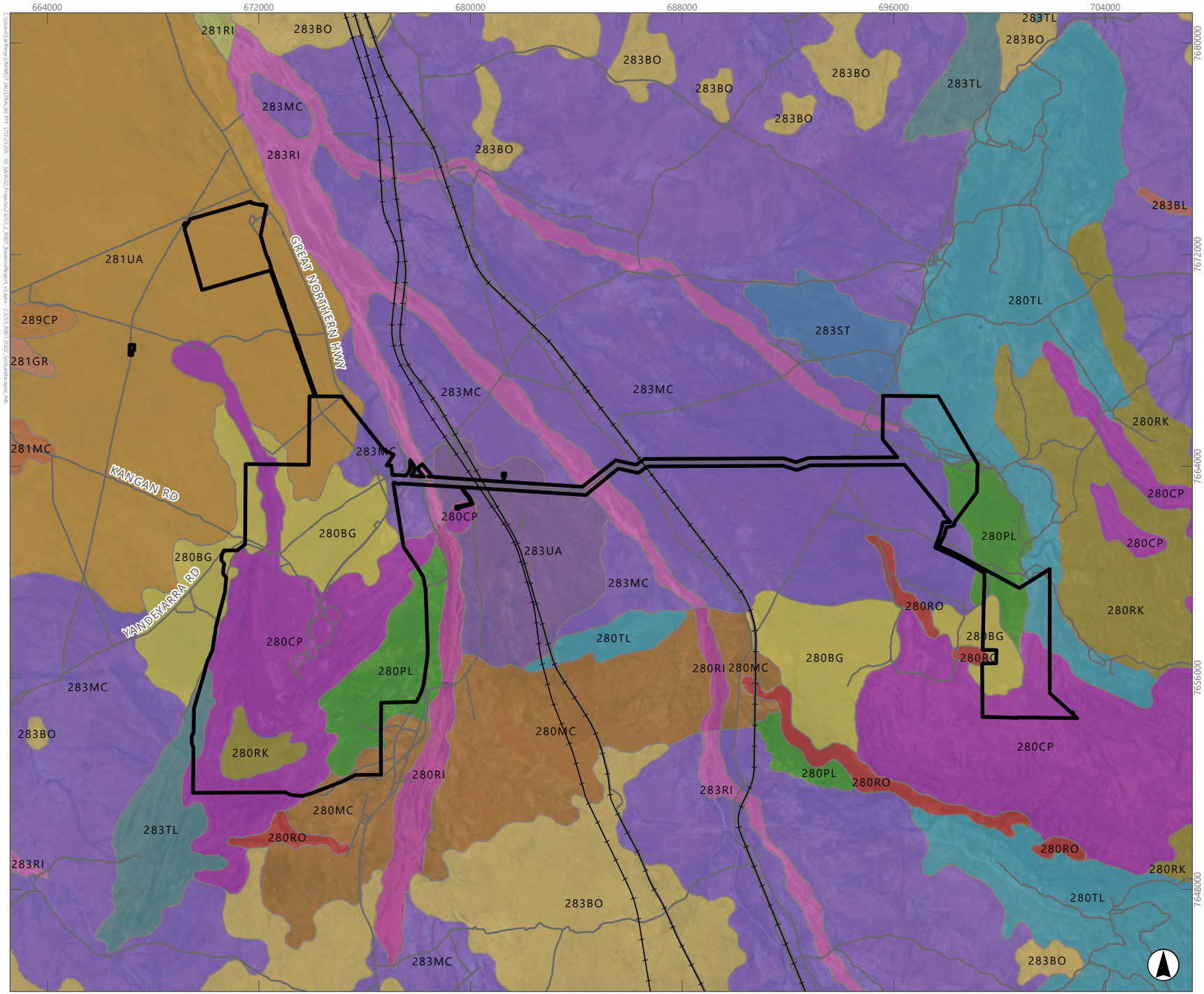
Table 5.3 Soil Landscape Units of the Survey Area

Soil Landscape Unit	Land System	Description of Land System	Total Mapped Extent (ha)
280Bg	Boolgeeda	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands	774,800
280Cp	Capricorn	Hills and ridges of sandstone and dolomite supporting shrubby hard and soft spinifex grasslands	529,600
283Mc	Macroy	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands	1,309,500
280Pl	Platform	Dissected slopes and raised plains supporting hard spinifex grasslands	1,570,00
283Ri	River	Active flood plains and major rivers supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands.	408,800
280Ro	Robe	Low limonite mesas and buttes supporting soft spinifex (and occasionally hard spinifex) grasslands.	86,500
280Rk	Rocklea	Basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands	22,993,00
280Tl	Talga	Hills and ridges of greenstone and chert and stony plains supporting hard and soft spinifex grasslands	212,400
281Ua	Uaroo	Broad sandy plains supporting shrubby hard and soft spinifex grasslands	768,100
283Ua			

The interrogation of the DBCA TEC and PEC database (DBCA, 2024a) returned one listed significant vegetation community with records within the Desktop Study Area, being the Gregory Land System PEC (P3). No TECs were returned form the search. The search of the DCCEEW SPRAT database with regard to MNES listed under the EPBC Act (DCCEEW, 2024) did not identify any TECs as occurring or potentially occurring within the Desktop Study Area (**Appendix C**).

FIGURE 5.2

Soil Landscape Mapping of the Survey Area



Legend

- Survey Area
- Road
- Railway

Soil Landscape Units

- 280Bg
- 280Cp
- 280Mc
- 280Pl
- 280Ri
- 280Rk
- 280Ro
- 280Tl
- 281Gr
- 281Mc
- 281Ri
- 281Ua
- 283Bl
- 283Bo
- 283Mc
- 283Ri
- 283St
- 283Tl
- 283Ua
- 289Cp

0 4 8

Kilometres

Scale 1:200,000 at A4
GDA2020 MGA Zone 50

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5.1.3 Groundwater and Surface Water Dependent Vegetation

Phreatophytes are usually deep-rooted perennial taxa that rely on groundwater sources for water uptake. These taxa are often (but not always) found within the riparian zones of permanent and ephemeral rivers, creeks and wetlands where water tables are often very close to the ground surface. Phreatophytes are divided into two main groups:

- Obligate: taxa are completely reliant on access to groundwater to survive. This reliance can be continual, seasonal or episodic and is often highly sensitive to alterations in groundwater regimes. Obligate phreatophytes occur in areas where the land surface is close to the groundwater table and directly access groundwater.
- Facultative: taxa that rely on groundwater only during extended periods of drought and are generally deep-rooted species occurring on floodplains and higher in the landscape away from very shallow groundwater aquifers. These species tend to be less sensitive to changes in groundwater regimes, however, may suffer stress during prolonged periods of drought. Such taxa can include those with shallow root systems that can survive periods of dryness, as well as periods of inundation and waterlogged soils, or those that can survive on soil moisture when available and utilise groundwater only during drier periods or higher elevations (phreatic facultative phreatophytes).

Groundwater dependent vegetation is known to occur in the Pilbara and is generally indicated by the presence of one or several phreatophytic taxa. These are:

- *Melaleuca argentea*: obligate phreatophyte (Graham (2001); cited in Loomes & Braimbridge (2010)). Studies by Graham (2001) indicate that this taxon has a shallow planiform root system adapted to areas of very shallow groundwater (2–3 m below ground level) and has difficulties adjusting to short periods of dry conditions (Loomes & Braimbridge, 2010). Studies undertaken by Woodward-Clyde (1997) for BHP indicate that a decline in groundwater level of 0.5 m may result in decreased vigour of plants and that a decline of 1 m or more may result in plant death.
- *Eucalyptus camaldulensis*: obligate or facultative phreatophyte, depending on the specific hydrological characteristics of a site (Loomes & Braimbridge, 2010). It is likely that this taxon is phreatophytic when groundwater is present within 10 m of the surface and may be sensitive when groundwater drawdown occurs at a rapid rate in these areas.
- *Sesbania formosa*: likely to be an obligate phreatophyte (Loomes & Braimbridge, 2010).
- *Acacia ampliceps*, *Atalaya hemiglauca*, *Melaleuca glomerata* and *Melaleuca linophylla*: likely facultative phreatophytes, primarily based on their presence in major river channels where groundwater is known to be close to the surface (Loomes, 2010a, 2010b; Loomes & Braimbridge, 2010). No impacts through groundwater drawdown have been noted for these taxa based on observations by Woodman Environmental (2019a), indicating that these taxa have a lower likelihood of being phreatophytes in most situations, and are generally likely to be vadophytes (i.e. taxa that rely on water from the unsaturated soil profile (vadose zone)).

- *Eucalyptus victrix*: suggested to be facultative phreatophyte in some situations (AQ2, 2015; Eastham, 2015; Loomes, 2010a; Loomes & Braimbridge, 2010)); however, it is generally considered to be a vadophyte (AQ2, 2015). Monitoring at the Ridley River (Pardoo) observed no significant long-term impacts to or mortalities of *Eucalyptus victrix* trees surrounding a bore over three years of extraction and over five years after extraction cessation (Woodman Environmental, 2019a).

Depth-to-groundwater can be used as a potential indicator of groundwater dependence by vegetation. Studies in the Pilbara have shown that there is reduced reliance on groundwater by vegetation where depth to groundwater exceeds 10 m (CSIRO, 2015; Loomes & Braimbridge, 2010; Woodward-Clyde, 1997).

In a local groundwater context, according to the Bureau of Meteorology 'Groundwater Dependent Ecosystems Atlas' (BoM, 2024b), the Survey Area intersects one Moderate potential aquatic GDE, being the Turner River. The Survey Area also intersects some very small pockets of Low potential aquatic GDEs. Aquatic GDEs are described as 'ecosystems that rely on the surface expression of groundwater – this includes surface water ecosystems which may have a groundwater component, such as rivers, wetlands and springs' (BoM, 2024b).

5.1.4 Local Flora and Vegetation Surveys

Flora and vegetation assessments have been undertaken at Wodgina since 1989 (Dames & Moore, 1989). Relevant flora and vegetation surveys undertaken within or in the vicinity of the Survey Area are summarised in **Table 5.4**. The locations of relevant surveys undertaken within the Survey Area are shown on **Figure 5.3** (subject to the availability of survey boundary files). There are limited publicly available surveys which have previously been undertaken within the far eastern portion of the Survey Area (with the exception of the 2023 survey by Umwelt (2024)). However, a number of flora and vegetation surveys have been undertaken for the North Star Project which is located in relatively close proximity to the south of this area, as well as surveys for Abydos located further to the north-east (as summarised in **Table 5.4**).

Table 5.4 Summary of Flora and Vegetation Surveys Previously Conducted in the Vicinity of the Survey Area

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
North Star Vegetation and Flora Assessment	Located 2 km south of the eastern part of the Survey Area	Ecologia (2012)	272 quadrats	453 taxa; 168 genera; 55 families	33 vegetation units: no TECs or PECs identified	6 taxa: *Abutilon* sp. Pritzelianum (S. van Leeuwen 5095) (P3)[+]; *Euphorbia clementii* (P3); *Euploca mutica* (P3)[#]; *Gymnanthera cunninghamii* (P3) *Ptilotus mollis* (P4); *Quoya zonalis* (T)[@]	7 taxa: *Aerva javanica*; *Bidens bipinnata*; *Cenchrus ciliaris;* *Digitaria ciliaris*; *Indigofera oblongifolia*; *Malvastrum americanum*; *Sonchus oleraceus*
North Star Extension Flora and Vegetation Survey	Located 15 km south-east of the eastern polygons of the Survey Area	Ecoscape (2020)	51 quadrats	201 taxa; 92 genera; 40 families	12 vegetation types: no TECs or PECs identified	3 taxa: *Quoya zonalis* (T)[@]; *Triodia basitricha* (P3); *Ptilotus mollis* (P4); *Themeda* sp. (potentially undescribed) – likely referrable to *Themeda* sp. Panorama (J. Nelson et al. NS 102) (though this location was not returned from DBCA database searches)	3 taxa: *Aerva javanica*; *Cenchrus ciliaris;* *Flaveria trinervia*
Flora, Vegetation and Fauna of the Proposed Expansion at Wodgina	Overlaps western section of the Survey Area	Mattiske (2000)	Not specified	214 taxa; 112 genera; 46 families	18 vegetation units; no TECs or PECs identified	*Acacia aphanoclada* (P1) listed although identification appears to be incorrect based on *FloraBase* records (WA Herbarium 1998-) and therefore is not considered further	3 taxa: *Aerva javanica*; *Cenchrus ciliaris*; *Sagina apetala*

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Talison Minerals Wodgina Operations and Mt Francisco: Vegetation and Flora Survey and DRF and Priority Targeted Search	Overlaps south-western section of the Survey Area	Outback Ecology (2008)	Survey area traversed on foot	111 taxa; 69 genera; 36 families	11 vegetation units; no TECs or PECs identified	-	3 taxa: *Aerva javanica*; *Passiflora foetida* var. *hispida*; *Cenchrus ciliaris*
Wodgina DSO Project Flora and Vegetation Assessment	Overlaps south-western section of the Survey Area	Outback Ecology (2009)	41 quadrats; 66 relevès over 550 ha	122 taxa; 67 genera; 38 families	12 vegetation units; no TECs or PECs identified	1 taxon: *Terminalia supranitifolia* (P3)	1 taxon: *Aerva javanica*
Targeted Flora and Vegetation Survey, Iron Bridge	Located 6 / 7 km south-west / south-east of the Survey Area	Spectrum Ecology (2021)	Survey area traversed	-	No TECs or PECs identified	3 taxa: *Euploca mutica* (P3)[#]; *Ptilotus mollis* (P4); *Quoya zonalis* (T)[@]	-
Interim Report on the Flora and Vegetation of the Cassiterite Pit Extension and EWL Extension	Overlaps the western section of the Survey Area	Western Botanical (2017)	7 quadrats; 37 relevès over 110 ha	114 taxa; 65 genera; 31 families	5 vegetation units; no TECs or PECs identified	1 taxon: *Terminalia supranitifolia* (P3)	5 taxa: *Aerva javanica*; *Cenchrus ciliaris* *Chloris barbata* *Passiflora foetida* var. *hispida*; *Physalis angulata*
Turner River Hub (TRH) Project Flora, Vegetation and Mangal Studies	Overlaps south-western section of the Survey Area	Woodman Environmental (2011a)	17 quadrats within the Study Area	Full number of taxa not relevant given survey area extends far beyond the Study Area	11 vegetation units within the Study Area	3 taxa within the Study Area: *Euphorbia clementii* (P3); *Terminalia supranitifolia* (P3); *Triodia chichesterensis* (P3)*	2 taxa within the Study Area *Aerva javanica*; *Cenchrus ciliaris*

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Wodgina Ore Stockpile Area Flora and Vegetation Assessment	Overlaps western section of the Survey Area	Woodman Environmental (2011b)	3 relevès over 12 ha	19 dominant taxa	3 vegetation units; no TECs or PECs identified	1 taxon: *Euphorbia clementii* (P3)	1 taxon: *Cenchrus ciliaris*
Wodgina Proposed Tower Base and Access Road Flora and Vegetation Assessment	Overlaps the western section of the Survey Area	Woodman Environmental (2012b)	8 relevès over 4.2 ha	33 dominant taxa	5 vegetation units; no TECs or PECs identified	1 taxon: *Terminalia supranitifolia* (P3)	2 taxa: *Aerva javanica*; *Cenchrus ciliaris*
Flora and Vegetation Studies for the Hercules Project	Overlaps western section of the Survey Area	Woodman Environmental (2012a)	68 quadrats over 1583.9 ha	211 taxa; 105 genera; 43 families	6 vegetation units; no TECs or PECs identified	3 taxa: *Euphorbia clementii* (P3); *Terminalia supranitifolia* (P3); *Triodia chichesterensis* (P3)*; *Vigna triodiophila* (P3)	6 taxa: *Aerva javanica*; *Cenchrus ciliaris*; *Cynodon dactylon*; *Flaveria trinervia*; *Passiflora foetida* var. *hispida*; *Trianthema portulacastrum*
Abydos Direct Shipping Ore (DSO) Project Flora and Vegetation Studies	Overlaps eastern section of the Survey Area	Woodman Environmental (2012c)	133 quadrats over 19,218 ha	261 taxa; 112 genera; 40 families	10 vegetation types; no TECs or PECs identified	4 taxa: *Euphorbia clementii* (P3); *Gymnanthera cunninghamii* (P3); *Euploca mutica* (P3)[#]; *Quoya zonalis* (T)[@]	4 taxa: **Aerva javanica*; **Cenchrus ciliaris*; **Citrullus colocynthis*; **Malvastrum americanum*
Abydos East Project Camp and Haul Road Corridor – Flora and Vegetation Studies	20 km north-east of the eastern part of the Survey Area	Woodman Environmental (2012d)	18 relevès over 316 ha	62 taxa; 40 genera; 20 families	8 vegetation communities: no TECs or PECs	1 taxon: *Euphorbia clementii* (P3)	3 taxa: **Aerva javanica*; **Cenchrus ciliaris*; **Citrullus colocynthis*

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Hercules DSO Project Conservation Significant Flora Assessment	Overlaps western section of the Survey Area	Woodman Environmental (2013b)	Survey area traversed	-	-	1 taxon: *Terminalia supranitifolia* (P3)	-
Wodgina Proposed Tower Base and Access Road Flora and Vegetation Assessment – Additional Assessment	Overlaps the western section of the Survey Area	Woodman Environmental (2013c)	8 relevès over 2.74 ha	26 dominant taxa	5 vegetation units; no TECs or PECs identified	1 taxon: *Terminalia supranitifolia* (P3)	2 taxa: *Aerva javanica*; *Cenchrus ciliaris*
Great Northern Highway (GNH) Upgrade Project Flora and Vegetation Assessment	Overlaps western section of the Survey Area	Woodman Environmental (2013a)	5 quadrats within the Study Area	Full number of taxa not relevant given survey area extends far beyond the Study Area	4 vegetation units within the Study Area	No taxa within the Study Area	2 taxa within the Study Area *Aerva javanica*; *Cenchrus ciliaris*
Abydos Direct Shipping Ore Project Stage 2 Flora and Vegetation Impact Assessment	20 km north-east of the eastern section of the Survey Area	Woodman Environmental (2013d)	Targeted survey – survey area traversed	-	-	1 taxon: *Quoya zonalis* (T)[@]	1 taxon: *Cenchrus ciliaris*
Abydos Iron Ore Project Cove Deposit Significant Flora Survey and Flora and Vegetation Impact Assessment	20 km north-east of the eastern section of the Survey Area	Woodman Environmental (2015)	Targeted survey – survey area traversed	-	-	2 taxa: *Quoya zonalis* (T)[@]; *Triodia basitricha* (P3)[$]	-

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Wodgina Expansion Project Detailed Flora and Vegetation Assessment	Entire Study Area overlaps with the western section of the Survey Area	Woodman Environmental (2019b)	100 quadrats; 13 existing quadrats resurveyed over 4,385 ha	223 taxa; 110 genera; 43 families	12 vegetation units; no TECs or PECs identified	5 taxa: *Euphorbia clementii* (P3); *Euploca mutica* (P3)[#]; *Terminalia supranitifolia* (P3); *Triodia chichesterensis* (P3); *Vigna triodiophila* (P3)	10 taxa: *Aerva javanica;* *Calotropis procera;* *Cenchrus ciliaris;* *Cenchrus setiger;* *Chloris barbata;* *Cynodon dactylon;* *Falveria trinerva;* *Passiflora foetida var hispida;* *Physalis angulata;* *Trianthema portulacastrum*
Wodgina Lithium Project: Detailed Flora and Vegetation Assessment	Entire Study Area overlaps with the western section of the Survey Area	Woodman Environmental (2020)	170 quadrats -94 quadrats from 2018; 76 quadrats 2019; 13 quadrats revisited over Study Area	267 taxa; 130 genera 51 families	15 vegetation units; no TECs or PECs identified	5 taxa: *Euphorbia clementii* (P3); *Euploca mutica* (P3)[#]; *Terminalia supranitifolia* (P3); *Triodia chichesterensis* (P3); *Vigna triodiophila* (P3)	12 taxa: *Aerva javanica;* *Calotropis procera;* *Cenchrus ciliaris;* *Cenchrus setiger;* *Chloris barbata;* *Cynodon dactylon;* *Falveria trinerva;* *Passiflora foetida var hispida;* *Physalis angulata;* *Opuntia stricta;* *Sagina apetala;* *Trianthema portulacastrum*

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Wodgina Gas Pipeline Detailed Flora and Vegetation Survey	Overlaps the western section of the Survey Area	360 Environmental (2018b)	36 quadrats; 14 relevès within Study Area	142 taxa; 67 genera; 31 families	13 vegetation units; no TECs or PECs identified	1 taxon: *Euphorbia clementii* (P3)	3 taxa: *Aerva javanica; Cenchrus ciliaris; Malvastrum americanum*
Wodgina Mine Site and Proposed Airstrip Flora, Vegetation and Fauna Assessment	Overlaps western section of the Survey Area	360 Environmental (2018e)	17 relevès over 988 ha	56 taxa; 34 genera; 18 families	8 vegetation units; no TECs or PECs identified	2 taxa: *Terminalia supranitifolia* (P3); *Euploca mutica* (P3)[#]	4 taxa: *Aerva javanica*; *Calotropis procera*; *Cenchrus ciliaris; Passiflora foetida* var. *hispida*
Wodgina Mine and Additional Gas Pipeline Flora, Vegetation, Fauna and Targeted Northern Quoll Assessment	Overlaps western section of the Survey Area	360 Environmental (2018c)	20 relevés over 1869 ha	79 taxa; 51 genera; 25 families	18 vegetation units; no TECs or PECs identified	-	2 taxa: *Aerva javanica*; *Cenchrus ciliaris*
Wodgina Mine Flora, Vegetation and Fauna Assessment Addendum	Overlaps western section of the Survey Area	360 Environmental (2018d)	5 relevés over 96 ha	43 taxa; 28 genera; 18 families	8 vegetation units: no TECs or PECs identified	1 taxon: *Terminalia supranitifolia* (P3)	5 taxa: *Aerva javanica*; *Calotropis procera*; *Cenchrus ciliaris; Cyperus ?rotundus*; *Passiflora foetida* var. *hispida*

Project	Location	Study	Parameters of Survey	Number of Taxa	Vegetation	Significant Flora Taxa^	Introduced Taxa^
Wodgina Aerodrome Detailed Flora and Vegetation Survey	Overlaps north-west section of the Survey Area	360 Environmental (2018a)	7 quadrats; 4 relevès over 469 ha	62 taxa; 36 genera; 20 families	2 vegetation units: no TECs or PECs identified	1 taxon: *Euploca mutica* (P3)[#]	-

^Significant flora and introduced flora as per current FloraBase listing (WA Herbarium, 1998-)

**The Triodia aff. basedowii collections recorded by Woodman Environmental 2011a and 2012c are referrable to Triodia chichesterensis, which was described as a new taxon following taxonomic studies undertaken after these reports were finalised.*

 # Euploca mutica is referred to by its non-current name Heliotropium muticum in these reports

[+]Abutilon sp. Pritzelianum (S. van Leeuwen 5095) (P3) is referred to by its non-current name Abutilon pritzelianum (P1) in that report

[@]Quoya zonalis is referred to by its non-current name Pityrodia sp. Marble Bar (G. Woodman & D. Coultas GWDC Opp 4) in these reports

[$]Triodia basitricha is referred to by its non-current name Triodia sp. Millstream (A.A. Mitchell PRP 207) in that report

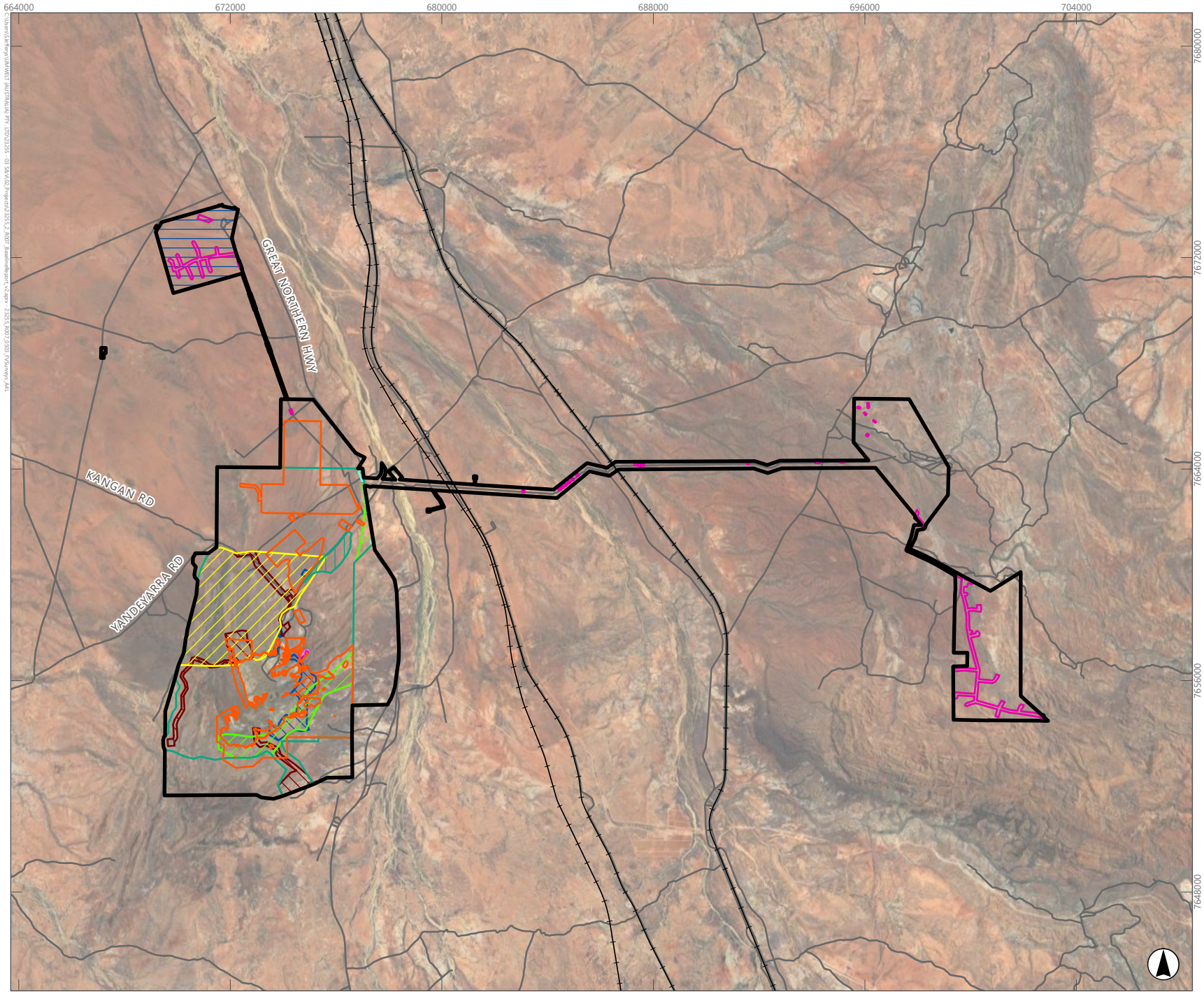


FIGURE 5.3

Flora and Vegetation Surveys Previously Conducted Within the Survey Area

Legend

- Survey Area
- 2023 Reconnaissance Survey Area
- 2023 Detailed Survey Area
- 2019 Wodgina Study Area
- Road
- Railway

Previous Surveys

- Wodgina Aerodrome Detailed Flora and Vegetation Survey (360 Environmental 2018a)
- Wodgina Mine Site and Proposed Airstrip (360 Environmental 2018e)
- Wodgina Mine and Additional Gas Pipeline Assessment (360 Environmental 2018c)
- GNH Upgrade Project (Woodman Environmental 2013a)
- Hercules Project (Woodman Environmental 2012a)
- TRH Project (Woodman Environmental 2011a)
- Wodgina Ore Stockpile Area Assessment (Woodman Environmental 2011b)
- Wodgina Tower Base and Access Road Assessment (Woodman Environmental 2012b)
- Wodgina Tower Base and Access Road Update (Woodman Environmental 2013c)

0 4 8

Kilometres

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5.1.5 Summary of Significant Flora Taxa

A list of significant flora taxa known from within the Desktop Study Area is presented in **Table 5.5**. This list has been compiled from the results of the desktop searches of the DBCA WA Herbarium and TPFL Databases (DBCA, 2024b), DCCEEW's PMST search (DCCEEW, 2024) and the results of local surveys as outlined in **Section 5.1.4**.

A total of 23 significant taxa are known from within the Desktop Study Area. One taxon (*Quoya zonalis*) is listed as Threatened under the *Biodiversity Conservation Act 2016* and the EPBC Act, and 22 are DBCA-classified Priority flora. Of these, six listed taxa are known from within the Survey Area itself (highlighted in yellow in **Table 5.5**). In addition, *Quoya zonalis* (T) is also known from just outside (<0.5 km) the Survey Area. **Figure 5.4** presents existing locations of significant flora taxa in the Desktop Study Area.

It should be noted that a record of *Nicotiana umbratica* (P3) is also located in the Survey Area, with a single WA Herbarium record in the north-eastern corner (**Figure 5.4**). However, previous investigation of this record indicates that this record has erroneous coordinates (Woodman Environmental, 2020). The locality description attached to the record notes that it is from the "Road to Nullagine, 2–5 km from junction with Great Northern Highway". Although this description is fairly vague, it is certainly not within the Survey Area. Notwithstanding this, *Nicotiana umbratica* (P3) is known to be restricted to overhangs and cracks in granite boulders (Woodman Environmental field observations; WA Herbarium, 1998-); this habitat does not occur at the coordinates of the record. This taxon is therefore not considered to occur within the Survey Area.

Table 5.5 Significant Flora Taxa Known from the Desktop Study Area

Taxon	Status (WA)	Source*	Flowering Period (WA Herbarium, 1998-)	Habitat (WA Herbarium, 1998-)
***Abutilon* sp. Pritzelianum (S. van Leeuwen 5095)**	P3	DBCA, SE	Apr–Sep	Plains, floodplains, sand dunes. Red-brown or orange-brown sandy or loamy soil.
Acacia leeuweniana	P1	DBCA,	May	Granite outcrops, granite hills.
Acacia levata	P3	DBCA,	May	Hillslopes. Sand or sandy loam over granite.
Bulbostylis burbidgeae	P4	DBCA,	Apr–Jun	Granitic soils. Granite outcrops, cliff bases.
Cochlospermum macnamarae	P1	DBCA	Following rainfall	Hills and slopes with granite outcrops Red or brown sand.
***Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)**	P3	DBCA	May–Jun	Undulating plains, flats, floodplains and flowlines. Red-brown or grey-brown cracking clay or clay.
Euphorbia clementii	P3	DBCA, WE, 360, SE	May–Jul	Flats/plains, rocky slopes, drainage lines. Red-brown or orange clay loam with ironstone gravel.

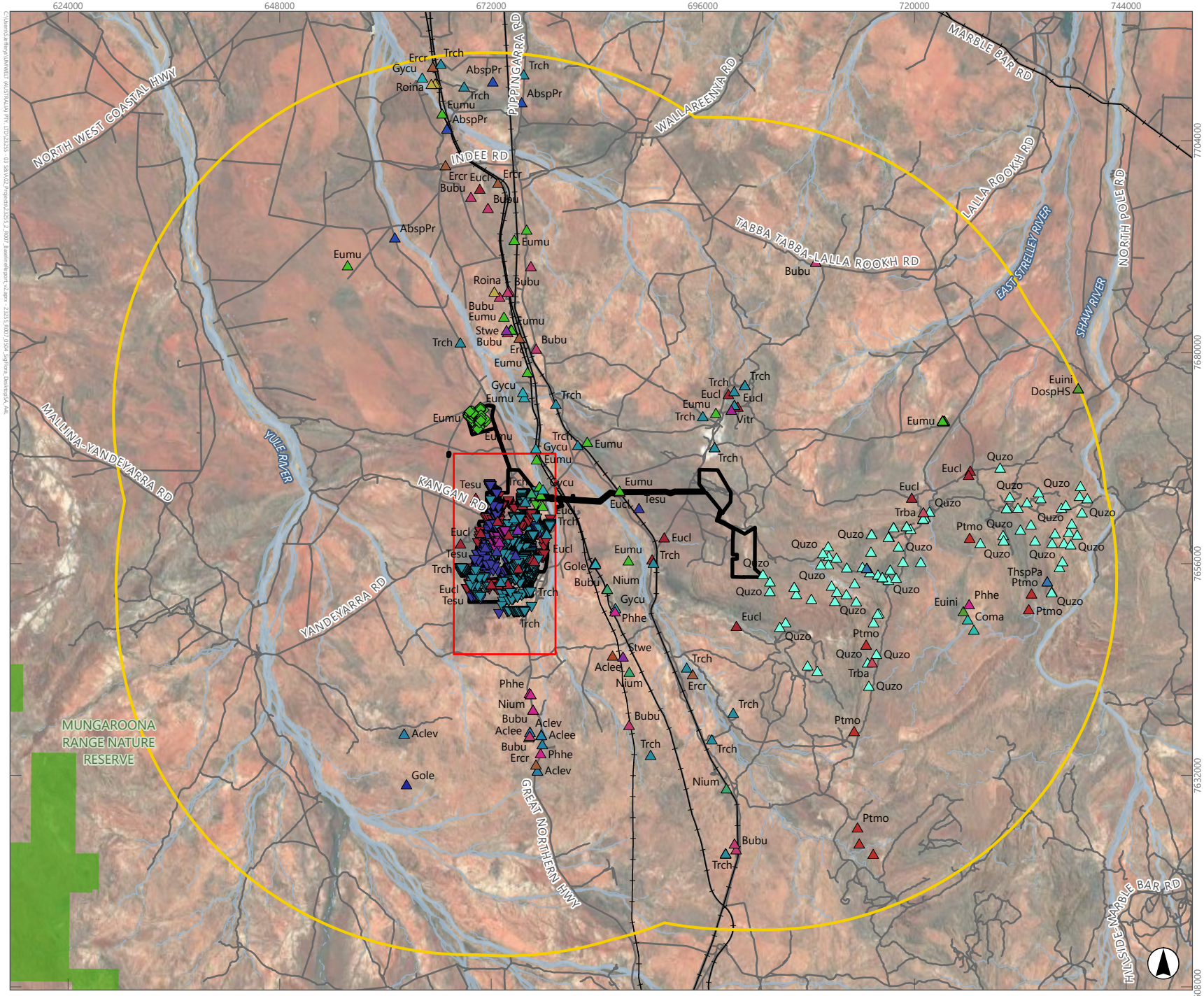
Taxon	Status (WA)	Source*	Flowering Period (WA Herbarium, 1998-)	Habitat (WA Herbarium, 1998-)
Euphorbia inappendiculata* var. *inappendiculata	P2	DBCA	Mar–Sep	Floodplains, claypans, drainage lines and flats. Brown or red-brown silty loam, clay loam or cracking clay.
Euploca mutica	P3	DBCA, Ecologia, SE, WE, 360	May–Nov	Plains/sandplains. Brown to orange or red sand or sandy loam, sometimes with gravel.
Gomphrena leptophylla	P3	DBCA,	Mar–Sep	Sand, sandy to clayey loam, granite, quartzite. Open flats, sandy creek beds, edges salt pans & marshes, stony hillsides.
Goodenia obscurata	P3	DBCA	May–Oct	Floodplains, hillslopes, drainage lines and flats. Brown or red-brown sandy loam or clay loam.
Gymnanthera cunninghamii	P3	DBCA, SE	Dec–Jan	Creek beds, drainage lines, on margins of mound springs. Sandy soils.
Nicotiana umbratica	P3	DBCA	Apr–Jun	Rocky outcrops with shallow soils.
Phyllanthus hebecarpus	P3	DBCA	Unknown	Granite outcrops, drainage lines. Skeletal brown sand or red sandy loam.
Ptilotus mollis	P4	DBCA, Ecoscape, SE	May or Sep	Stony hills and screes.
Quoya zonalis	T	DBCA, DCCEEW, Ecoscape, SE, WE	Jul–Aug	Hills, clay loam over granite. Rocky slopes.
Rothia indica* subsp. *australis	P3	DBCA	Apr–Aug	Sandhills and sandy flats. Sandy soils.
Stylidium weeliwolli	P3	DBCA	Aug–Sep	Edges of watercourses. Gritty red/brown sand or clay soil.
Terminalia supranitifolia	P3	DBCA, OE, WB, WE, 360	May–Dec	Drainage lines, cliffs, slopes, rocky outcrops. Red-brown clay loam or sandy soil.
***Themeda* sp. Panorama (J. Nelson et al. NS 102)**	P1	DBCA; Ecoscape	May	Rocky gorges and steep hills.
Triodia basitricha	P3	DBCA, Ecoscape, WE	May–Jul	Rocky rises and slopes. Red-brown clay loam, often with ironstone.
Triodia chichesterensis	P3	DBCA, WE	Mar–May	Plains, low hills. Orange sandy soil or brown clay loam, sometimes gravelly, calcrete or quartz in origin.
Vigna triodiophila	P3	DBCA, WE	Mar–Jul	Rocky hill slopes with rock piles. Red-brown soil.

**Sources are: DBCA (DBCA, 2024b), DCCEEW (DCCEEW, 2023), Ecologia (ecologia, 2012), Ecoscape (Ecoscape, 2020), OE (Outback Ecology, 2009), SE (Spectrum Ecology, 2021), WB (Western Botanical, 2017), WE (Woodman Environmental, 2011a, 2011b, 2012b, 2012a, 2012c, 2013b, 2013c, 2013d, 2015, 2019b, 2020) , 360 (360 Environmental, 2018b, 2018e, 2018d, 2018a)*

 # Euploca mutica was previously known as Heliotropium muticum

FIGURE 5.4

Significant Flora Records of the Desktop Study Area



Legend

- Desktop Study Area
- Survey Area
- Road
- Railway
- Waterbody
- Nature Reserve
- Inset

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Kilometres

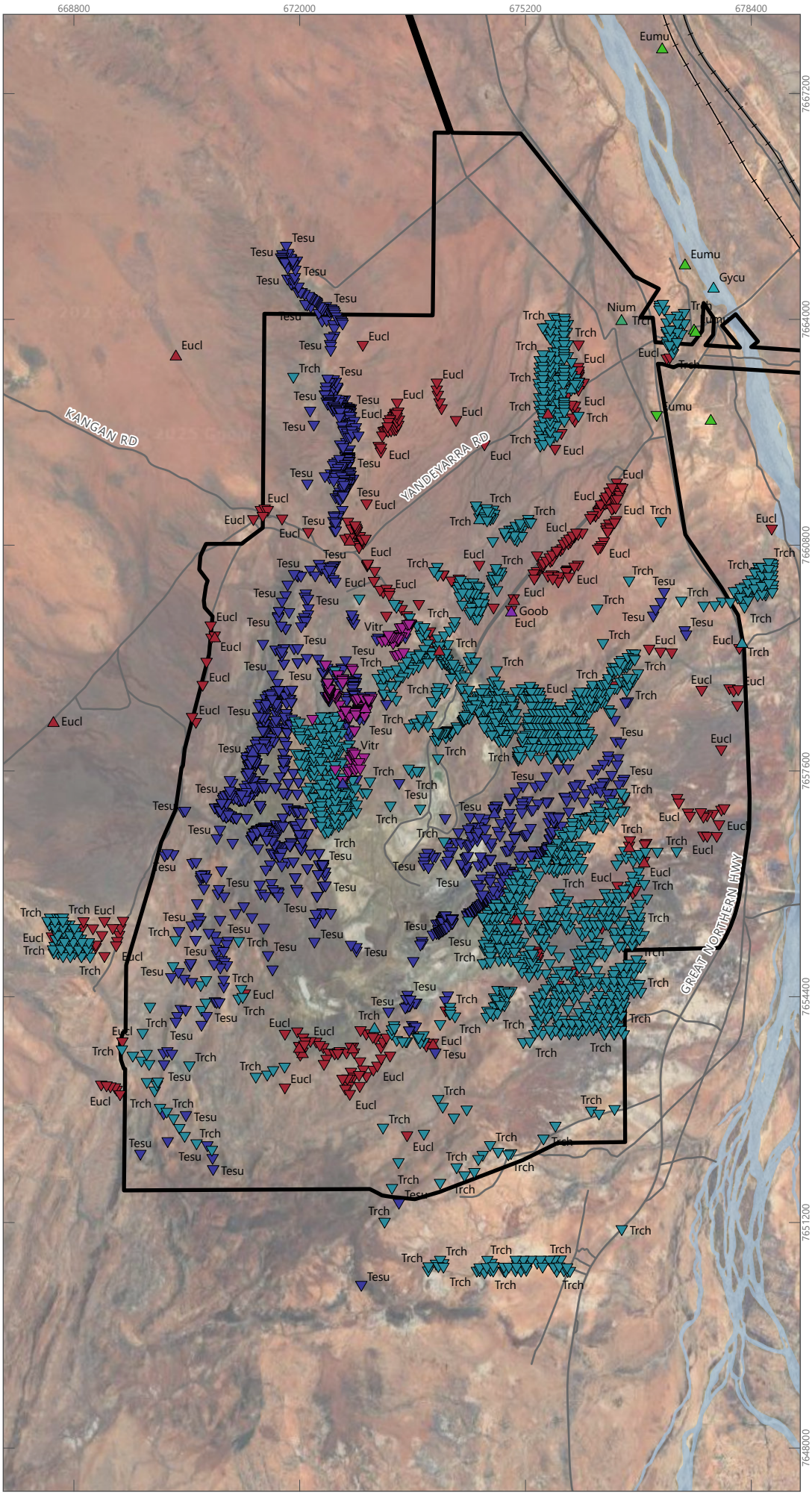
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FIGURE 5.4

INSET: Significant Flora Records of the Desktop Study Area



Legend

- Survey Area
- Road
- Railway
- Waterbody

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Kilometres

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Significant Flora (DBCA 2024)

▲	AbspPr	*Abutilon* sp. Pritzelianum (S. van Leeuwen 5095) (P3)
▲	Aclee	*Acacia leeuweniana* (P1)
▲	Aclev	*Acacia levata* (P3)
▲	Bubu	*Bulbostylis burbidgeae* (P4)
▲	Coma	*Cochlospermum macnamarae* (P1)
▲	DospHS	*Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)
▲	Ercr	*Eragrostis crateriformis* (P3)
▲	Eucl	*Euphorbia clementii* (P3)
▲	Euini	*Euphorbia inappendiculata* var. *inappendiculata* (P2)
▲	Eumu	*Euploca mutica* (P3)
▲	Gole	*Gomphrena leptophylla* (P3)
▲	Goob	*Goodenia obscurata* (P3)
▲	Gycu	*Gymnanthera cunninghamii* (P3)
▲	Nium	*Nicotiana umbratica* (P3)
▲	Phhe	*Phyllanthus hebecarpus* (P3)
▲	Ptmo	*Ptilotus mollis* (P4)
▲	Quzo	*Quoya zonalis* (T)
▲	Roina	*Rothia indica* subsp. *australis* (P3)
▲	Stwe	*Stylidium weeliwolli* (P3)
▲	Tesu	*Terminalia supranitifolia* (P3)
▲	ThspPa	*Themeda* sp. Panorama (J. Nelson et al. NS 102) (P1)
▲	Trba	*Triodia basitricha* (P3)
▲	Trch	*Triodia chichesterensis* (P3)
▲	Vitr	*Vigna triodiophila* (P3)

Significant Flora (Umwelt Previous Surveys)

▼	Eucl	*Euphorbia clementii* (P3)
▼	Eumu	*Euploca mutica* (P3)
▼	Tesu	*Terminalia supranitifolia* (P3)
▼	Trch	*Triodia chichesterensis* (P3)
▼	Vitr	*Vigna triodiophila* (P3)

Significant Flora (Other Consultant Previous Surveys)

◆	Eumu	*Euploca mutica* (P3)

FIGURE 5.4

LEGEND: Significant Flora Records of the Desktop Study Area

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5.1.6 Summary of Introduced Flora Taxa

A list of introduced flora taxa known from within the Desktop Study Area is presented in **Table 5.6**. This list has been compiled from results of the DBCA NatureMap search (DBCA, 2007-) and from the results of local surveys as outlined in **Section 5.1.4**.

A total of 18 introduced flora taxa were identified from the desktop assessment, three of which (*Calotropis procera, Opuntia elata and Opuntia stricta*) are listed as Declared Pests under BAM Act (DPIRD, 2024). Two taxa identified within the desktop assessment; *Opuntia elata* and *Opuntia stricta*, are also WoNS (Weeds Australia, 2024). Whilst *Cenchrus ciliaris* is not a Declared Pest or WoNS it is known to be widespread and common in the Pilbara (WA Herbarium, 1998-), and is considered by the States and Territories to pose a particularly significant threat to biodiversity as it is known to be invasive under certain conditions (Hussey et al., 2007).

Ecological Impact and Invasiveness Ratings have been assessed by the DBCA's (formerly Department of Parks and Wildlife) Weed Prioritisation Process for environmental weeds (i.e. weeds that may impact on natural, rather than agricultural or horticultural values) (DBCA, 2014). The assessments on ecological impact (low, medium, high, or unknown) and invasiveness (slow, moderate, rapid or unknown), are given in **Table 5.6**.

Table 5.6 Introduced Flora Taxa Potentially Occurring Within the Desktop Study Area

Taxon	Common Name	Source*	Legislative Significance	Ecological Impact^	Invasiveness^
Aerva javanica	Kapok Bush	Ecologia, Ecoscape, MAT, OE, WB, WE, 360		High	Rapid
Bidens bipinnata	Bipinnate Begger's Tick	Ecologia, NM		Unknown	Rapid
Calotropis procera	Calotrope	NM, WE, 360	Declared Pest	-	-
Cenchrus ciliaris	Buffel Grass	Ecologia, Ecoscape, NM, MAT, OE, Umwelt, WB, WE, 360		High	Rapid
Cenchrus setiger	Birdwood Grass	WE		High	Rapid
Chloris barbata	Purpletop Chloris	WB, WE		High	Rapid
Cynodon dactylon	Couch	WE		High	Rapid
Digitaria ciliaris	Summer Grass	Ecologia		Low	Slow
Flaveria trinervia	Speedy Weed	Ecoscape, NM, WE		-	-
Indigofera oblongifolia	Jhil	Ecologia		-	-
Malvastrum americanum	Spiked Malvastrum	Ecologia, 360		High	Rapid
Opuntia elata	Riverina Pear	NM	Declared Pest, WoNS	-	-

Taxon	Common Name	Source*	Legislative Significance	Ecological Impact^	Invasiveness^
Opuntia stricta	Common Prickly Pear	WE	Declared Pest, WoNS	High	Rapid
Passiflora foetida* var. *hispida	Stinking Passion Flower	OE, WB, WE, 360		High	Rapid
Physalis angulata	Wild Gooseberry	WB, WE		Unknown	Unknown
Sagina apetala	Annual Pearlwort	MAT, WE		-	-
Sonchus oleraceus	Common Sowthistle	Ecologia		Low	Rapid
Trianthema portulacastrum	Giant Pigweed	NM, WE		-	-

**Sources: Ecologia (ecologia, 2012), Ecoscape (Ecoscape, 2020), MAT (Mattiske Consulting, 2000), NM (DBCA, 2007-), OE (Outback Ecology, 2008, 2009), WB (Western Botanical, 2017), WE (Woodman Environmental, 2011a, 2011b, 2012b, 2012a, 2013c, 2013a, 2016, 2020), 360 (360 Environmental, 2018b, 2018e, 2018c, 2018d)*

^Source: DBCA (2014)

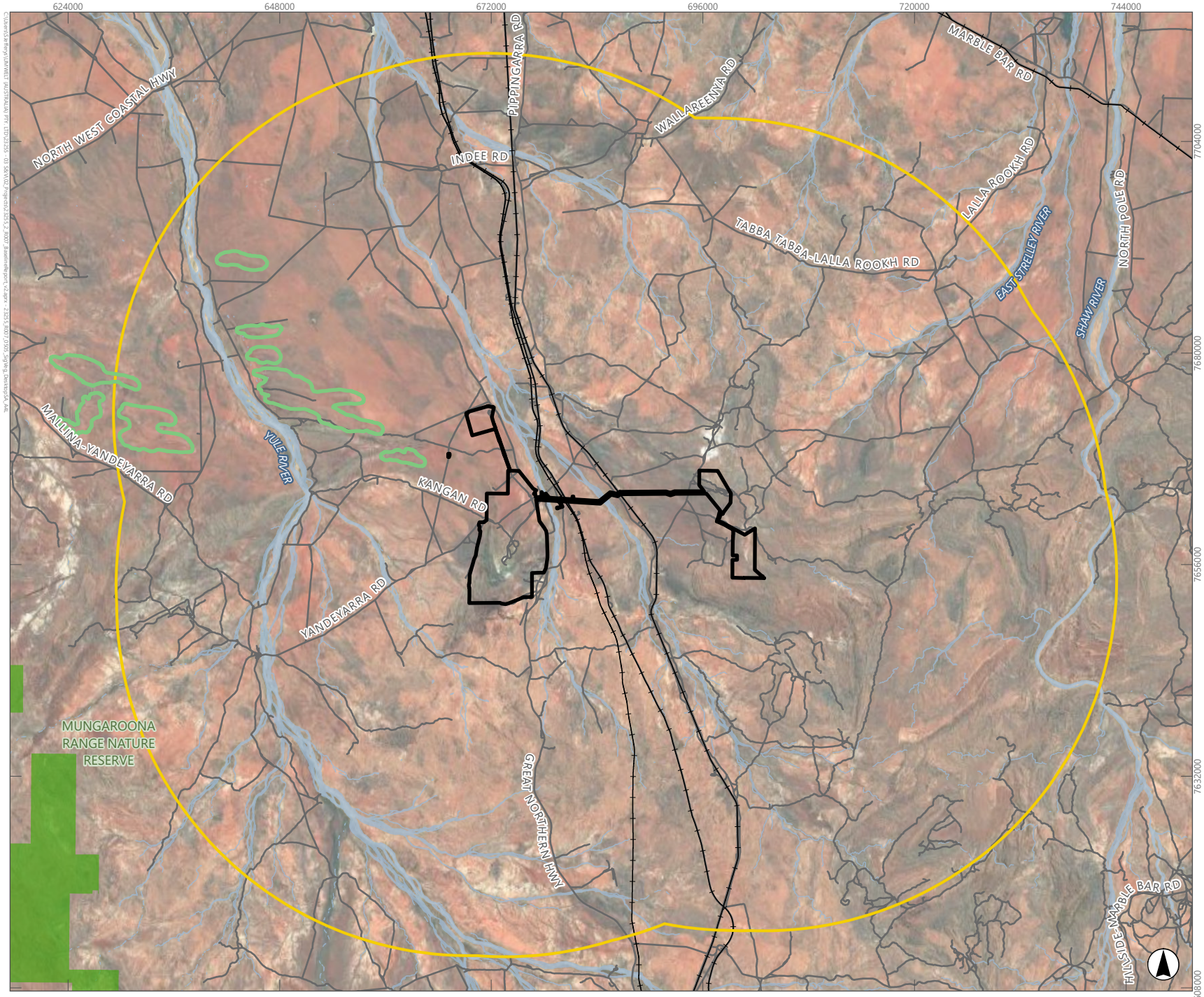
5.1.7 Summary of Significant Vegetation

One listed significant vegetation community is known to occur within the Desktop Study Area, being the Gregory Land System PEC (P3) (returned from the DBCA TEC and PEC database search (DBCA, 2024a)). The Gregory Land System is described as linear dunes and restricted sandplains supporting shrubby hard spinifex (and occasionally soft spinifex) grasslands (DBCA, 2023d). It is not known to occur in the Survey Area, with the nearest known location being approximately 6 km west of the Survey Area (**Figure 5.5**).

No other significant vegetation communities are known from within the Desktop Study Area, with no significant communities returned from the DCCEEW's PMST search (DCCEEW, 2024) or identified by any other local surveys (**Section 5.1.4**). No significant vegetation communities are known from the Survey Area itself.

FIGURE 5.5

Significant Vegetation of the Desktop Study Area



Legend

- Desktop Study Area
- Survey Area
- Road
- Railway
- Waterbody
- Nature Reserve

Significant Vegetation (DBCA 2023a)

- Gregory Land System

0 12 24

Kilometres

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5.2 Field Survey Results

5.2.1 Flora Census

A total of 400 discrete vascular flora taxa (including 14 introduced taxa), two known hybrids (as per WA Herbarium (1998-)) and eight putative hybrids have been recorded within the Survey Area including data from the Woodman Environmental (2020) survey and other previous surveys, the 2023 survey (Umwelt, 2024) and the current (2024) survey. The taxa and hybrids represent 58 families and 156 genera. The most well-represented families were Fabaceae (70 taxa; two known hybrids and seven putative hybrids), Poaceae (67 taxa) and Malvaceae (41 taxa). A total of 385 discrete vascular flora taxa (including 12 introduced taxa) and 10 hybrids, representing 55 families and 153 genera, were recorded within the Survey Area during the 2023 and 2024 surveys alone.

Average taxon richness per quadrat across all quadrats from the Survey Area was 24 (± 12.9), with the greatest number of taxa recorded in a single quadrat being 70 (quadrat HER024), and the lowest number being five (quadrat WOJ10).

A full list of taxa recorded within the Survey Area is presented in **Appendix D**. Raw quadrat and relevé data and parameters from all sites in the Survey Area (including those previously established by Woodman Environmental (2020) that were not resurveyed in 2023 or 2024) are presented in **Appendix E**.

Several collections could not be identified to species level because of poor material. Some are known to be distinct taxa relative to other taxa recorded by the survey – these are included in the totals presented above, and in **Appendix D** (e.g. *Polymeria* sp.). Other collections may represent distinct taxa relative to other taxa recorded by the survey; however it is more likely that they represent taxa already recorded elsewhere, with the quality of the material such that this distinction cannot be made (e.g. *Portulaca* ?*cyclophylla*). Such collections are not included in the totals above.

A total of two taxa (*Cajanus cinereus* and *Eriachne ciliata*) recorded during previous surveys undertaken within the Survey Area (Woodman Environmental, 2013b) were not included in the taxon counts above, or in **Appendix D**. *Cajanus cinereus* is taxonomically similar to *Cajanus pubescens*, a taxon identified by this current survey, with available information indicating that these taxa differ only in quantitative flora attributes (WA Herbarium, 1998-). Further study of these taxa may elucidate qualitative differences; however, in the meantime these taxa have been combined under the name *Cajanus pubescens*, as often plants are observed without flowering material and cannot be assigned to either taxon. *Eriachne ciliata* is considered unlikely to occur in the Survey Area, with records of this species likely referrable to the recently established name *Eriachne* sp. Dugald River (B.K. Simon+ 3007), which was recorded by this current survey. However, this cannot be verified for all records without collection of material at each record.

5.2.2 Summary of Significant Flora Taxa

Table 5.7 presents a summary of data relating to significant flora taxa recorded in the Survey Area. A total of 11 significant flora taxa have been recorded within the Survey Area by this current survey and previous surveys, nine of which are Priority flora taxa. Two potentially undescribed taxa were recorded during the 2023/2024 surveys, which in the absence of further information are being treated as potentially significant (see **Section 5.2.5.1** for further discussion).

No Threatened flora taxa were recorded within the Survey Area. A known (DBCA) location of *Quoya zonalis* (T) approximately 0.2 km north-east of the south-eastern corner of the Survey Area was verified by the 2023 survey (**Figure 5.6**; **Appendix F**). Although habitat considered suitable for this taxon was present in the south-eastern corner of the Survey Area (near the known location), this taxon was not located within the Survey Area during the 2023 survey or the 2024 survey (see **Section 5.2.7** for further discussion).

An overview of locations of significant flora taxa recorded in the Survey Area is presented on **Figure 5.6**, with detailed mapping in **Appendix F**, and a list of GPS locations presented in **Appendix G**.

Table 5.7 Summary of Significant Flora Taxa Recorded within the Survey Area

Taxon	Status	Number of Locations Recorded					Number of Individuals Recorded					VTs
		Survey Area		Regional		Overall Total	Survey Area		Regional		Overall Total	
		2023/2024 Surveys	Previous Surveys	2023/2024 Surveys	Previous Surveys		2023/2024 Surveys	Previous Surveys	2023/2024 Surveys	Previous Surveys		
Corchorus* aff. *incanus	-	7	-	-	-	7	7	-	-	-	7	8, 11
Euphorbia clementii	P3	328	349	-	27	704	1841	61,139	-	1,009	63,989	1^, 2, 3^, 5^, 7^, 8, 9, 10, 12, 13, 14
Euploca mutica	P3	158	77	-	-	235	2,655	96	-	-	2,751	1^, 2, 7^, 8, 13, 16
Goodenia obscurata	P3	2	-	1	-	3	27	-	5	-	32	2, 5
Gymnanthera cunninghamii	P3	1	-	2	-	3	1	-	3	--	4	11^
***Polymeria* sp.**	-	11	-	-	-	11	24	-	-	-	24	1, 5, 6, 10
Ptilotus mollis	P4	9	-	1		10	316	-	100	-	416	10, 13
Terminalia supranitifolia	P3	9	1,480	-	62	1,542	14	2,803	-	100	2,903	3, 10, 12^, 13, 14
Triodia basitricha	P3	21	-	1	-	22	6,846	-	5,000	-	11,846	4, 5, 12
Triodia chichesterensis	P3	928	1,686	4	214	2,832	725,623	1,634,426	17,060	245,620	2,622,729	1^, 2, 3, 4, 5, 7, 8, 9, 10, 12^, 13^, 14^, 15
Vigna triodiophila	P3	1	169	-	-	169	1	2,482	-	-	2,482	3, 10, 12^, 14

#Includes significant flora data from Woodman Environmental (2020) and historical surveys by other consultancies which have been verified by Umwelt/Woodman Environmental

^Designates preferred habitat, based on proportional location representation and landforms/soils

**The location and number of individuals recorded in 2023/2024 surveys has not been added to the overall total for these taxa, as these locations are re-surveys of previously recorded locations*

5.2.3 Revisits to Significant Flora Populations

5.2.3.1 Summary of Revisits to Significant Flora Populations

The results of the 2023 targeted survey re-visits to existing significant flora populations and/or suitable habitat (for *Euphorbia clementii* only) in areas of the Survey Area previously subject to targeted survey are detailed below under each individual significant flora taxon. Overall, it was determined that as expected, there has likely been little change to the population dynamics of *Terminalia supranitifolia*, *Triodia chichesterensis* and *Vigna triodiophila* (all P3), and that the existing datasets for these taxa remain valid estimates of the distribution and abundance of these taxa in these areas. The population dynamics of *Euphorbia clementii* (P3) have changed in these areas because they have been recently fire-affected; this was also expected. As previously documented by Woodman Environmental (2020), it is not possible to accurately assess the distribution and abundance of this taxon in a given area unless survey is undertaken in the first growing season post-fire. This is discussed further below. **Appendix H** presents the data from the 2023 revisit of previously recorded significant flora populations which were reviewed in the field. Detailed descriptions of these taxa, including further biological information, are presented in **Sections 5.2.4.1**, **5.2.4.6**, **5.2.4.8** and **5.2.4.9**.

5.2.3.2 *Terminalia supranitifolia* (P3) Revisit Results

Twelve known locations of this taxon in the Survey Area were re-visited during the 2023 survey. There was no change to population dynamics observed at all locations except one; at this location, one individual had apparently perished in the 2022 fire that affected the Survey Area. This appears to be unusual; at all other locations affected by fire individuals had re-sprouted. The loss of a small number of individuals may have occurred across the population in areas affected by the fire; whether or not any recruitment has occurred is unknown. However, it is unlikely that population dynamics have been affected significantly. As such, it is considered that the existing dataset for this species in the Survey Area is still valid.

5.2.3.3 *Triodia chichesterensis* (P3) Revisit Results

Twenty-seven known locations of this taxon in the Survey Area were re-visited during the 2023 survey. There was no change to population dynamics observed at all locations. Many locations were affected by the 2022 fire in the Survey Area, but the fire did not appear to affect individual numbers, with post-fire abundance apparently similar to pre-fire levels. It is therefore considered that the existing dataset for this species in the Survey Area is still valid.

5.2.3.4 *Vigna triodiophila* (P3) Revisit Results

Three known locations of this taxon in the Survey Area were re-visited during the 2023 survey. Although all locations were affected by the 2022 fire in the Survey Area, there was apparently no change to population dynamics observed at two locations. At the third location, a number of additional plants were observed, but all were small and may have been seedlings. It is unclear whether these individuals will persist to reproductive maturity at this stage. Given the small number of locations and the uncertainty around post-fire persistence of seedlings, it is therefore considered that the existing dataset for this species in the Survey Area is still valid. Further investigation of known locations in the Survey Area would be of interest to clarify the response of this taxon to fire, but it appears that the population dynamics of this taxon have not significantly changed since previous survey.

5.2.3.5 *Euphorbia clementii* (P3) Revisit Results

Two known locations of this taxon in the Survey Area were re-visited during the 2023 survey; however, as noted in **Section 3.4.5**, investigation of previously surveyed suitable habitat for this taxon that had been recently burnt (in 2022) was undertaken while revisiting other significant flora locations and existing quadrats in the Survey Area, particularly in areas north of the haul road to the Great Northern Highway. At one known location, no individuals could be located; it was observed that the age of the vegetation indicated that it had not been burnt since at least 2019. The second location (north of the haul road to the Great Northern Highway) had been affected by the fire 18 months prior to the 2023 survey; the same number of individuals as previously recorded were observed, however they were clearly not the same individuals, and a number had already senesced. Additionally, numerous additional locations of this taxon were recorded in previously surveyed habitat north of the haul road, all in areas affected by the fire 18 months prior to survey. Many individuals recorded had recently senesced, and many were in unhealthy condition (see **Section 5.2.4.1** for further discussion).

The recording of further locations of this taxon in areas where it had not previously been recorded by targeted surveys was expected; the habitat was considered suitable, however previous targeted surveys were conducted when the vegetation had not been recently burnt, and this taxon is well known to only establish en masse following fire. It is also likely that survey in 2023 did not observe the maximum number of individuals likely to have been present post-fire; as noted above, many individuals had recently senesced, and it is likely that many other senesced individuals would have been overlooked due to difficulties detecting such individuals.

As discussed in **Section 5.2.4.1**, the potential extent and abundance of *Euphorbia clementii* is best assessed via a combination of physical records and suitable habitat extent. Therefore, both previously recorded data and newly recorded data are presented for this taxon; although it is acknowledged that there may not be any individuals currently present at previously recorded locations, it is expected individuals would re-establish following fire.

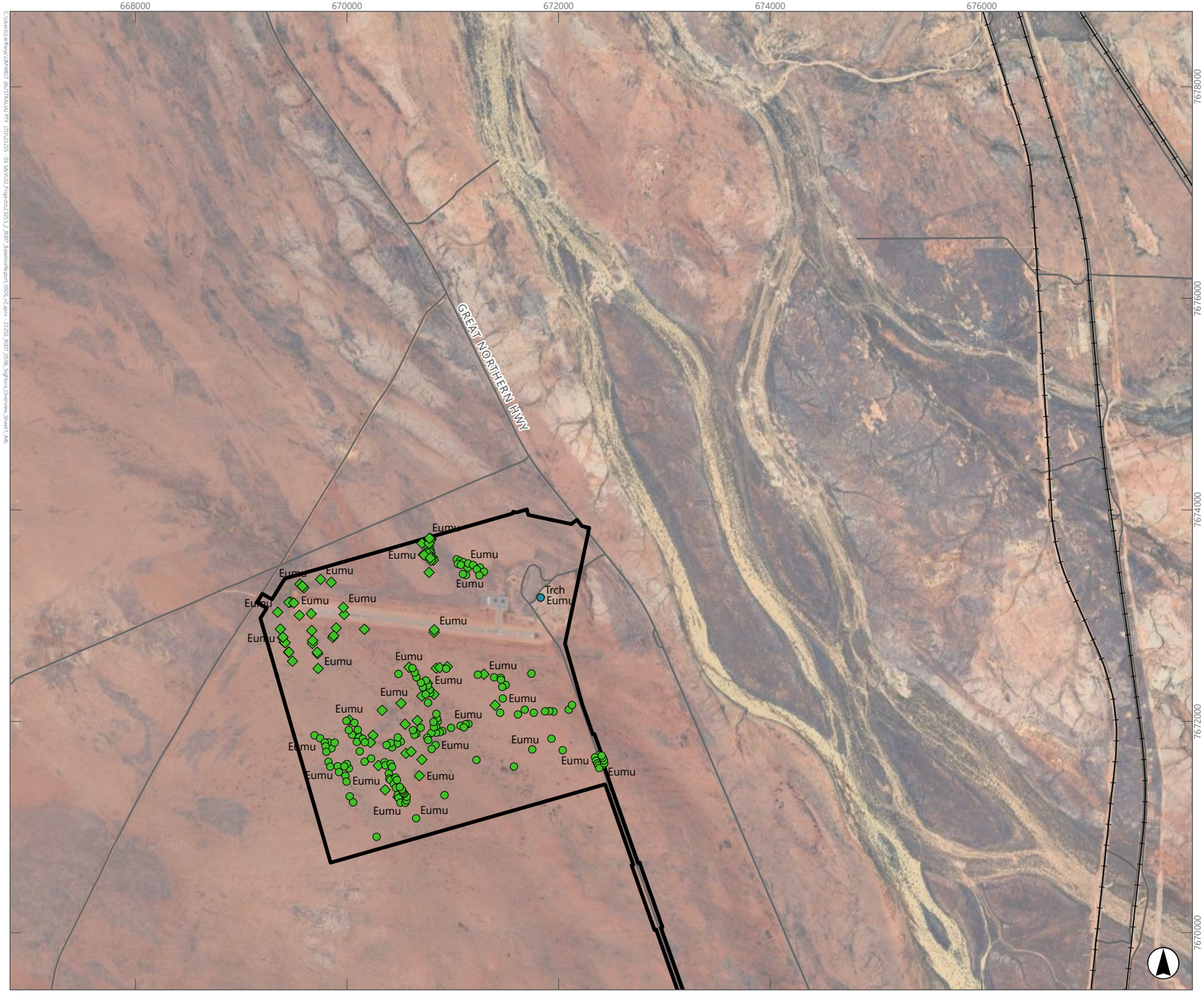
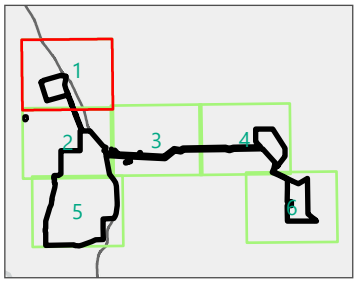


FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 1

Legend

- Survey Area
- Road
- Railway



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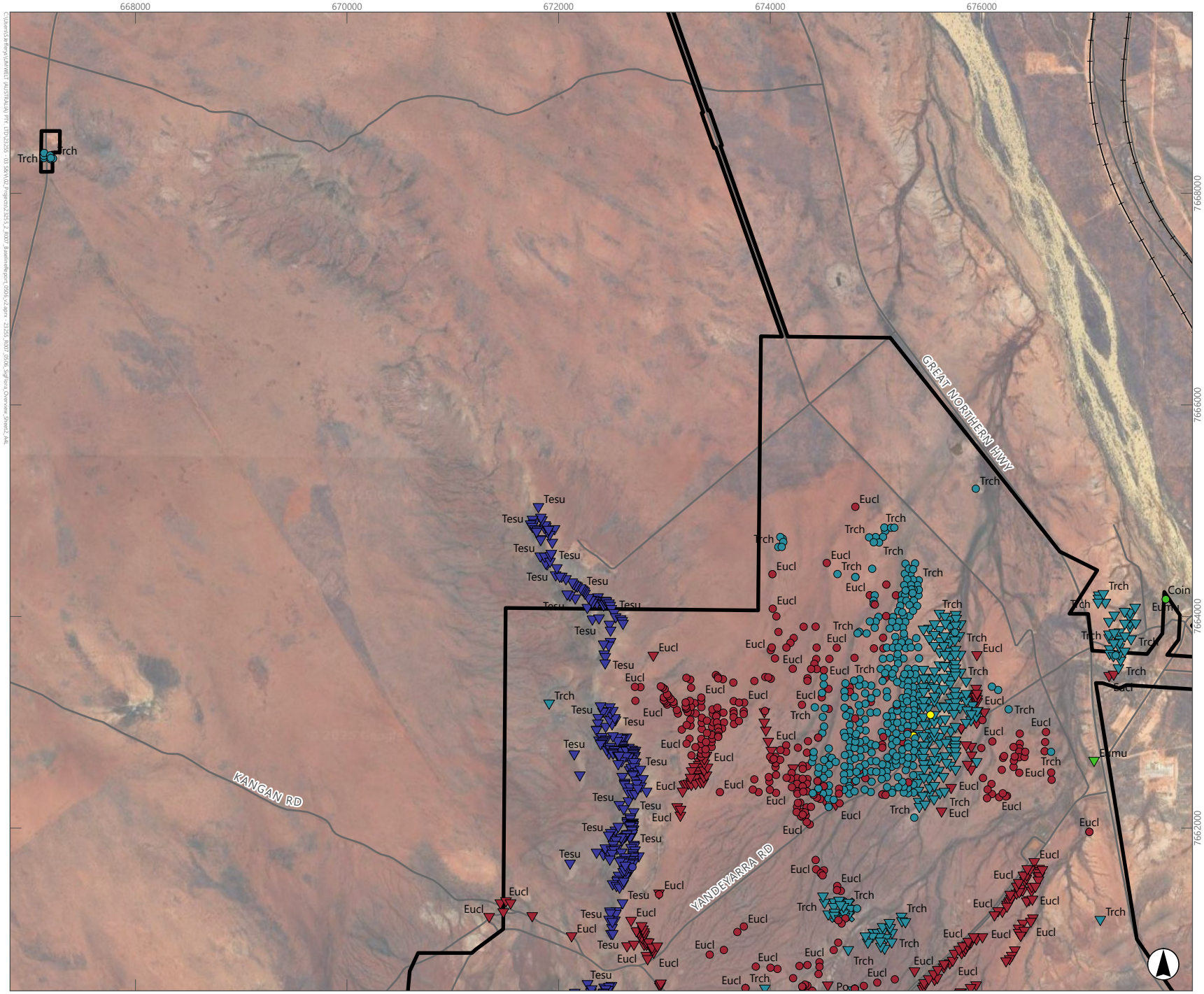
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FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 2



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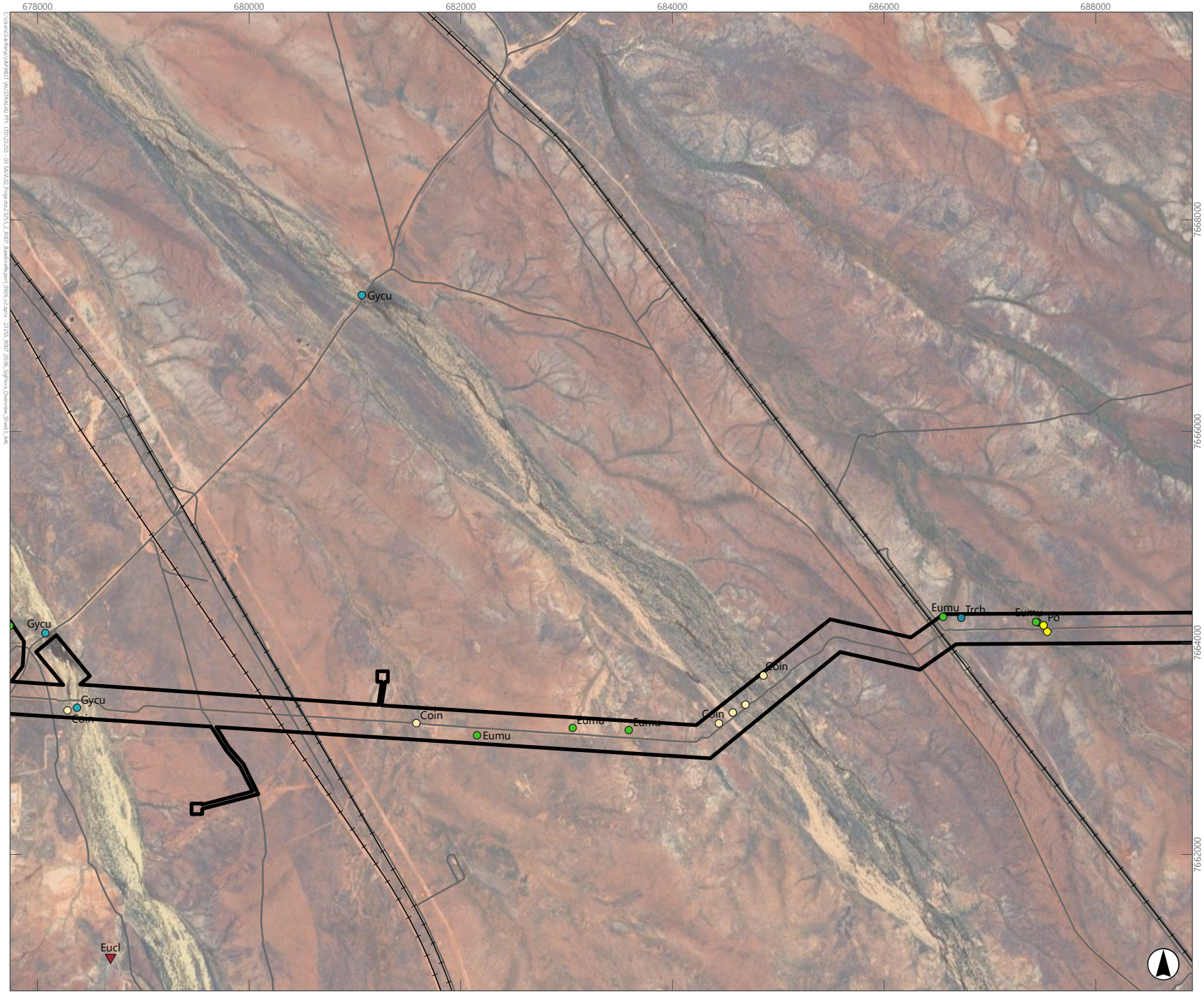
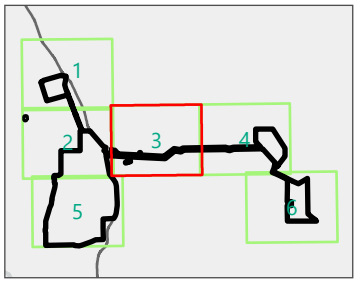


FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 3

Legend

- Survey Area
- Road
- Railway



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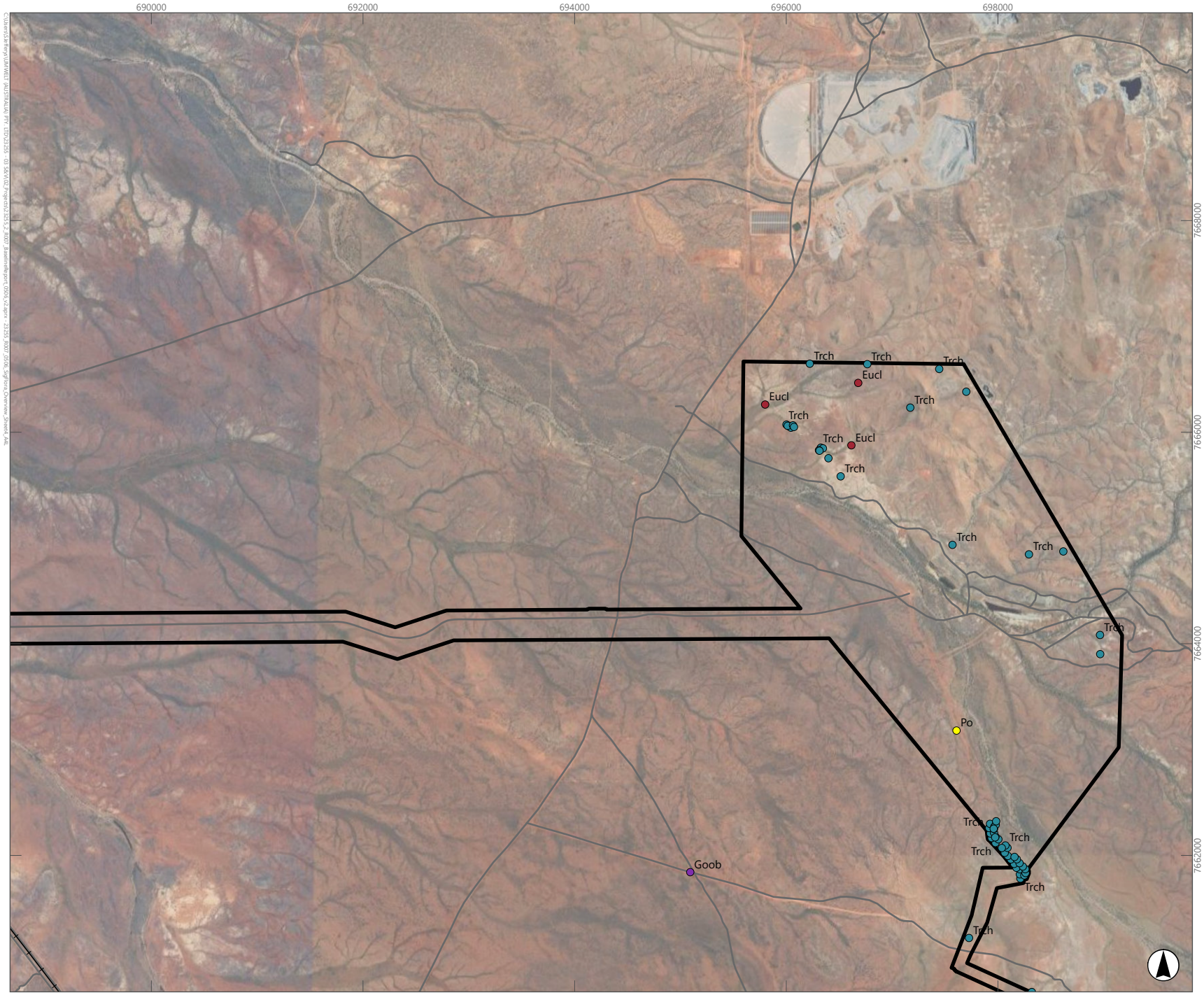
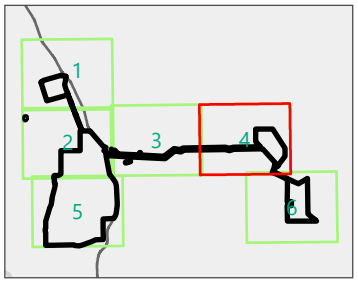


FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 4

Legend

- Survey Area
- Road
- Railway



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Kilometres

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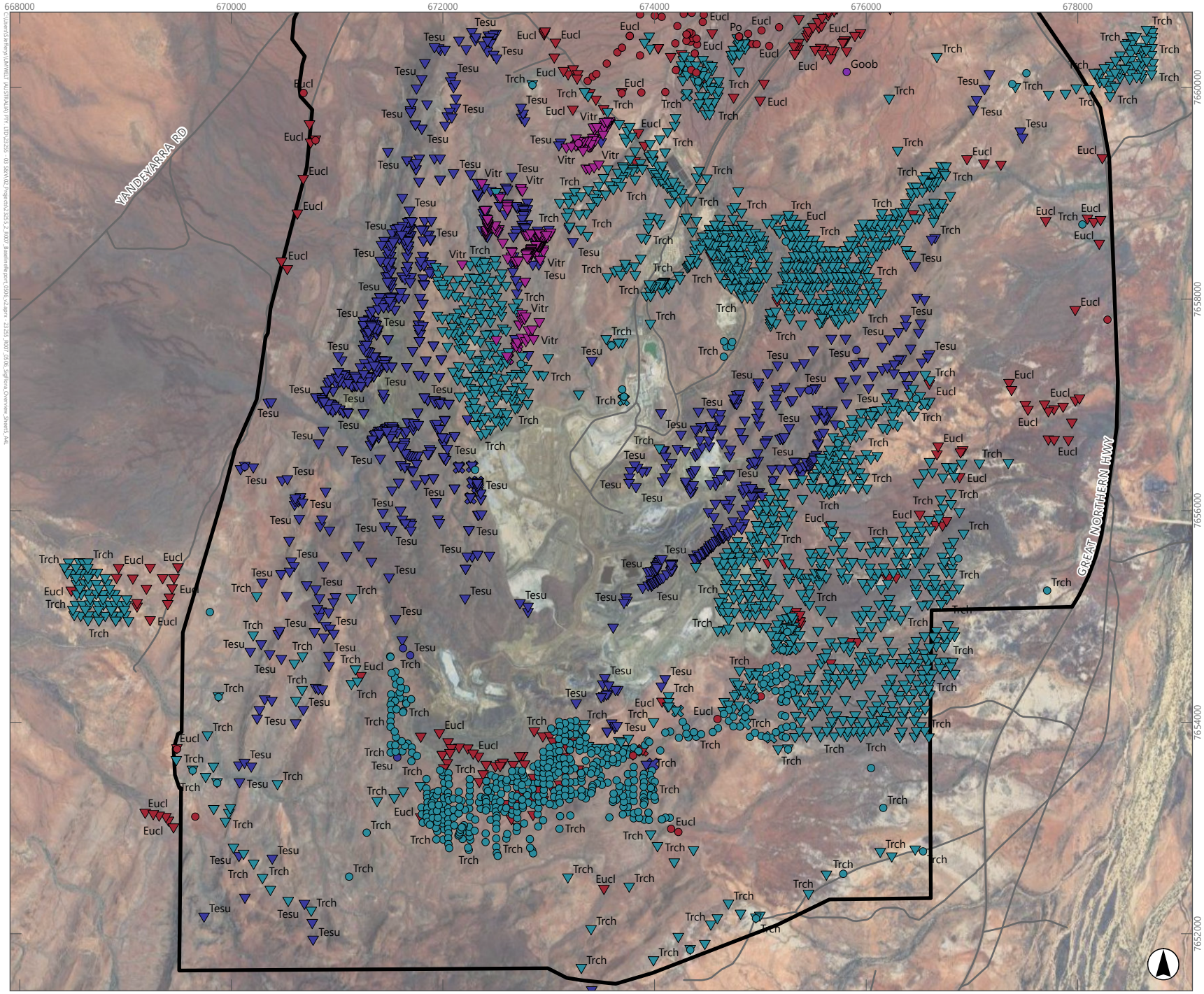
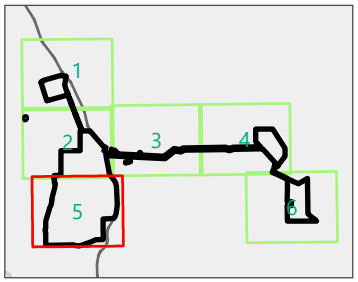


FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 5

Legend

- Survey Area
- Road



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Kilometres

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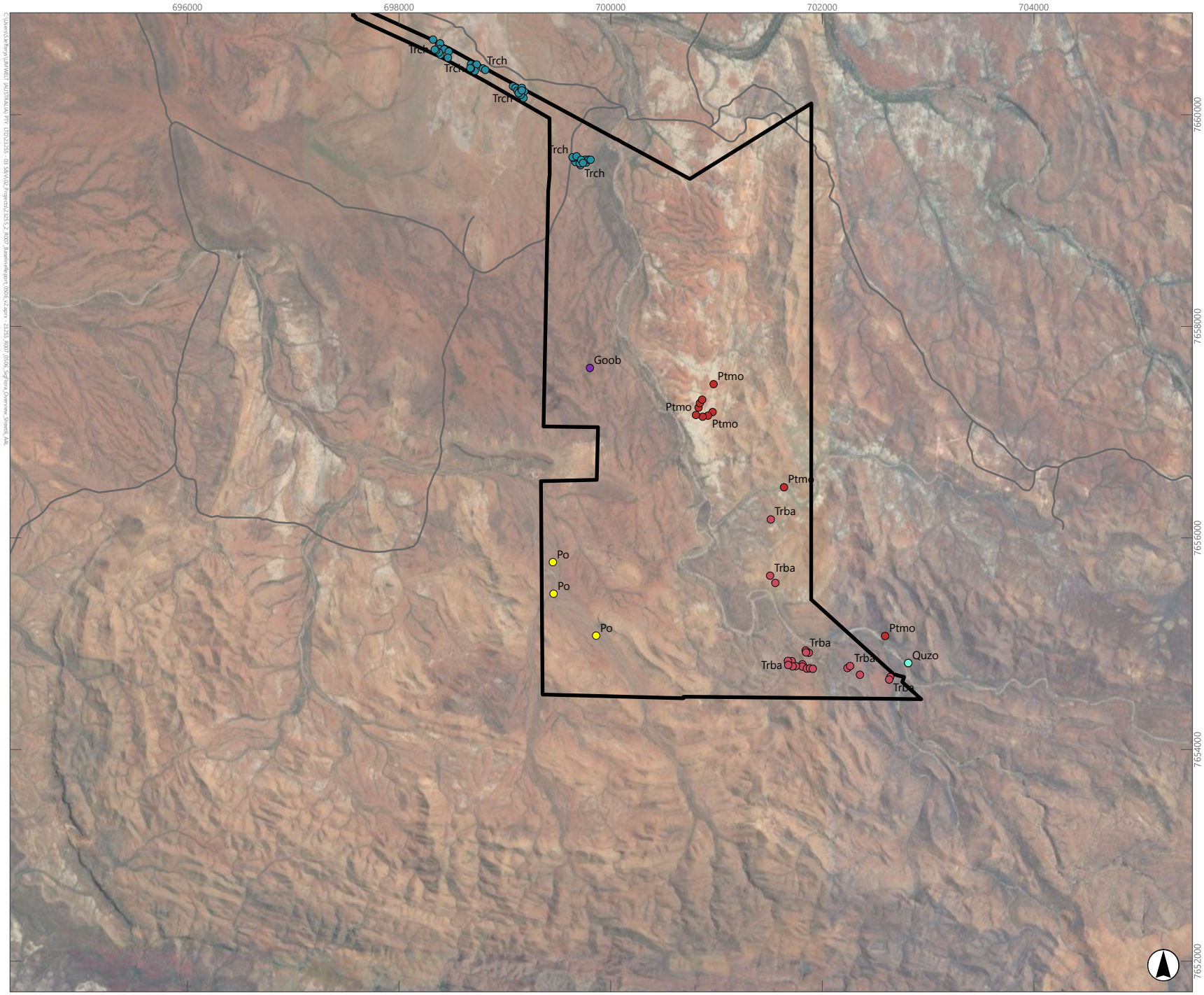
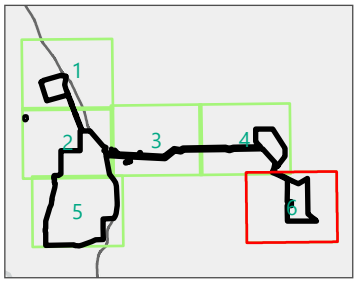


FIGURE 5.6

Overview of Significant Flora Locations in the Survey Area – Sheet 6

Legend

- Survey Area
- Road



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Kilometres

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Significant Flora – Umwelt 2023 / 2024 Surveys

Coin	*Corchorus* aff.*incanus* (Potentially undescribed)
Eucl	*Euphorbia clementii* (P3)
Eumu	*Euploca mutica* (P3)
Goob	*Goodenia obscurata* (P3)
Gycu	*Gymnanthera cunninghamii* (P3)
Po	*Polymeria* sp. (Potentially undescribed)
Ptmo	*Ptilotus mollis* (P4)
Quzo	*Quoya zonalis* (T)
Tesu	*Terminalia supranitifolia* (P3)
Trba	*Triodia basitricha* (P3)
Trch	*Triodia chichesterensis* (P3)
Vitr	*Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

Eucl	*Euphorbia clementii* (P3)
Eumu	*Euploca mutica* (P3)
Tesu	*Terminalia supranitifolia* (P3)
Trch	*Triodia chichesterensis* (P3)
Vitr	*Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

Eumu	*Euploca mutica* (P3)

Significant Flora Revisit Locations – Umwelt 2023 Survey

Eucl	*Euphorbia clementii* (P3)
Tesu	*Terminalia supranitifolia* (P3)
Trch	*Triodia chichesterensis* (P3)
Vitr	*Vigna triodiophila* (P3)

FIGURE 5.6

LEGEND: Overview of Significant Flora Locations in the Survey Area

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5.2.4 Listed Significant Flora Taxa

5.2.4.1 *Euphorbia clementii* (P3)

Euphorbia clementii (P3) is an erect herb growing to 0.6 m high (**Photo 5.1**), that occurs on stony plains, and often within sandy flow lines that dissect such plains (Umwelt field observations; WA Herbarium (1998-)). This taxon appears to be endemic to the Abydos Plain in northern part of the Pilbara region of Western Australia (ALA, 2024), occurring over a range of approximately 290 km from south of Port Hedland in the west to west of Telfer in the east. This taxon is known from 31 WA Herbarium records representing approximately 26 populations. None of these locations occur in DBCA-managed tenure (WA Herbarium, 1998-). The population of this taxon in the western portion of the Survey Area is located close to the western edge of the known range of this taxon.

Euphorbia clementii is known to occur widely across the western part of the Survey Area, west of the Turner River near Wodgina mine site (**Figure 5.6**). An overall total of 62,980 individuals of *Euphorbia clementii* have been recorded at 677 point locations during the 2023/2024 surveys and previous surveys (Woodman Environmental, 2020) in the Survey Area representing two populations; one consisting of three locations and four individuals, located in north-eastern part of the Survey Area, and a second larger population in the western part of the Survey Area (near Wodgina minesite) consisting of the remainder of locations in the Survey Area. The locations of this taxon in the Survey Area occur within VTs 1, 2, 3, 5, 7, 8, 9, 10, 12, 13 and 14, with VTs 1, 3, 5, and 7 considered to represent the preferred habitat for this taxon. In addition, 1,009 individuals have been recorded at regional locations (outside of Survey Area) at 27 point locations. The locations are in close proximity to the Survey Area and are considered to be part of the large western population. The eastern population is located approximately 8 km south of a WA Herbarium record (DBCA, 2024b) recorded north-east of the Pilgangoora mine site. There was no evidence of recent fire in this area.

This taxon is well known to occur almost exclusively in areas that have been recently burnt (generally within 12 months) (Woodman Environmental / Umwelt field observations). Almost all individuals previously recorded in the western part of the Survey Area were recorded in areas known to have been burnt within the previous 12 months (Woodman Environmental / Umwelt field observations). Indeed, the majority of individuals of *Euphorbia clementii* recorded by the Woodman Environmental (2020) survey occurred in a single small sandy flat area in the northern part of the 2019 Wodgina Study Area that had been burnt within a few months of the survey being conducted. Although a significant number of individuals were recorded in these recently burnt areas, very few individuals were recorded elsewhere within unburnt areas that were the subject of targeted survey, despite almost identical habitat to the aforementioned burnt area being present elsewhere.

This was reinforced by re-survey in 2023 of the above-mentioned small sandy flat area (now four years post-fire) where thousands of individuals had previously been recorded, as well as surrounding identical habitat that had been recently burnt (18 months prior to survey). No individuals were located in the previously surveyed area; a number of individuals were located in the surrounding identical habitat, however, many had already senesced or were near senescence, and numbers observed were significantly less than that observed by previous surveys. This indicates that the maximum abundance and distribution of this taxon in a given area can only be observed during the first growing season after fire; after this, numbers apparently rapidly decline (it is presumed that the 2023 survey was undertaken in the second or third growing season since the fire).

Additionally, revisits to other areas of apparently suitable habitat subject to previous targeted survey by Woodman Environmental (2020) while the vegetation was relatively long-unburnt, that had subsequently been affected by the same fire 18 months prior to the 2023 survey, also observed a number of individuals in locations where none were recorded by previous targeted survey. As for the small sandy flat area described above, many of the individuals observed had already senesced or were near senescence, and it is likely that many more individuals would have been observed if survey had been undertaken in the first growing season post-fire.

The results of the 2023/2024 surveys and previous surveys ultimately demonstrate that the potential extent and abundance of *Euphorbia clementii* is best assessed via a combination of physical records and suitable habitat extent. The 2023/2024 surveys and previous surveys have indicated that the relative abundance of individuals in areas of suitable habitat for this species is strongly linked to time since fire, and that its absence may be simply because such areas have not been recently burnt, rather than the taxon not occurring there, or being overlooked by the surveys. The taxon could likely be present in such areas in dormant seed form, waiting for the next germination stimulus event.



Photo 5.1 *Euphorbia clementii* (P3) (Photos: Umwelt 2023)

5.2.4.2 *Euploca mutica* (P3)

Euploca mutica (P3), previously known as *Heliotropium muticum* (P3) (Frohlich et al., 2020), is an ascending to spreading perennial herb growing to 0.3 m high, and generally occurs on coarse sandy plains and flats (WA Herbarium, 1998-) (**Photo 5.2**). *Euploca mutica* is typically present only in recently burnt areas, and like *Euphorbia clementii* (P3), is apparently short-lived. This taxon is endemic to the Abydos Plain in northern part of the Pilbara region of Western Australia (ALA, 2024), occurring over a range of approximately 150 km, from Strelley Station in the east to Whim Creek (west of Port Hedland) in the west (WA Herbarium, 1998-). The Herbarium records that plot near Marble Bar are known to have erroneous coordinates; their location description puts them within the above-mentioned range near the North Star mining area (WA Herbarium, 1998-). This taxon is known from 77 WA Herbarium records representing approximately 54 populations. None of these records occur in DBCA-managed tenure (WA Herbarium, 1998-). The Survey Area is located within the known range of this taxon.

Euploca mutica (P3) has been recorded at a total of 234 point locations in the Survey Area, with a total of 2,750 individuals recorded by the 2023/2024 surveys and previous surveys (360 Environmental, 2018a; Woodman Environmental, 2020). The majority of locations recorded occur in the north-western part of the Survey Area near the Wodgina airport, within an area subject to a fire in early 2022 (**Figure 5.6**). Of these, 11 point locations were recorded during surveys by 360 Environmental (2018a) for the Wodgina Aerodrome (see **Section 5.1.4**). These individuals were not recorded during the 2023/2024 surveys; however, given this taxon is a relatively short-lived perennial which generally appears to only germinate en masse following fire, these locations have been included as existing locations as there is a high likelihood individuals would reappear at these locations following fire. The other occurrences of this taxon were within the central part of the Survey Area (east of the Great Northern Highway) in relatively recently (2019) burnt areas; however, it is possible that more individuals could occur in these areas if survey were conducted immediately post-fire. The locations of this taxon in the Survey Area occur in VTs 1, 2, 7, 8, 13 and 16, with VT 1 and VT 7 considered to represent the preferred habitat for this taxon.



Photo 5.2 *Euploca mutica* (P3) (Photos: Umwelt 2023)

5.2.4.3 *Goodenia obscurata* (P3)

Goodenia obscurata (P3) is an erect herb growing to 0.5 m high, occurring on stony slopes, ridges, outcrops, floodplains or near drainage llines, in red-brown sandy loam or clay loam, often in association with ironstone (WA Herbarium, 1998-) (**Photo 5.3**). *Goodenia obscurata* is a short-lived (annual or short-lived perennial) disturbance opportunist, frequently appearing post-fire or in disturbed habitats (Shepherd & Lepschi, 2023). This taxon occurs in the Carnarvon and Pilbara regions, with the majority of records occurring in the central to north-western part of the Pilbara region of Western Australia (ALA, 2024). *Goodenia obscurata* occurs over a range of approximately 495 km, from Kennedy Range in the south-west to Wodgina in the north-east (WA Herbarium, 1998-). This taxon is known from 29 WA Herbarium records representing approximately 26 populations. Four of these records occur in DBCA-managed tenure including Millstream Chichester National Park and Karijini National Park (WA Herbarium, 1998-). The Survey Area is located on the north-eastern boundary of the known range of this taxon.

The WA Herbarium record of *Goodenia obscurata* in the Survey Area was originally collected during the Hercules assessment by Woodman Environmental (2012a). It was originally identified as *Velleia connata*, with the specimen submitted to the WA Herbarium because it was a range extension at the time of the survey. Following revision of *Goodenia panduriformis* and allies in 2023 (Shepherd & Lepschi, 2023), this specimen was determined to be *Goodenia obscurata* (P3). No count of individuals was recorded at this location.

Goodenia obscurata was recorded at two locations in the Survey Area during the 2024 survey, one located approximately 0.9 km north-east of the WA Herbarium record of this taxon (in the western part of the Survey Area near Wodgina mine site) and one in the south-eastern part of the Survey Area, with 27 individuals recorded (26 individuals at the western location and one individual at the eastern location). Additionally, one location of this taxon was recorded outside the Survey Area adjacent to the access track to the south-east part of the Survey Area, with five individuals recorded at this location (**Figure 5.6**)). The locations within the Survey Area, occur within VTs 2 and 5. Given *Goodenia obscurata* was described post-2023 survey, it has not been subject to targeted survey. As such, based on the habitats present, it is considered possible that additional locations of this taxon could be present in Survey Area, including the combined 2023 Detailed Survey Area/2019 Wodgina Study Area, and the remaining central to eastern portions of the Survey Area. However, as for *Euphorbia clementii* (P3), it is likely that the maximum abundance and distribution of this taxon in a given area can only be observed during the first growing season after fire.

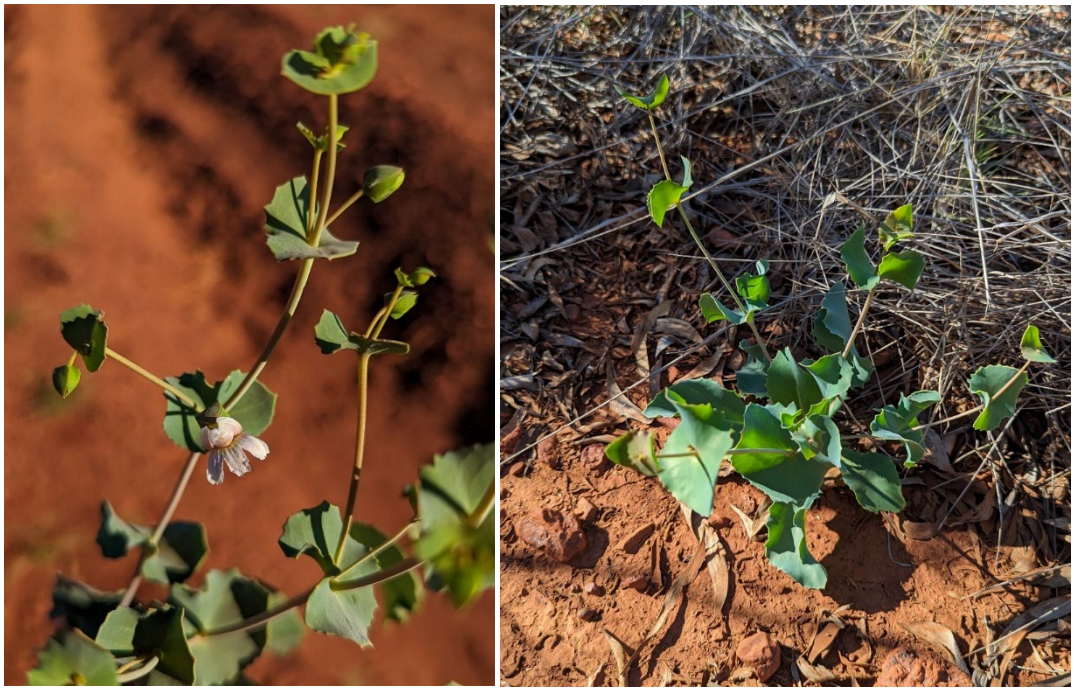


Photo 5.3 Goodenia obscurata (P3) (Photos: Umwelt 2024)

5.2.4.4 *Gymnanthera cunninghamii* (P3)

Gymnanthera cunninghamii (P3) is an erect, multi-stemmed perennial shrub growing to 1–2 m high (**Photo 5.4**), that generally occurs in sandy creek beds (WA Herbarium, 1998-). This taxon has a wide range across northern Australia, occurring from Kennedy Range (in WA), between Alice Springs and Tennant Creek in NT, east to near Mount Isa in Queensland (ALA, 2024). Within WA, the taxon has a range of approximately 870 km from Kennedy Range to Eighty Mile Beach (WA Herbarium, 1998-). There are 45 records of this taxon in WA in DBCA databases, representing approximately 38 regional populations, five of which occur within DBCA-managed tenure (Kennedy Range National Park, Walyarta Conservation Park and unnamed nature reserves R 36909 and R 36915) (WA Herbarium, 1998-). The Survey Area is located within the known range of this taxon.

Gymnanthera cunninghamii (P3) was recorded at one location in the Survey Area during the 2024 survey, consisting of one individual, located within the Turner River (in the western part of the Survey Area). This location was within VT 11, which represents the preferred habitat for this taxon. Additionally, two locations were recorded outside the Survey Area, while traversing between parts of the Survey Area, one which is just outside the Survey Area east of Great Northern Highway in the west branch of the Turner River, and one location in the east branch of the Turner River located 3.6 km north of the Survey Area (**Figure 5.6**).



Photo 5.4 ***Gymnanthera cunninghamii*** **(P3) (Photos: Umwelt 2010 (Turner River))**

5.2.4.5 *Ptilotus mollis* (P4)

Ptilotus mollis (P4) is a low, compact shrub with soft grey foliage to 0.5 m high (**Photo 5.5**), which occurs on stony hill tops and scree slopes (WA Herbarium, 1998-). This taxon occurs over a range of approximately 640 km in Western Australia, from near the north-western edge of Karlamilyi (formerly Rudall River) National Park in the east, to the north-eastern corner of Cane River Conservation Park in the west (WA Herbarium, 1998-). This taxon is endemic to WA, with the majority of records occurring within the Pilbara region (ALA, 2024). It is known from 45 WA Herbarium records representing approximately 35 populations, three of which occur in DBCA-managed tenure including Karijini National Park and Cane River Conservation Park (WA Herbarium, 1998-). The Survey Area is located within the known range of this taxon.

Ptilotus mollis was recorded at nine locations in the Survey Area during the 2024 survey, consisting of 316 individuals, all within the south-east portion of the Survey Area. Additionally, one location of this taxon was recorded outside the Survey Area in 2023 approximately 0.2 km to the east, with approximately 100 individuals recorded at this location (**Figure 5.6**)). The locations within the Survey Area occur within VTs 10 and 13. This taxon is unlikely to occur in the western part of the Survey Area (combined 2023 Detailed Survey Area/2019 Wodgina Study Area) as survey of potentially suitable habitat has not previously recorded this taxon.



Photo 5.5 ***Ptilotus mollis (*P4) (Photo: Umwelt 2024)**

5.2.4.6 *Terminalia supranitifolia* (P3)

Terminalia supranitifolia (P3) is a spreading, tangled shrub or tree growing to 3 m high, and generally occurs on rock outcrops, cliffs and breakways (WA Herbarium, 1998-) (**Photo 5.6**). This taxon is endemic to the northern part of the Pilbara region of Western Australia (ALA, 2024), occurring over a range of approximately 275 km from Wodgina in the east to near Pannawonica in the west (WA Herbarium, 1998-). This taxon is known from 53 WA Herbarium records representing approximately 11 populations (including the population in the 2019 Wodgina Study Area), two of which occur in DBCA tenure including Murujunga National Park (on Burrup Peninsula) and Dolphin Island Nature Reserve (WA Herbarium, 1998-). The majority of records of this taxon (including 10 of the 11 apparent populations) occur over 190 km west of Wodgina. The Wodgina population (consisting of four records) is primarily within the 2019 Wodgina Study Area (one locality has erroneous coordinates and plots outside the Wodgina Study Area but is known to have been collected within it by Woodman Environmental). The Wodgina population is therefore the eastern-most known occurrence of this taxon.

This taxon occurs widely across the western part of the Survey Area (**Figure 5.6**), with over 2,000 individuals previously recorded within it (Woodman Environmental, 2020); a handful of additional individuals were recorded in 2023 and 2024, however, were near to existing records and likely represent a historical recording error. Overall a total of 2,903 individuals have been recorded at 1,542 point locations within the Survey Area, including data from the 2023/2024 surveys and previous surveys (**Table 5.7**). The extent of *Terminalia supranitifolia* records within the Survey Area are considered to represent a single population for this taxon. The locations occur within VTs 3, 10, 12, 13 and 14, of which VT 12 is considered to represent preferred habitat for this taxon. In addition, a further 62 point locations consisting 100 individuals have been recorded outside of the Survey Area, in close proximity to the Survey Area.

Terminalia supranitifolia is apparently a long-lived, conspicuous shrub or small tree, and therefore it is considered that previous locations recorded for this taxon are likely to persist long-term; re-survey only a few years subsequent to previous survey for this taxon is unlikely to result in significant changes to population census data. A number of known locations of this taxon in the Survey Area were revisited in 2023 for verification; these re-visits did not identify any significant changes to previously recorded data (Woodman Environmental, 2020) for this taxon.



Photo 5.6 *Terminalia supranitifolia* (P3) (Photos: Umwelt 2023)

5.2.4.7 *Triodia basitricha* (P3)

Triodia basitricha (P3) is a hummock grass growing to 0.4 m high, that generally occurs on rocky rises and slopes (WA Herbarium, 1998-) (**Photo 5.7**). This taxon is endemic to the northern part of the Pilbara region of Western Australia (ALA, 2024), occurring over a range of approximately 490 km from near Meenthena Station in the east, to Barlee Range Nature Reserve in the west (WA Herbarium, 1998-). This taxon is known from 43 WA Herbarium records, representing approximately 33 populations (not including the Survey Area), three of which occur in DBCA tenure, including Barlee Range Nature Reserve and Chichester National Park (WA Herbarium, 1998-). The Survey Area is located within the central part of the taxon's known range. *Triodia basitricha* has not been previously recorded within the Survey Area.

Triodia basitricha was recorded at 21 point locations within the Survey Area in 2023 and 2024 (**Figure 5.6**), with a total of 6,846 individuals recorded. These were all located in the south-east part of the Survey Area. The locations occur within VTs 4, 5 and 12. In addition, one location was recorded outside of (east of) the south-eastern part of the Survey Area, where the species was found to be extensive on the lower slope of a hill, with approximately 5,000 individuals recorded. The population was also observed to extend south of the Survey Area at another location, with approximately 750 individuals recorded (**Appendix G**). It appears based on field observations that further suitable habitat occurs just to the south and east of the south-east part of the Survey Area. The locations of this taxon within and adjacent to Survey Area are considered to represent a single population. This taxon is unlikely to occur in the western part of the Survey Area given the level of survey of potentially suitable habitat undertaken over this area, and the relative distinctiveness of this taxon.



Photo 5.7 ***Triodia basitricha*** **(P3) (Photos: Umwelt)**

5.2.4.8 *Triodia chichesterensis* (P3)

Triodia chichesterensis (P3) is a hummock grass growing to 0.4 m high, that generally occurs on stony plains and low stony ridges (usually calcrete or quartz-derived) (WA Herbarium, 1998-) (**Photo 5.8**). This taxon appears to be endemic to the Abydos Plain in northern part of the Pilbara region of Western Australia (ALA, 2024), occurring over a range of approximately 130 km from Strelley (south-east of Port Hedland) in the north to east of Mungaroona Nature Reserve in the south (WA Herbarium, 1998-). This taxon is known from 43 WA Herbarium records, representing approximately 28 populations (including within the Survey Area and surrounds), none of which occur in DBCA tenure (WA Herbarium, 1998-). The Survey Area is located on the western edge of the known range of this taxon (WA Herbarium, 1998-). This taxon is known to be common and widespread across the Survey Area and surrounds (**Figure 5.6**), with over 1,968,000 individuals recorded by previous surveys of the area (Woodman Environmental, 2020).

Triodia chichesterensis has been recorded at a total of 2,614 point locations within the Survey Area, and 2,360,049 individuals recorded (2023/2024 and previous survey data) (**Table 5.7**). These are considered to represent three populations. *Triodia chichesterensis* primarily occurs on low hills and outwashes where calcrete has developed that surround the main range at Wodgina, and was recorded as dominating the ground stratum in most locations where it was present (**Photo 5.8**). These locations occur within VTs 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14 and 15, of which 12, 13 and 14 are considered to be preferred habitat for this taxon.

In addition, *Triodia chichesterensis* has been recorded outside of the Survey Area, with 262,680 individuals recorded at 218 point locations (2023/2024 and previous survey data). These locations occur to the west, east and south of the Survey Area.

Triodia chichesterensis, like most *Triodia*, is apparently a long-lived taxon, and therefore it is considered that previous locations recorded for this taxon are likely to persist long-term; re-survey only a few years subsequent to previous survey for this taxon is unlikely to result in significant changes to population census data. A number of known locations of this taxon in the 2019 Wodgina Study Area were revisited in 2023 for verification; these re-visits did not identify any significant changes to previously recorded data (Woodman Environmental, 2020) for this taxon.

Triodia chichesterensis is superficially similar, and closely related to *Triodia scintillans* (not a significant taxon) (Anderson et al., 2017), which was recorded during surveys in 2018. However, it was noted that additional material was required to conclusively determine whether one or both were present in the 2019 Wodgina Study Area (Woodman Environmental, 2019b). A number of collections of what were considered to be these taxa were made during 2019, with representative specimens sent to the WA Herbarium for identification. The WA Herbarium advised that all collections represent *Triodia chichesterensis* on account of lemma morphology, as well as the locality of the collections (M. Hislop pers. comm. 2019). The presence of 'sparkling droplets' on all specimens is somewhat at variance for this taxon, as it is not mentioned in the protologue for the taxon; this was the primary reason that material collected in 2018 was identified as *Triodia scintillans*, which characteristically has 'sparkling droplets' (Anderson et al., 2017). However, there is a paucity of collections of *Triodia chichesterensis* at the WA Herbarium, and some do possess some sparkling droplets (M. Hislop pers. comm. 2019), indicating that this character may be somewhat variable, possibly depending on the level of drought stress of plants.



Photo 5.8 *Triodia chichesterensis* (P3) (Photos: Umwelt)

5.2.4.9 *Vigna triodiophila* (P3)

Vigna triodiophila (P3) is a perennial (ephemeral stems arising from a persistent woody rootstock) climber that occurs on rocky hills, slopes and outcrops among basalt rockpiles (WA Herbarium, 1998-) (**Photo 5.9**). This taxon appears to be endemic to the northern Pilbara in Western Australia (ALA, 2024), with current DBCA records indicating it has a range of approximately 225 km from Burrup Peninsula (north of Karratha) in the west to Wallareenya Station in the east (WA Herbarium, 1998-). This taxon is known from 21 WA Herbarium records, representing approximately eight populations (including the Survey Area). One population occurs within DBCA tenure, within Murujunga National Park (on Burrup Peninsula) (WA Herbarium, 1998-). The Survey Area is near the eastern edge of the known range of this taxon.

This taxon is relatively restricted in distribution in the Survey Area (**Figure 5.6**), owing to the fairly limited extent of suitable habitat (basalt rockpiles) present in this area. A total of 2,482 individuals of *Vigna triodiophila* were recorded at 169 point locations during previous surveys of the Survey Area (**Table 5.7**), all being within the western part of the Survey Area. No additional locations were recorded in 2023 or 2024. The recorded locations of this taxon occur within VTs 3, 10, 12 and 14, with VT 12 considered to be preferred habitat for this taxon.

Based on revisits to known locations of this taxon where individuals were observed to be resprouting post-fire, *Vigna triodiophila* is apparently a relatively long-lived taxon, and therefore it is considered that previous locations recorded for this taxon are likely to persist long-term; re-survey only a few years subsequent to previous survey for this taxon is unlikely to result in significant changes to population census data. Several locations of this taxon in the Survey Area were revisited in 2023 for verification; these re-visits did not identify any significant changes to previously recorded data (Woodman Environmental, 2020) for this taxon at most locations.

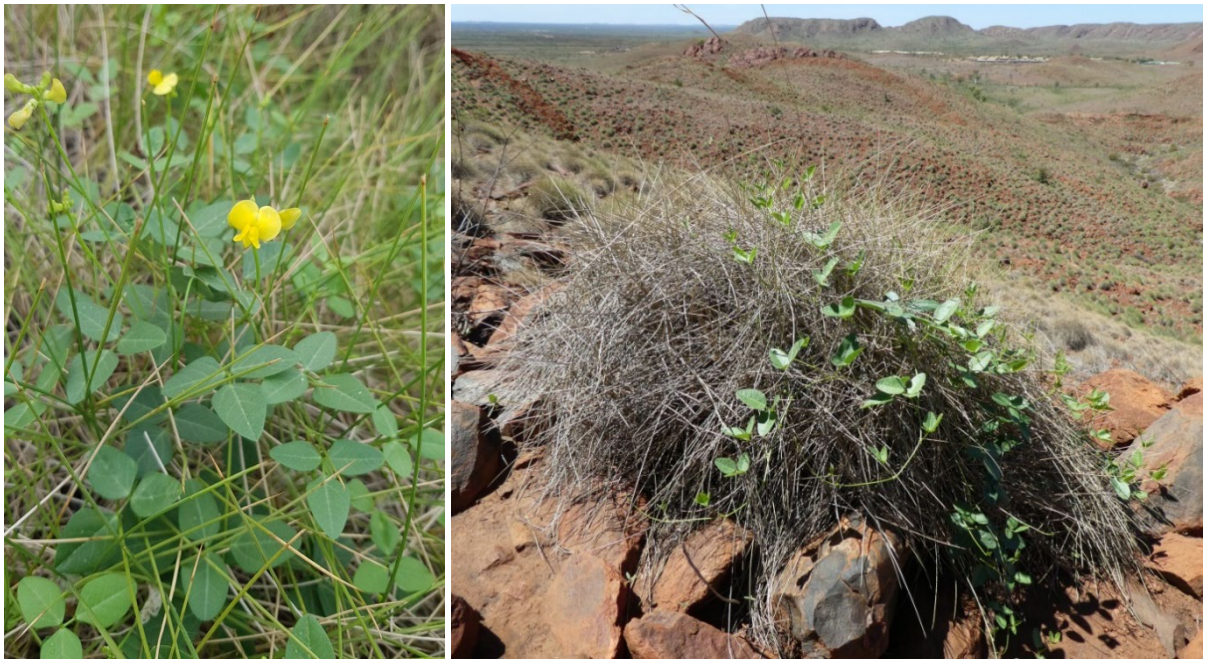


Photo 5.9 *Vigna triodiophila* (P3) (Photos: Umwelt 2023)

5.2.5 Unlisted Potentially Significant Flora Taxa

5.2.5.1 *Corchorus* aff. *incanus* (Potentially Undescribed)

Three collections were made during the 2023/2024 surveys of an entity that did not match any named (either formally or informally) taxon, but appear to be most similar to *Corchorus incanus*. However, these collections differed in having narrower fruits than the given range for the taxon, and also smaller, narrower leaves than *Corchorus incanus* subsp. *incanus* (Halford, 2004), which is known to occur in the general area (WA Herbarium, 1998-) (**Photo 5.10**). Members of *Corchorus* in the Pilbara are well-known to often be difficult to identify; the characters used to discriminate between taxa are often subtle, and the current treatment was published nearly 20 years ago (Halford, 2004) with limited material available for review. It appears that the treatment did not capture all of the variation across the genus, including within described taxa, in the Pilbara, and a revision is required, with a significant number of additional collections now available for review (WA Herbarium, 1998-). It is unclear whether the specimens collected by the 2023/2024 surveys represent variation not accounted for in the concept of *Corchorus incanus*, or an undescribed taxon. The WA Herbarium was consulted on the identification of this entity; *Corchorus* aff. *incanus* was considered to be the most appropriate name for this entity at this point. It is not known whether this entity has been collected elsewhere previously in WA. As the taxonomic and conservation status of this entity is unclear, it is considered appropriate to treat it as a potentially significant taxon, as per EPA (2016a, 2016b).

Corchorus aff. *incanus* was recorded at seven locations within the Survey Area during the 2023/2024 surveys (**Figure 5.6**). No counts of individuals were made at these locations, however, it was observed to be common at several. Based on the habitat that this entity was recorded within (sandy river floodplains and channels, VTs 8 and 11), it is likely that there are further occurrences of this entity outside of the Survey Area, and there are no indications that such habitat is restricted.



Photo 5.10 Corchorus aff. incanus (Potentially Undescribed) (Photo: Umwelt, 2023 (Scanned Specimen))

5.2.5.2 *Polymeria* sp. (Potentially Undescribed)

Four collections were made during surveys undertaken in 2023/2024 of an entity that appeared to represent the genus *Polymeria* but did not match any named (either formally or informally) taxon (**Photo 5.11**). A representative specimen of this entity was sent to the WA Herbarium for identification, who noted that this entity matched several other collections it holds from the northern Pilbara region, and that its current opinion is that this entity represents an undescribed species (M. Hislop, pers. comm., 2024). It is the aim of the WA Herbarium to phrase name this species in the future (M. Hislop, pers. comm., 2024).

Polymeria sp. (potentially undescribed) is a prostrate, creeping herb with long stems that root at the nodes, sometimes with short (to 0.1 m) semi-erect stems in the centre of the plant, with small, dark green leaves and relatively small, pale pink flowers (Umwelt field observations; WA Herbarium (1998-)) (**Photo 5.11**). The WA Herbarium holds five collections of this taxon; these collections have been made over a range of approximately 260 km, from Karratha in the west, to just west of Marble Bar in the east. The Survey Area is within this range. Two of the collections held by the WA Herbarium may represent the same regional population, as the locality details are similar, while a further collection was made during a survey by Umwelt (as Woodman Environmental), during which a second, discrete record was made. None of these regional populations occur within DBCA-managed tenure. Subsequent to the 2023 survey being conducted, it was determined that *Polymeria* sp. (potentially undescribed) had been recorded from four apparently discrete populations during recent surveys undertaken by Umwelt approximately 15 km north-west of the Survey Area (Umwelt field observations).

A total of 11 locations of this entity were recorded in the Survey Area during the 2023/2024 surveys (**Figure 5.6**). One of the locations was at a previously established quadrat that was reassessed by this current survey (HER021); previously this entity had been identified as ?*Polymeria ambigua*, owing to a lack of suitable material for positive identification. Overall, it is considered that four populations are present within the Survey Area. No counts of individuals were made at the recorded locations, however, it was noted as being relatively uncommon where it occurred.This taxon appears to prefer alluvial sandy or clay loam soils, sometimes with stones, in lower lying situations, including minor flow lines and flats, and may favour areas that have been recently disturbed, including by fire or machinery works (Umwelt field observations; WA Herbarium (1998-)); all locations were recorded in such recently disturbed areas. It is possible that another location (potentially representing another population) of this taxon occurs in the Survey Area, as a second record identified as ?*Polymeria ambigua* was made at a previously established quadrat; however, resurvey of this location is required to confirm this, and this record is not included in **Table 5.7** or on **Figure 5.6.**

The WA Herbarium has noted that it considers that this entity would unlikely be assessed as being of high conservation concern, owing to the wide distribution of collections held by the WA Herbarium (M. Hislop, pers. comm., 2024). This is now supported by the reasonable number of populations this entity is known from (14), as well as the potential for there to be significant remaining areas of suitable habitat (its habitat does not appear to be unusual or restricted). However, given that the number of known populations is still relatively small, and abundance and condition data for most of these populations is unknown, it is considered appropriate to treat it as a potentially significant taxon, as per EPA (2016a, 2016b).

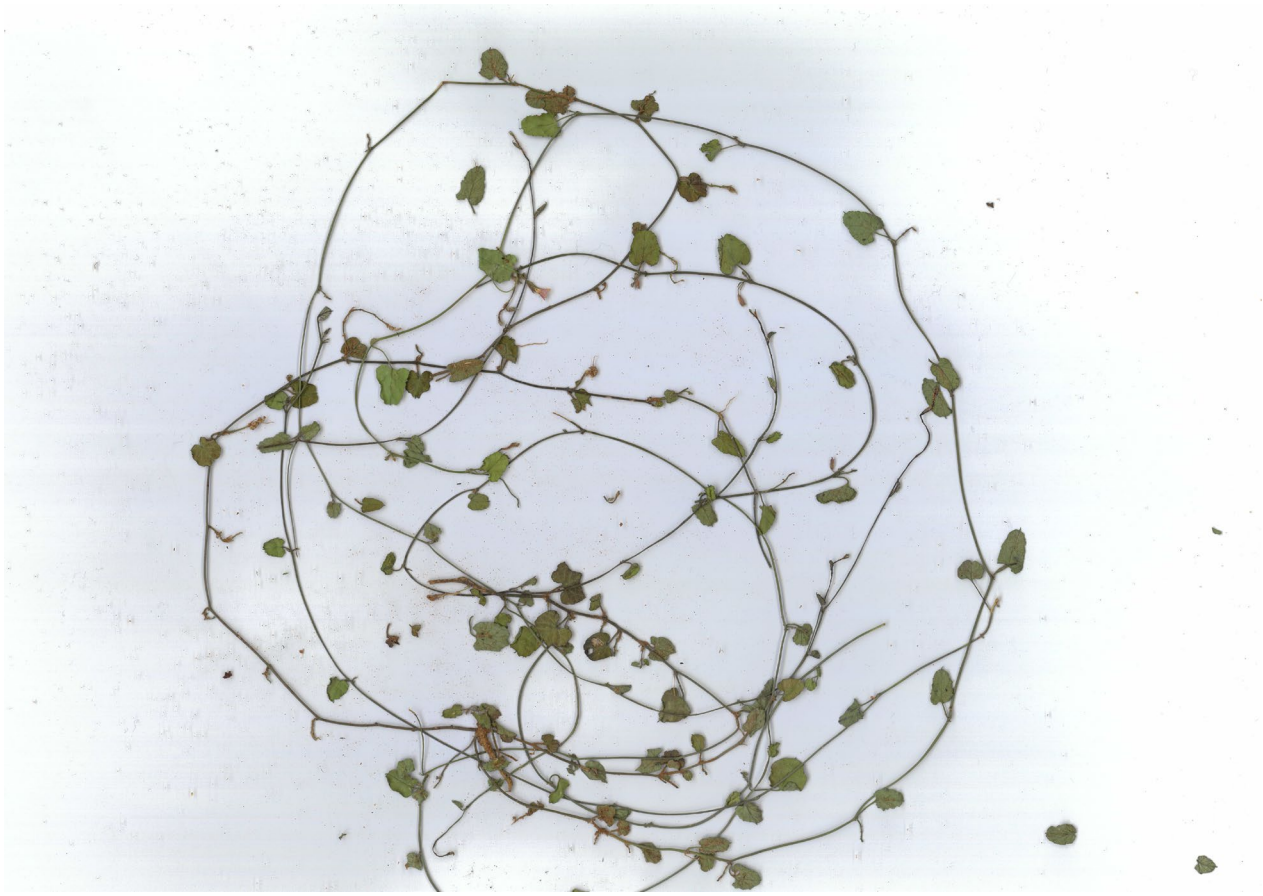


Photo 5.11 ***Polymeria*** **sp. (Potentially Undescribed) (Photo: Umwelt, 2022 (Scanned Specimen))**

5.2.6 Distribution Extensions and Distribution Gaps

Table 5.8 presents taxa where collections from the Survey Area made during the 2023 and 2024 surveys represent extensions to the known distribution of such taxa, or otherwise fill gaps within their known distributions, according to Florabase (WA Herbarium, 1998-). Distribution extensions and gaps are considered to be records that extend the known distribution of a taxon by greater than approximately 50 km to the known distribution of such taxa, or fill a gap in a taxon's known range of greater than approximately 50 km, according to Florabase (WA Herbarium, 1998-). Six flora taxa recorded during the 2023/2024 surveys represents range extensions or locality holes. Specimens will be lodged at the WA Herbarium by Umwelt as per the requirements of EPA (2016b), where such material is of sufficient quality.

Note that although collections of taxa that are 'representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range)' can be considered significant taxa as per EPA (2016a, 2016b), none of the taxa listed in **Table 5.8** are considered to be significant taxa in this context. All such taxa have wide distributions, and the recording of these taxa is considered to be a function of the somewhat limited previous survey undertaken in the Survey Area and surrounds.

Table 5.8 Native Taxa Where Collections Represent Range Extensions or Fill Distribution Gaps

Taxon	Description
Dichanthium fecundum	Locality hole – nearest record located approximately 90 km to the north-east
Kennedia prorepens	Range extension – 170 km to the north-west
Paspalidium reflexum	Range extension – 300 km to the north-west
Polygala galeocephala	Range extension – 80 km to the south
Sclerolaena hostilis	Locality hole – nearest record located approximately 100 km to the north
Vincetoxicum flexuosum	Range extension – 50 km to the north

5.2.7 Likelihood of Occurrence of Further Significant Flora Taxa

As detailed in **Section 5.1.5**, a total of 23 listed significant flora taxa were identified prior to the 2023/2024 surveys as occurring within or in the vicinity of the Desktop Study Area. Of these, six taxa (*Euphorbia clementii* (P3), *Euploca mutica* (P3), *Goodenia obscurata* (P3), *Terminalia supranitifolia* (P3), *Triodia chichesterensis* (P3) and *Vigna triodiophila* (P3)) were already known to occur within the Survey Area (**Table 5.5**); two additional taxa identified during the desktop assessment was recorded in the Survey Area during the 2023/2024 surveys (*Ptilotus mollis* (P4) and *Triodia basitricha* (P3)). It is considered that the remaining 15 taxa were identifiable during the survey period, either because the survey period coincided with the taxon's flowering period or the taxon can be identified reliably when in fruit or sterile. Additionally, two further potentially significant taxa were recorded by the 2023/2024 surveys that were not identified by the Desktop Assessment (*Polymeria* sp. and *Corchorus* aff. *incanus*).

It is considered unlikely that eight of the 15 unrecorded significant taxa identified in the desktop assessment would occur in the Survey Area, either because suitable habitat is not considered to be present in the Survey Area or that all potential habitat was searched by the 2023/2024 surveys or previous surveys (**Table 5.9**). With specific reference to taxa whose preferred habitat is granite outcrops, there are small areas of granite outcrops present in the Survey Areas, but it appears that these areas are not sufficiently large enough to support these taxa, a number of which occur in cracks and under overhangs of large granite outcrops.

It is considered possible that the remaining seven significant taxa could occur in the Survey Area. However, this is only relevant to the portions of the Survey Area that have not been subject to targeted survey. All nine taxa are considered unlikely to occur in the portions of the Survey Area subject to targeted survey (specifically the combined 2023 Detailed Survey Area and the 2019 Wodgina Study Area, and the 2023 Reconnaissance Survey Area), due to either potential habitat not being present, or all potential habitat being searched by the 2023/2024 survey or previous surveys.

Table 5.9 Likelihood of Occurrence of Significant Flora Taxa in the Survey Area

Taxon	Status (WA)	Flowering Period^	Habitat^	Nearest Known Location to Survey Areas (DBCA, 2024b)	Identifiable During Survey?	Likelihood of Occurrence in the Survey Area
***Abutilon* sp. Pritzelianum (S. van Leeuwen 5095)**	P3	Apr–Sep	Plains, floodplains, sand dunes. Red-brown or orange-brown sandy or loamy soil.	21 km north-east	Yes	**Possible** – potential habitat present in the central to eastern parts of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area – not recorded by this survey or previous surveys; all potential habitat searched.
Acacia leeuweniana	P1	May	Granite outcrops, granite hills.	11 km south east	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Acacia levata	P3	May	Hillslopes. Sand or sandy loam over granite.	15 km south	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Bulbostylis burbidgeae	P4	Apr–Jun	Granitic soils. Granite outcrops, cliff bases.	7 km east	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Cochlospermum macnamarae	P1	Following rainfall	Hills and slopes with granite outcrops Red or brown sand.	24 km south east	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
***Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)**	P3	May–Jun	Undulating plains, flats, floodplains and flowlines. Red-brown or grey-brown cracking clay or clay.	40 km north east	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Euphorbia inappendiculata* var. *inappendiculata	P2	Mar–Sep	Floodplains, claypans, drainage lines and flats. Brown or red-brown silty loam, clay loam or cracking clay.	23 km south east	Yes	**Possible** – potential habitat present in the central to eastern parts of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.

Taxon	Status (WA)	Flowering Period^	Habitat^	Nearest Known Location to Survey Areas (DBCA, 2024b)	Identifiable During Survey?	Likelihood of Occurrence in the Survey Area
Gomphrena leptophylla	P3	Mar–Sep	Sand, sandy to clayey loam, granite, quartzite. Open flats, sandy creek beds, edges salt pans & marshes, stony hillsides.	5 km east	Yes	**Possible** – potential habitat present in the central to eastern parts of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.
Gymnanthera cunninghamii	P3	Dec–Jan	Sandy river beds.	0.5 km north-east	Yes	**Possible** – potential habitat present in the central parts of the Survey Area in the major drainage channels. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.
Nicotiana umbratica	P3	Apr–Jun	Cracks and caves/overhangs in granite outcrops.	7 km east (excluding the erroneous location discussed in **Section 5.1.5**)	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Phyllanthus hebecarpus	P3	Unknown	Granite outcrops, drainage lines. Skeletal brown sand or red sandy loam.	10 km south east	Yes	Unlikely – habitat not present within the survey area, not recorded by this survey or previous surveys.
Quoya zonalis	T	Jul–Aug	Hills, clay loam over granite. Rocky slopes.	0.2 km north-east	Yes	**Possible** – potential habitat present in the eastern part of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.

Taxon	Status (WA)	Flowering Period^	Habitat^	Nearest Known Location to Survey Areas (DBCA, 2024b)	Identifiable During Survey?	Likelihood of Occurrence in the Survey Area
Rothia indica* subsp. *australis	P3	Apr–Aug	Sandhills and sandy flats. Sandy soils.	13 km north	Yes	**Possible** – potential habitat present in the eastern part of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.
Stylidium weeliwolli	P3	Aug–Sep	Edges of watercourses. Gritty red/brown sand or clay soil.	9 km north	Yes	Unlikely – habitat not present within the survey area.
***Themeda* sp. Panorama (J. Nelson et al. NS 102)**	P1	May	Rocky gorges and steep hills.	12 km east	Yes	**Possible** – potential habitat present in the eastern part of the Survey Area. Unlikely to occur in the combined 2023 Detailed Survey Area / 2019 Wodgina Study Area and the 2023 Reconnaissance Survey Area - not recorded by this survey or previous surveys; all potential habitat searched.

^Source: WA Herbarium (1998-)

5.2.8 Introduced Flora Taxa

A total of 15 introduced taxa have been recorded within the Survey Area by the 2023/2024 survey and previous surveys (Woodman Environmental (2020)). **Table 5.10** lists location information and comments regarding the significance of these taxa, including ecological impact and invasiveness ratings for each introduced taxon under the Invasive Plant Prioritization Process for the DBCA for the Pilbara Region (DBCA, 2014). Note that *Calotropis procera* and *Opuntia* sp. are Declared Pests under the BAM Act (DPIRD, 2024). *Opuntia* species are also WoNS (Weeds Australia, 2024). Locations of introduced flora taxa are presented on the figure in **Appendix I**, with GPS locations presented on **Appendix G**.

Table 5.10 Summary of Introduced Taxa Recorded within the Survey Area

Taxon	Common Name	Number of Locations		VTs	Legislative Significance	Ecological Impact^	Invasiveness^	Risk Assessment – Pilbara Region (Webber et al., 2017)
		Previous Surveys	2023 / 2024 Surveys					
Aerva javanica	Kapok Bush	89	30	2, 5, 6, 8, 9, 10, 11, 12, 13, 14	-	High	Rapid	Priority for research to determine environmental impact
Calotropis procera	Calotrope	3	6	10, 11, 12	Declared Pest	Not rated	Not rated	Widespread and probably beyond containment, management should focus on asset protection
Cenchrus ciliaris	Buffel Grass	118	66	1, 2, 3, 5, 8, 10, 11, 12, 13, 15	-	High	Rapid	Widespread and probably beyond containment, management should focus on asset protection
Cenchrus setiger	Birdwood Grass	27	21	1. 2. 5, 6, 8, 10, 11, 12, 16	-	High	Rapid	Widespread and probably beyond containment, management should focus on asset protection
Chloris barbata	Purpletop Chloris	1	1	16	-	High	Rapid	Priority for research to determine environmental impact
Cynodon dactylon	Couch	3	-	10	-	High	Rapid	Priority for research to determine environmental impact
Digitaria ciliaris	Crabgrass	-	1	16		Low	Slow	Priority for research to determine environmental impact
Eragrostis minor	Smaller Stinkgrass	1	-	5	-	Not rated	Not rated	Prospect for containment to one or two sub-regions within the Pilbara IBRA region
Flaveria trinervia	Speedy Weed	15	4	8, 10, 12, 14	-	Not rated	Not rated	Suggestion of native or weeds that are considered native-range extenders in the Pilbara region
Malvastrum americanum	Spiked Malvastrum	-	3	8	-	High	Rapid	Priority for research to determine environmental impact

Taxon	Common Name	Number of Locations		VTs	Legislative Significance	Ecological Impact^	Invasiveness^	Risk Assessment – Pilbara Region (Webber et al., 2017)
		Previous Surveys	2023 / 2024 Surveys					
***Opuntia* sp.**	Prickly pears	-	3	11	Declared Pest; (*Opuntia elata* / *Opuntia stricta*) WoNS (*Opuntia* spp.)	High (*Opuntia stricta*)	Rapid (*Opuntia stricta*)	WoNS in the Pilbara Weeds Database where legislation requires management in the Pilbara IBRA region
Passiflora foetida* var. *hispida	Stinking Passion Flower	20	2	10, 12, 14	-	High	Rapid	Widespread and probably beyond containment, management should focus on asset protection
Physalis angulata	Wild Gooseberry	Recorded – number not specified	-	Unknown	-	Unknown	Unknown	Prospect for containment to one or two sub-regions within the Pilbara IBRA region
Trianthema portulacastrum	Giant Pigweed	8	3	10	-	Not rated	Not rated	Priority for research to determine environmental impact
Tribulus terrestris	Caltrop	-	1	6	-	Unknown	Moderate	Prospect for containment to one or two sub-regions within the Pilbara IBRA region

5.2.9 Reassessment of Previous Quadrats

As noted in **Section 3.4.4**, 87 previously established quadrats in the Survey Area were re-sampled during the 2023/2024 surveys, to test the assumption that change to vegetation composition and condition over the time since initial sampling was negligible. As expected, with the exception of changes in in vegetation structure and composition relating to the recent fire that affected the Survey Area 18 months prior to the 2023 survey, negligible change was observed; at all quadrats reassessed, the overwhelming majority of previously recorded taxa (as per Woodman Environmental (2020)) were re-recorded by survey in 2023/2024, and in quadrats that were not affected by fire, very few additional taxa were recorded.

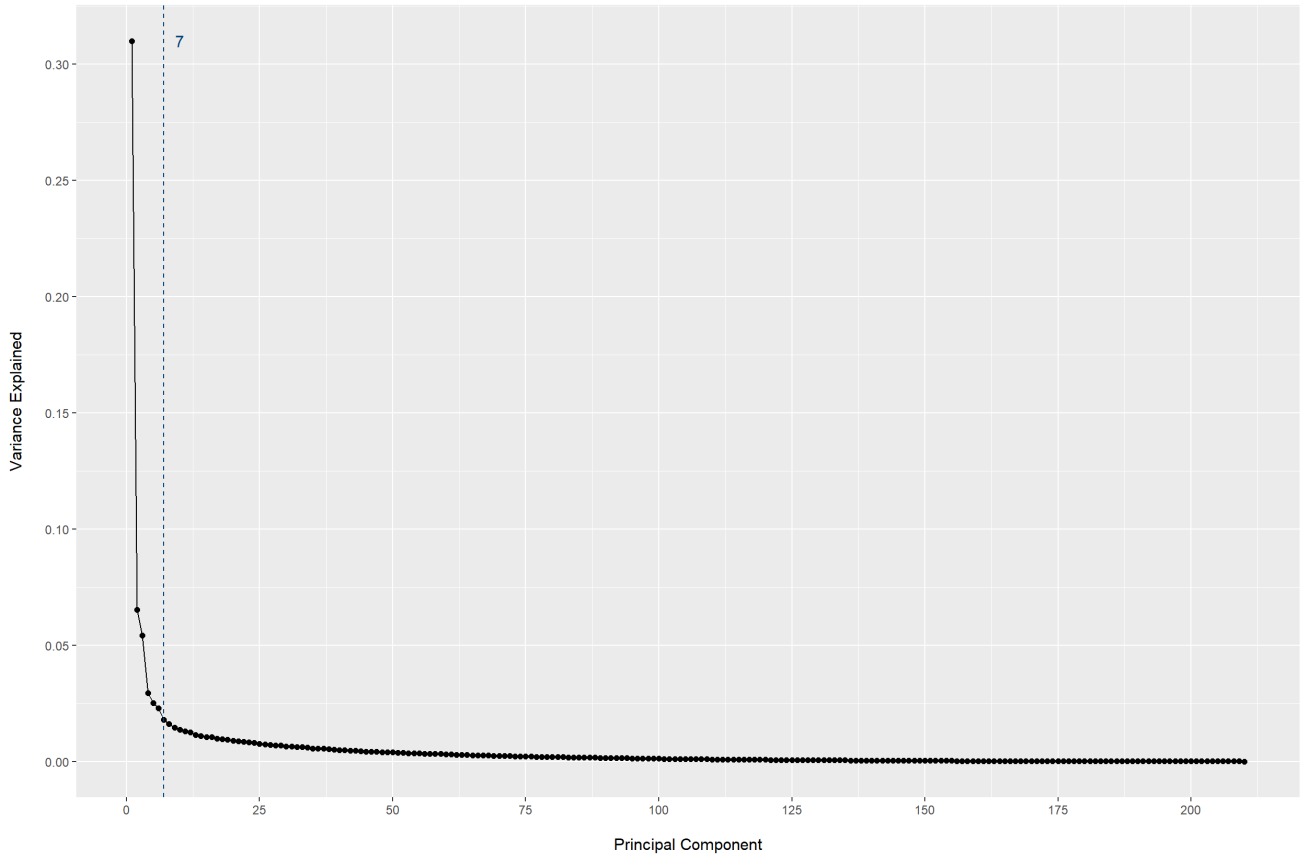
For the majority of reassessed quadrats that had been affected by recent fire, however, numerous additional short-lived 'fire responder' taxa were observed that were not previously recorded at these quadrats. This impacted the taxon composition for quadrats assessed in both 2023 and 2024. This was also expected, as it is well known that such short-term compositional change occurs across Pilbara habitats, with such taxa generally rapidly declining and often altogether disappearing over time. No change in vegetation condition was noted at any of the reassessed quadrats.

It is therefore considered that the existing quadrat dataset from the Survey Area is still current and valid for use in the EIA process. However, as noted in **Section 3.6**, it was considered undesirable to include 2023/2024 re-assessment quadrat data in the quadrat classification analysis, given that re-assessment of all quadrats used in the classification analysis was not undertaken in 2023 / 2024, and introduction of a relatively large volume of data from recently burnt quadrats could influence the classification results.

5.2.10 Floristic Classification Results

PCA determined that seven clusters may be appropriate to capture the majority of the variation in the Survey Area quadrat dataset, as presented in **Graph 5.1**; the 'elbow' of the scree plot in **Graph 5.1** indicates where the eigenvalues level off, and hence the principal components to the left of this point should be retained as significant. The dendrogram (**Appendix J**), cluster plot (**Appendix K**) and taxon group matrix (**Appendix L)** were therefore initially examined at this level, to determine the plausibility of clusters with regard to taxon groups as well as field observations. This process identified 77 quadrats that were considered to have been misclassified, for reasons including being taxon-poor, sampling recently burnt vegetation, disturbed vegetation, or being spatially located within the interface of two VTs and therefore possessing taxa common to both. These quadrats were manually reassigned to other clusters, as indicated in **Appendix L**, based on detailed investigation of their species composition, as well other characteristics including topography, soils, and geographic location.

It was ultimately determined that there were 16 plausible clusters that are considered to represent VTs in the Survey Area; these clusters were resolved at differing levels of similarity. As noted above, 77 quadrats were manually assigned to other VTs; this is discussed further in **Section 5.2.11** below. The clusters, as well as the 77 aforementioned quadrats, are labelled in the dendrogram in **Appendix J**. The initial seven clusters identified by the analysis are also indicated on the dendrogram in **Appendix J**.



Graph 5.1 PCA Scree Plot and Result of Optimal Number of Clusters Analysis (Dashed Line)

As expected (as detailed in **Section 3.6**), the addition of a relatively large volume of quadrat data from a wider geographic area resulted in the classification results differing from those presented in Woodman Environmental (2020) and Umwelt (2024). A number of discrete groups of quadrats that represented VTs from rocky sites (e.g. hills and outwashes) in the Woodman Environmental (2020) and Umwelt (2024) classifications have not been maintained in this current classification, with the current classification results indicating that fewer VTs occur on these landforms. In particular, most quadrats from Woodman Environmental (2020) and Umwelt (2024) VTs 3, 4 and 9 formed a single cluster in this classification, despite VTs 3 and 4 apparently not being especially similar to VT 9 based on the Woodman Environmental (2020) and Umwelt (2024) classifications. Most quadrats from Woodman Environmental (2020) and Umwelt (2024) VTs 5, 6, 8 and 12 also formed a single cluster in this classification. However, a number of discrete groups of quadrats from the Woodman Environmental (2020) and Umwelt (2024) classifications were essentially maintained, e.g. Woodman Environmental (2020) and Umwelt (2024) VTs 1, 2, 10, 14 and 16 (equivalent to VTs 2, 3, 7, 10 and 1 respectively in this classification), with a number of new quadrats classified in these groups. Individual quadrats within this classification dendrogram are annotated with the previous Umwelt (2024) VT codes (**Appendix J**).

All quadrats which have been manually reassigned are denoted in the dendrogram in **Appendix J** and described in **Appendix M**.

5.2.11 Vegetation Types

A total of 16 VTs were defined and mapped within the Survey Area based on the results of the floristic classification analysis and subsequent examination of quadrat data. The VTs defined represent four broad vegetation groups, based on soils and topography (groups are outlined below in dendrogram order):

- Group 1: Low woodlands and shrublands over hummock and occasionally tussock grasslands on low, undulating to flat plains and minor drainage lines with sandy to clay loams with granite or quartz stones (VTs 1, 2, 3, 4, 5, 6, 7, 8 and 9).
- Group 2: Low woodlands and shrublands over hummock and tussock grassland on clay to sandy loams in major drainage lines (VTs 10 and 11).
- Group 3: Shrublands over hummock grasslands on steep to moderate crests and slopes to stony outwash plains influenced by granite, ironstone and/or dolerite (VTs 12, 13 and 14)
- Group 4: Shrublands over hummock grasslands on low-lying flats, stony plains and minor drainage features with likely saline influence (VTs 15 and 16).

Table 5.11 presents a description of each of the VTs, including location, area mapped, sampling regime, significant flora recorded, average taxon richness and a description of variation found within the VT. Indicator taxon analysis is presented in **Appendix N**. The raw sampling data is presented in **Appendix E**, with raw vegetation mapping note data is presented in **Appendix O. Appendix P** presents the resulting taxon-VT matrix. **Figure 5.7** presents an overview of the distribution of these VTs within the Survey Area, while **Appendix Q** presents detailed VT mapping, including locations of quadrats.

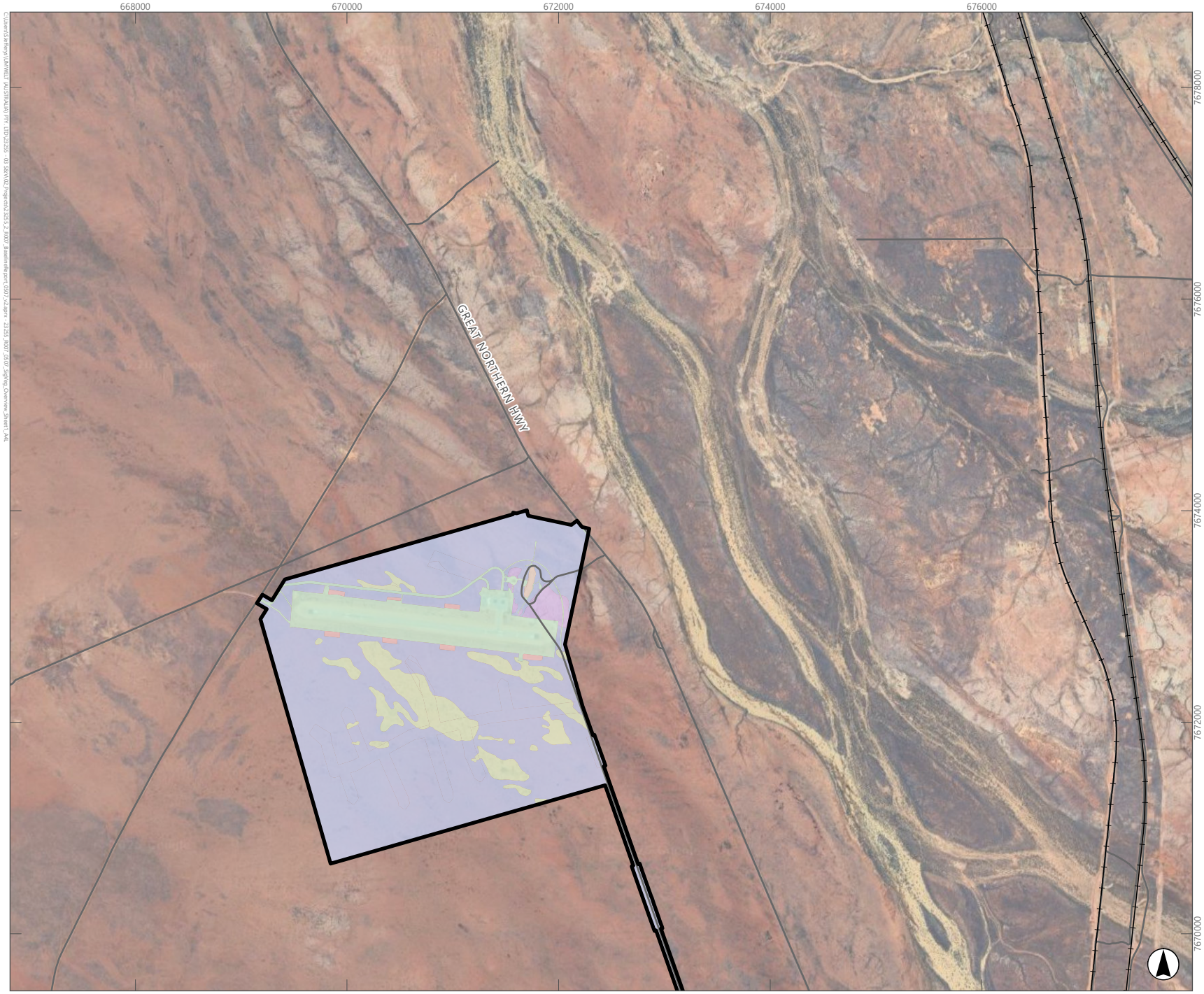


FIGURE 5.7

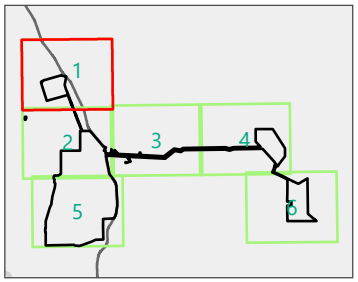
Overview of Vegetation Types of the Survey Area – Sheet 1

Legend

- Survey Area
- Road
- Railway

Vegetation Type

- 1
- 7
- 12
- 13
- C
- R



0 1 2

Kilometres

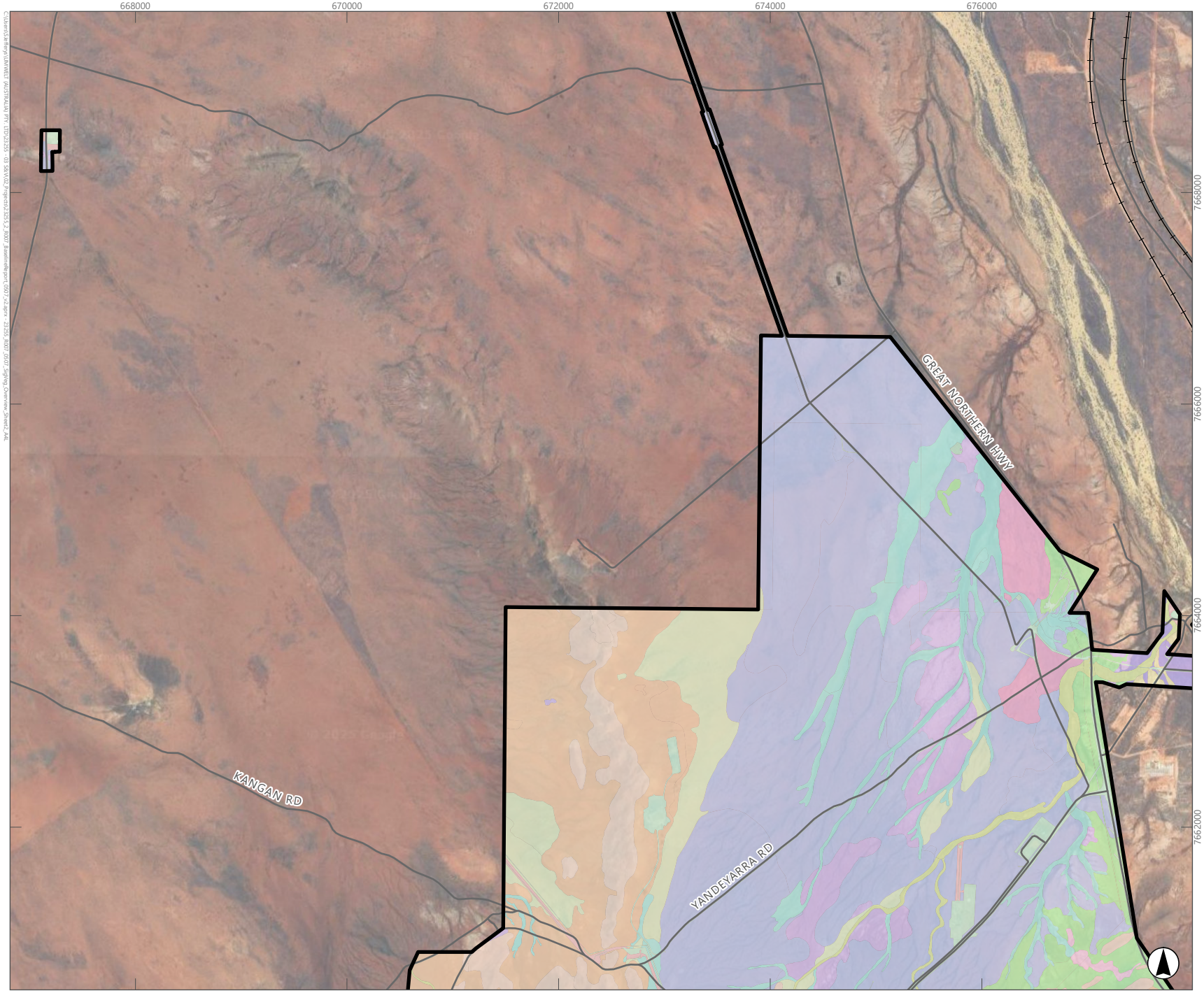
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FIGURE 5.7

Overview of Vegetation Types of the Survey Area – Sheet 2

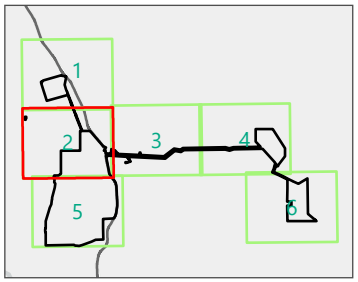


Legend

- Survey Area
- Road
- Railway

Vegetation Type

1	16
2	C
3	R
5	
7	
8	
9	
10	
11	
12	
13	
15	



0 1 2

Kilometres

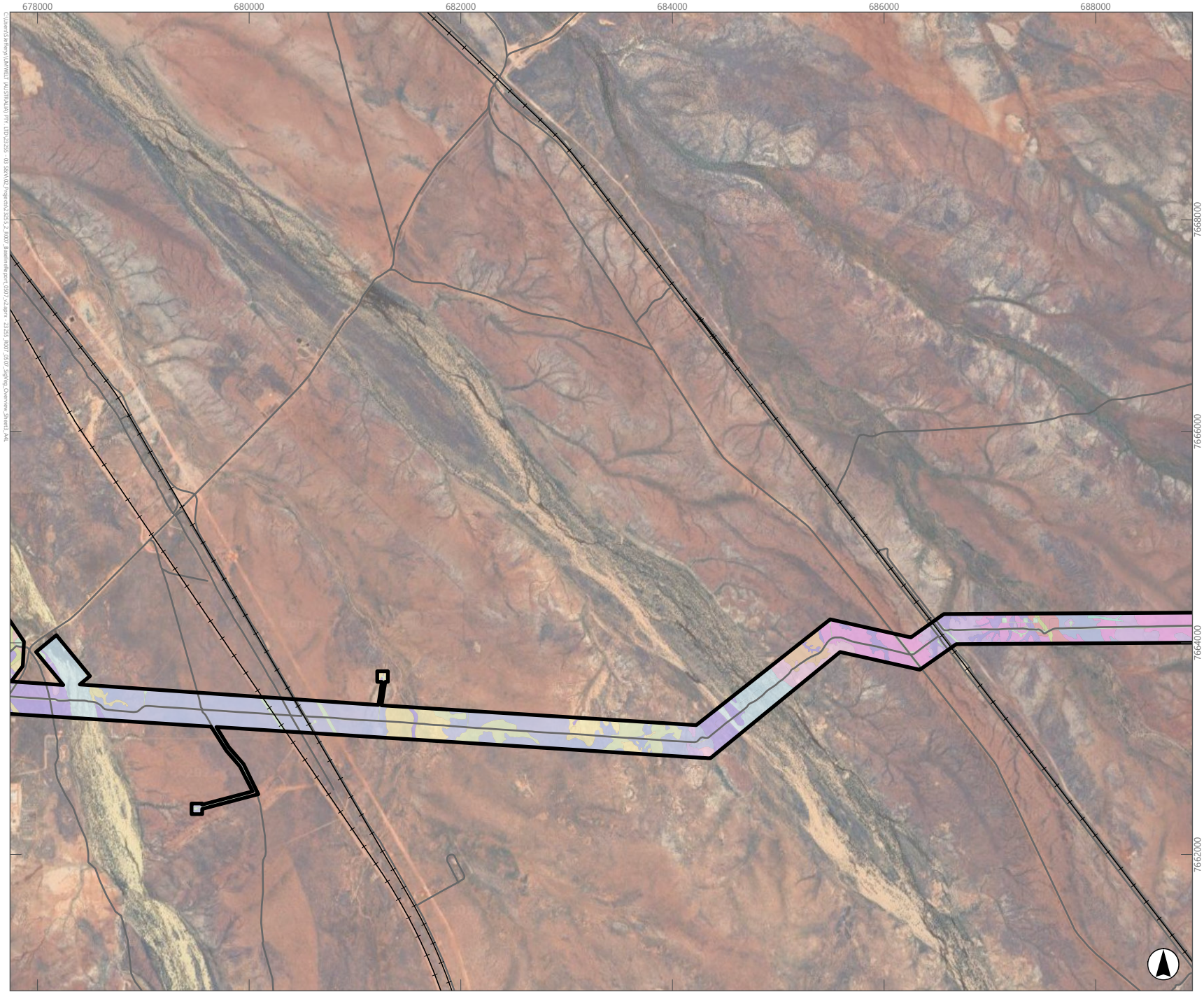
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FIGURE 5.7

Overview of Vegetation Types of the Survey Area – Sheet 3

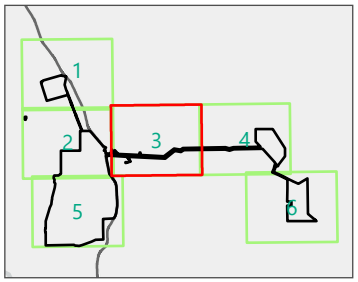


Legend

- Survey Area
- Road
- Railway

Vegetation Type

- 1
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 13
- 16
- C
- R



0 1 2

Kilometres

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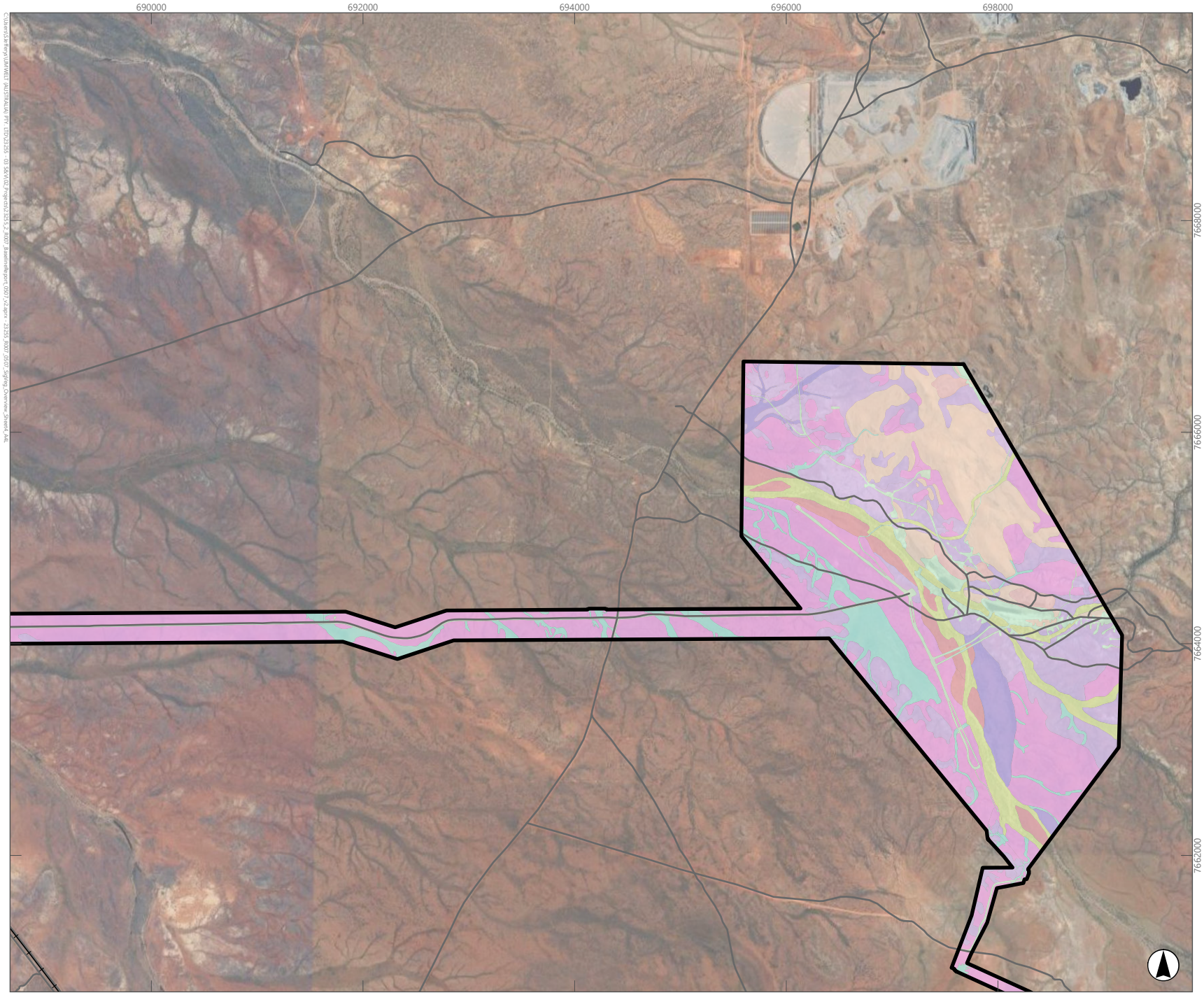


FIGURE 5.7

Overview of Vegetation Types of the Survey Area – Sheet 4

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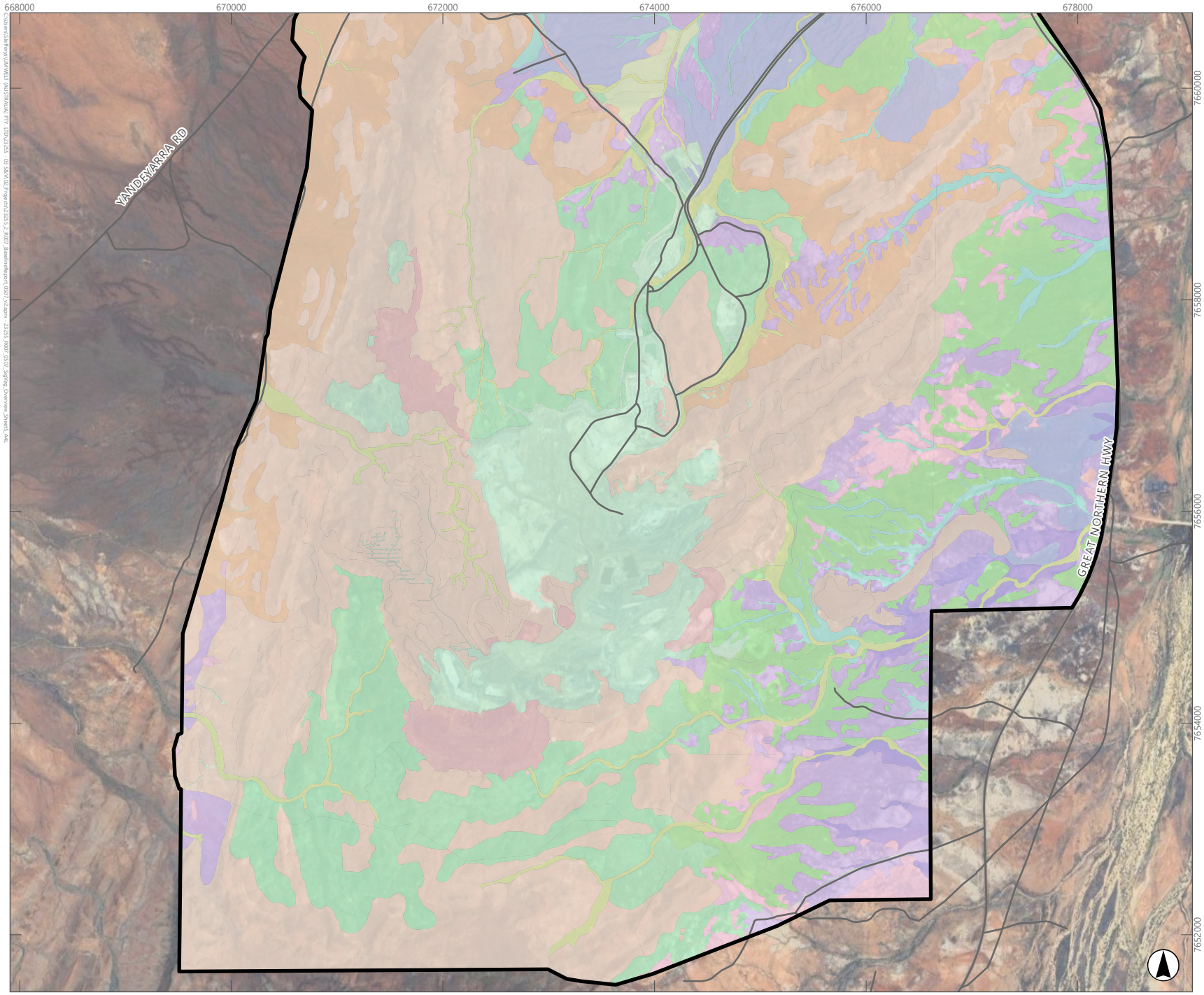


FIGURE 5.7

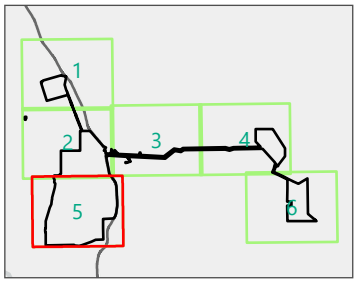
Overview of Vegetation Types of the Survey Area – Sheet 5

Legend

- Survey Area
- Road

Vegetation Type

- 1
- 2
- 3
- 5
- 7
- 8
- 9
- 10
- 12
- 13
- 14
- C
- R



0 1 2

Kilometres

Scale 1:50,000 at A4
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FIGURE 5.7

Overview of Vegetation Types of the Survey Area – Sheet 6

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Vegetation Type

1 Mid sparse to open shrubland dominated by *Acacia ancistrocarpa* over low sparse shrubland dominated by *Bonamia erecta*, *Ptilotus astrolasius* and *Ptilotus calostachyus* over mid hummock grassland of *Triodia lanigera* on red-brown sandy loam or sandy clay, often with quartz or ironstone stones, on plains

2 Tall open to sparse shrubland dominated by *Acacia orthocarpa*, *Acacia ancistrocarpa* and *Acacia acradenia* over low sparse shrubland of mixed species including *Goodenia stobbsiana* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia epactia* on red-brown clay loam with granite, quartz or ironstone stones on colluvial stony plains and low flat-topped rises

3 Tall to mid sparse shrubland of mixed species dominated by *Acacia acradenia*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Indigofera monophylla* and *Goodenia stobbsiana* over low hummock grassland dominated by *Triodia epactia* and/or *Triodia brizoides* on red, brown or red-brown clay loam with metamorphic, ironstone, quartz and occasionally granite stones, occasionally with metamorphosed granite or granite outcropping, on lower slopes and colluvial outwashes of ranges

4 Tall to mid sparse shrubland dominated by *Acacia acradenia* and *Acacia ancistrocarpa* over low sparse shrubland dominated by *Acacia ptychophylla* and/or *Acacia stellaticeps* over low hummock grassland dominated by *Triodia lanigera* and *Triodia wiseana*, often with *Triodia epactia* on red-brown clay loam on stony undulating plains and outwashes of ranges

5 Low isolated trees of *Corymbia hamersleyana* over tall open to sparse shrubland dominated by *Acacia tumida* var. *pilbarensis*, *Acacia ancistrocarpa* and *Acacia acradenia* over low open to sparse shrubland of mixed species including *Bonamia erecta*, *Corchorus parviflorus* and *Indigofera monophylla* over low hummock and tussock grassland dominated by *Chrysopogon fallax*, *Triodia epactia* and occasionally *Triodia lanigera* on red, brown or red-brown sandy or clay loam with colluvial stones in minor drainage features including on flats and in small creeks

6 Low isolated trees of *Corymbia hamersleyana* over tall sparse to open shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia pyrifolia* var. *pyrifolia* over low sparse shrubland of mixed species including *Tephrosia rosea* var. *clementii*, *Indigofera monophylla* and *Corchorus lasiocarpus* subsp. *lasiocarpus* over mid sparse to open hummock grassland of *Triodia epactia* on brown or red-brown sandy loam or clay loam in stony drainage lines and on flood plains

7 Tall to mid open to sparse shrubland dominated by *Acacia ancistrocarpa* and occasionally *Acacia tumida* var. *pilbarensis*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including by *Bonamia erecta*, *Indigofera monophylla* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia schinzii* and/or *Triodia epactia* on red, brown or red-brown sandy or clay loam, often with quartz or ironstone stones, on plains

8 Low isolated trees of *Corymbia hamersleyana* over tall isolated shrubs to sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia trachycarpa* low sparse to open shrubland of *Acacia stellaticeps* over low open hummock grassland to hummock grassland dominated by *Triodia epactia* and occasionally *Triodia lanigera* on red-brown or orange sandy clay loam in minor drainage lines, on drainage line edges and on floodplains

9 Isolated low trees dominated by *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia orthocarpa, Grevillea wickhamii* subsp. *hispidula* and often *Acacia maitlandii* and *Acacia tumida* var. *pilbarensis* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Dampiera candicans*, *Goodenia stobbsiana*, *Indigofera monophylla* and *Scaevola browniana* subsp. *browniana* over low hummock grassland dominated by *Triodia epactia* and occasionally *Triodia brizoides* or *Triodia lanigera* on orange, brown or red-brown sandy or clay loam with granite and quartz stones over granite outcropping on undulating plains or low rises

10 Low open woodland to isolated trees dominated by *Eucalyptus victrix* and/or *Corymbia hamersleyana* over tall open to sparse shrubland of mixed species dominated by *Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis* and *Melaleuca linophylla* over mid to low open to sparse shrubland of mixed species including *Cajanus pubescens*, *Indigofera monophylla*, *Tephrosia rosea* var. *clementii*, *Corchorus parviflorus* and *Jasminum didymum* subsp. *lineare* over low tussock and hummock grassland to open tussock and hummock grassland of mixed species dominated by *Triodia epactia*, *Cenchrus ciliaris*, *Chrysopogon fallax*, *Cymbopogon ambiguus* and *Eriachne tenuiculmis* on red or brown clay or sandy loam, usually with colluvial stones, in major creeks

11 Mid to low open woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca argentea* over tall open shrubland of *Melaleuca glomerata*, *Melaleuca linophylla*, *Acacia trachycarpa* and*Acacia ampliceps* over mid to low open to sparse shrubland, forbland and sedgeland of mixed species including *Crotalaria cunninghamii*, *Cyperus ixiocarpus*, *Afrohybanthus aurantiacus* and *Nellica maderaspatensis* over low sparse hummock grassland of *Triodia epactia* over low tussock grassland of *Cenchrus ciliaris* on orange / light brown sand with colluvial stones in major drainage channels in the Turner River

12 Low isolated trees of *Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia hamersleyana* over mid sparse shrubland to isolated shrubs dominated by *Acacia acradenia, Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Indigofera monophyla* and *Tribulus suberosus* over low hummock grassland dominated by *Triodia wiseana*, *Triodia epactia* and occasionally *Triodia brizoides* on red, brown or red-brown clay loam with ironstone, metamorphosed granite or occasionally dolerite or quartz stones over ironstone or metamorphosed granite outcropping on cliffs, ridges and crests and upper to mid slopes of ranges

13 Low open woodland to isolated trees of *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia inaequilatera, Acacia bivenosa* and Acacia *acradenia* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* and occasionally *Triodia angusta* on red, red-brown or light brown clay loam with calcrete, quartz and metamorphosed granite stones, occasionally over calcrete outcropping, on colluvial outwashes of ranges and colluvial stony plains

14 Tall to mid sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia orthocarpa* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* on brown, red or red-brown clay loam with dolerite, calcrete and quartz stones, often with dolerite or granite outcropping, on low hills

FIGURE 5.7

LEGEND: Overview of Vegetation Types of the Survey Area

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), Umwelt (2024), MRL (2024)

Vegetation Type

15 Mid isolated shrubs of *Acacia synchronicia* over low isolated chenopod shrubs of *Maireana georgei* over mid hummock grassland of *Triodia longiceps* over low sparse forbland, tussock grassland and sedgeland of mixed species including *Portulaca oleracea*, *Ptilotus exaltatus*, *Cynodon prostratus*, *Sporobolus australasicus* and *Fimbristylis dichotoma* on red clay loam with colluvial stones on slightly saline plains and flats

16 Low isolated shrubs to sparse shrubland of *Acacia stellaticeps* and *Pluchea ferdinandi-muelleri* over low open hummock grassland to hummock grassland dominated by *Triodia angusta*, *Triodia secunda* and/or *Triodia longiceps* over low sparse forbland and tussock grassland of mixed species including *Trianthema triquetrum*, *Sporobolus australasicus*, *Eriachne obtusa* and *Calandrinia stagnensis* on red-brown or brown sandy clay on low lying, slightly saline plains

C Cleared land

R Rehabilitated land

C:\Users\Sarah.Reyne\UMWELT (AUSTRALIA) PTY LTD\23255 - 03 SWA\02 Projects\23255.2_R007 Baseline\Report_0507\24-apr\x - 23255_R007_0507_SkyVeg Overview_LEGEND2.A4L

FIGURE 5.7

LEGEND: Overview of Vegetation Types of the Survey Area

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Table 5.11 Summary of Vegetation Types Described in the Survey Area

VT	Summary	Photograph
1	**Description**: Mid sparse to open shrubland dominated by *Acacia ancistrocarpa* over low sparse shrubland dominated by *Bonamia erecta*, *Ptilotus astrolasius* and *Ptilotus calostachyus* over mid hummock grassland of *Triodia lanigera* on red-brown sandy loam or sandy clay, often with quartz or ironstone stones, on plains. **Location**: Mapped on stony plains throughout the central to north-western extent of the Survey Area (**Appendix Q**) **Area mapped:** 2,280 ha (17.3% of Survey Area) **Sampling:** 47 quadrats (HER012, HER022, TRH060, WD10, WD14, WD51, WD57, WD61, WD67, WD71, WD75, WDD03, WDD11, WDD12, WDD13, WDD17, WDK18, WDKX03, WDKX05, WDMX01, WDMX02, WDMX04, WOC07, WOC21, WOC25, WOD28, WOD29, WOD32 , WOD36, WOD37, WOD38, WOE06, WOE07, WOE08, WOE09, WOE10, WOE15, WOE19, WOM28, WOM32, WOM34, WOM35, WOM36, WOM37, WOM38, WOS12, WOS13) **Average Taxon Richness per Quadrat:** 14.0 ± 4.9 **Indicator Taxa**: *Acacia ancistrocarpa, Corymbia zygophylla* **Significant Taxa:** *Euphorbia clementii* (P3) (preferred habitat), *Euploca mutica* (P3) (preferred habitat), *Polymeria* sp.(potentially undescribed), *Triodia chichesterensis* (P3) (preferred habitat) **Variation and Similar VTs**: Occasionally there were isolated trees of *Corymbia zygophylla* or *Corymbia hamersleyana* (**Photo 5.13**). A lower stratum of *Acacia stellaticeps* was present in some instances. *Triodia lanigera* dominated almost all occurrences; however occasionally *Triodia epactia* was co-dominant. Floristically, VT 1 is most similar to VT 2; VT 1 most obviously differs in the absence of *Acacia orthocarpa* in the tall shrub stratum. VT 7 is also similar; however, VT 7 has higher taxon diversity, particularly low shrubs.	 **Photo 5.12: VT 1 (Quadrat WOK16)**  **Photo 5.13: VT 1 variant with *Corymbia zygophylla* / *Corymbia hamersleyana* tree stratum (Quadrat WOD37)**

VT	Summary	Photograph
2	**Description**: Tall open to sparse shrubland dominated by *Acacia orthocarpa*, *Acacia ancistrocarpa* and *Acacia acradenia* over low sparse shrubland of mixed species including *Goodenia stobbsiana* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia epactia* on red-brown clay loam with granite, quartz or ironstone stones on colluvial stony plains and low flat-topped rises. **Location**: Mapped on stony plains and low rises in the western extent of the Survey Area adjacent to Wodgina minesite (**Appendix Q**) **Area mapped:** 787.8 ha (6.0% of Survey Area) **Sampling:** 27 quadrats (GNH16, GNH40, GNH41, TRH062, TRH067, WD02, WD08, WD18, WD26, WD30, WD60, WD62, WD69, WD72, WD76, WDK07, WDK12, WDK14, WDM01, WDM02, WDM07, WOE28, WOE30, WOJ32, WOK18, WOM29, WOM40) **Average Taxon Richness per Quadrat:** 15.5 ± 4.8 **Indicator Taxa**: *Acacia spondylophylla, Bonamia pilbarensis, Codonocarpus cotinifolius, Goodenia stobbsiana, Triodia lanigera* **Significant Taxa:** *Euphorbia clementii* (P3), *Euploca mutica* (P3), *Goodenia obscurata* (P3), *Triodia chichesterensis* (P3) **Variation and Similar VTs**: The *Acacia*-dominated overstorey component was variable, ranging from comprising a relatively minor component (see **Photo 5.15**), to being more dominant (see **Photo 5.14**). *Acacia orthocarpa* and *A. ancistrocarpa* rarely co-dominated in any quadrat. *Triodia lanigera* was almost always dominant in the hummock grassland stratum, however occasionally *Triodia epactia*, and rarely *Triodia chichesterensis*, dominated or co-dominated. VT 2 is considered to be most similar to VT 1, see under that VT for discussion.	 **Photo 5.14: VT 2 (Quadrat WD69)**  **Photo 5.15: VT 2 (Quadrat WDK07)**

VT	Summary	Photograph
3	**Description**: Tall to mid sparse shrubland of mixed species dominated by *Acacia acradenia*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Indigofera monophylla* and *Goodenia stobbsiana* over low hummock grassland dominated by *Triodia epactia* and/or *Triodia brizoides* on red, brown or red-brown clay loam with metamorphic, ironstone, quartz and occasionally granite stones, occasionally with metamorphosed granite or granite outcropping, on lower slopes and colluvial outwashes of ranges and occasionally on low flat-topped rises. **Location**: Mapped on lower slopes and outwashes predominantly in the western extent of the Survey Area, adjacent to Wodgina minesite (**Appendix Q**) **Area mapped:** 952.8 ha (7.2% of Survey Area) **Sampling:** 27 quadrats (HER001, HER003, HER014, HER017, HER050, HER051, HER057, HER061, HER062, HER066, WD24, WD32, WD39, WD40, WD45, WD49, WDD01, WDD04, WDD06, WDD09, WDD21, WDK17, WDM13, WDM16, WDM17, WDM19, WOC11) **Average Taxon Richness per Quadrat**: 16.0 ± 5.3 **Indicator Taxa**: *Acacia acradenia*, *Triodia brizoides* **Significant Taxa:** *Euphorbia clementii* (P3) (preferred habitat), *Terminalia supranitifolia* (P3), *Triodia chichesterensis* (P3), *Vigna triodiophila* (P3) **Variation and Similar VTs**: The *Acacia*-dominated overstorey component was variable, ranging from comprising a relatively minor component, to being prominent. *Acacia acradenia* was almost always present and almost always dominant or co-dominant, however *Acacia tumida* var. *pilbarensis* was dominant at some locations. *Triodia epactia* was almost always dominant or co-dominant in the hummock grassland stratum, with *Triodia brizoides* often co-dominant or dominant; rarely, *Triodia lanigera* or *Triodia wiseana* dominated or co-dominated. VT 3 is considered to be most similar to VT 4. VT 4 differs in that it generally occurs on undulating plains rather than lower slopes, is generally dominated by *Triodia lanigera* and/or *Triodia wiseana* in the hummock grassland stratum, and also tends to be more species poor. VT 3 also has a greater diversity of species in the mid and low shrubland stratums.	 **Photo 5.16: VT 3 (Quadrat HER066)**  **Photo 5.17: VT 3 (Quadrat WD32)**

VT	Summary	Photograph
4	**Description**: Tall to mid sparse shrubland dominated by *Acacia acradenia* and *Acacia ancistrocarpa* over low sparse shrubland dominated by *Acacia ptychophylla* and/or *Acacia stellaticeps* over low hummock grassland dominated by *Triodia lanigera* and *Triodia wiseana*, often with *Triodia epactia* on red-brown clay loam on stony undulating plains and outwashes of ranges. **Location**: Mapped on stony undulating plains and outwashes of ranges in the eastern extent of the Survey Area (**Appendix Q**) **Area mapped:** 1,307.4 ha (9.9% Survey Area) **Sampling:** 26 quadrats (WOC01, WOC04, WOC06, WOD02, WOD16, WOD25, WOD27, WOJ06, WOJ07, WOJ08, WOJ16, WOJ17, WOK02, WOK09, WOK16, WOM01, WOM02, WOM03, WOM09, WOM11, WOM14, WOM15, WOM17, WOM21, WOM22, WOM26) **Average Taxon Richness per Quadrat:** 11.7 ± 4.2 **Indicator Taxa**: *Acacia ptychophylla* **Significant Taxa:** *Triodia basitricha* (P3), *Triodia chichesterensis* (P3). **Variation and Similar VTs**: This VT was relatively consistent; however, the lower stratum of *Acacia ptychophylla* / *Acacia stellaticeps* were absent in some areas. VT 4 is considered to be most similar to VT 3, see under that VT for discussion.	 **Photo 5.18: VT 4 (Quadrat WOJ08)**  **Photo 5.19: VT 4 Variation with *Acacia ptychophylla* / *Acacia stellaticeps* stratum absent (Quadrat WOD16)**

VT	Summary	Photograph
5	**Description**: Low isolated trees of *Corymbia hamersleyana* over tall open to sparse shrubland dominated by *Acacia tumida* var. *pilbarensis*, *Acacia ancistrocarpa* and *Acacia acradenia* over low open to sparse shrubland of mixed species including *Bonamia erecta*, *Corchorus parviflorus* and *Indigofera monophylla* over low hummock and tussock grassland dominated by *Chrysopogon fallax*, *Triodia epactia* and occasionally *Triodia lanigera* on red, brown or red-brown sandy or clay loam with colluvial stones in minor drainage features including on flats and in small creeks. **Location**: Mapped in minor drainage features in the western and eastern extent of the Survey Area (**Appendix Q**) **Area mapped:** 431.9 ha (3.3% of Survey Area) **Sampling:** 37 quadrats (GNH17, HER011, HER019, HER021, HER024, HER032, WD16, WD28, WD53, WD63, WD82, WD91, WDD16, WDK16, WDK19, WDKX04, WDKX06, WDM08, WDM12, WOC02, WOC03, WOC05, WOC22, WOC24, WOC27, WOD05, WOD20, WOD41, WOE23, WOE29, WOJ12, WOK05, WOK11, WOM04, WOM08, WOM27, WOM31) **Average Taxon Richness per Quadrat:** 35.6 ± 13.7 **Indicator Taxa**: *Aristida holathera* var. *holathera, Chrysopogon fallax, Corymbia hamersleyana, Hibiscus sturtii* var. *campylochlamys, Isotropis atropurpurea, Neurachne muelleri, Seringia nephrosperma* **Significant Taxa:** *Euphorbia clementii* (P3) (preferred habitat), *Goodenia obscurata* (P3), *Polymeria* sp.(potentially undescribed), *Triodia basitricha* (P3), *Triodia chichesterensis* (P3) **Variation and Similar VTs**: The tree and tall shrub strata were relatively consistent compositionally, however structurally the tall shrub stratum was quite variable; this appears to be related to the amount of drainage water the areas receive, with the shrubland generally densest at the wettest sites (**Photo 5.21**). This was also the case for the low shrub stratum; however, this stratum varied greatly in composition, and was generally not dominated by any one taxon. The lower stratum was also relatively variable; often it was dominated by *Triodia epactia*, or more rarely *Triodia lanigera*; however, tussock grasses such as *Chrysopogon fallax* were also occasionally co-dominant and rarely dominant. VT 5 is most similar to VT 6, with VT 6 occurring in alluvial floodout zones only in the eastern extent of the Survey Area. VT 5 is also more species rich, particularly for the wetter sites, and the shrub strata differ in composition.	 **Photo 5.20: VT 5 (Quadrat WOE23)**  **Photo 5.21: VT 5 1 Variation with dense shrubland stratum (Quadrat WOC05)**

6	**Description** Low isolated trees of *Corymbia hamersleyana* over tall sparse to open shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia pyrifolia* var. *pyrifolia* over low sparse shrubland of mixed species including *Tephrosia rosea* var. *clementii*, *Indigofera monophylla* and *Corchorus lasiocarpus* subsp. *lasiocarpus* over mid sparse to open hummock grassland of *Triodia epactia* on brown or red-brown sandy loam or clay loam in stony drainage lines and on flood plains. **Location**: Mapped in floodout zones in the central to eastern extent of the Survey Area (**Appendix Q**) **Area mapped:** 117.5 ha (0.9% of Survey Area) **Sampling:** 11 quadrats (WOC08, WOD01, WOD15, WOD19, WOJ13, WOK17, WOM13, WOM18, WOM19, WOM20, WOM25) **Average Taxon Richness per Quadrat**: 30.5 ± 6.8 **Indicator Taxa**: *Acacia adoxa* var. *adoxa, Corchorus laniflorus, Corchorus lasiocarpus* subsp. *lasiocarpus, Gossypium robinsonii, Grevillea wickhamii / Grevillea wickhamii* subsp. *hispidula / Grevillea wickhamii* subsp. *macrodonta, Indigofera monophylla, Pentalepis trichodesmoides* subsp. *trichodesmoides, Petalostylis labicheoides, Tephrosia rosea* var. *clementii, Trigastrotheca molluginea, Waltheria virgata* **Significant Taxa:** *Polymeria* sp.(potentially undescribed) **Variation and Similar VTs**: The tree and tall shrub strata were relatively consistent compositionally. The tall shrub stratum and lower shrub stratum was quite variable depending on the amount of water the areas receive (**Photo 5.23**), although the low shrub stratum varied in species composition (as per VT 5). The lower stratum was generally dominated by *Triodia epactia*; however, in some cases *Triodia lanigera* was dominant. *Chrysopogon fallax* was also occasionally co-dominant in the wetter sites. VT 6 is considered to be most similar to VT 5, see under that VT for discussion.	 **Photo 5.22: VT 6 (Quadrat WOD15)**  **Photo 5.23: VT 6 Variation with dense shrubland stratum (Quadrat WOK17)**

VT	Summary	Photograph
7	**Description**: Tall to mid open to sparse shrubland dominated by *Acacia ancistrocarpa* and occasionally *Acacia tumida* var. *pilbarensis*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including by *Bonamia erecta*, *Indigofera monophylla* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia schinzii* and/or *Triodia epactia* on red, brown or red-brown sandy or clay loam, often with quartz or ironstone stones, on plains. **Location**: Mapped on plains in the central to north-western extent of the Survey Area (**Appendix Q**) **Area mapped:** 324.9 ha (2.5% of Survey Area) **Sampling:** 14 quadrats (HER069, HER070, WDD02, WDD08, WDD10, WDD14, WDD18, WDD19, WDD24, WOD30, WOD31, WOD33, WOE17, WOS14) **Average Taxon Richness per Quadrat:** 27.4 ± 11.7 **Indicator Taxa**: *Arivela uncifera, Euploca mutica* (P3)*, Euploca vestita, Goodenia microptera, Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)*, Triodia schinzii* **Significant Taxa:** *Euphorbia clementii* (P3) (preferred habitat), *Euploca mutica* (P3) (preferred habitat), *Triodia chichesterensis* (P3) **Variation and Similar VTs**: Much of the variation was related to the relative stoniness of the occurrence, with some areas predominantly stony, and others completely sandy. An upper stratum of low isolated trees of *Corymbia hamersleyana* was present in some occurrences (**Photo 5.25**). The tall shrub stratum was generally sparse on sandy sites and open on stony sites, however the composition was quite uniform across most sites. *Triodia lanigera* dominated or co-dominated almost all occurrences, especially occurrences that were stony; occasionally *Triodia epactia* and/or *Triodia schinzii* dominated, but this was almost always at sandy sites. Floristically similar to VT 8, see under that VT for discussion. Also similar to VT 1 – see under that VT for discussion.	 **Photo 5.24: VT 7 (Quadrat WOE17)**  **Photo 5.25: VT 7 Variation with *Corymbia hamersleyana* upper stratum (Quadrat WDD14)**

VT	Summary	Photograph
8	**Description**: Low isolated trees of *Corymbia hamersleyana* over tall isolated shrubs to sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia trachycarpa* low sparse to open shrubland of *Acacia stellaticeps* over low open hummock grassland to hummock grassland dominated by *Triodia epactia* and occasionally *Triodia lanigera* on red-brown or orange sandy clay loam in minor drainage lines, on drainage line edges and on floodplains. **Location**: Mapped on minor drainage lines, drainage line edges and floodplains in the central and eastern extent of the Survey Area and adjacent to the Turner River in the west (**Appendix Q**) **Area mapped:** 191.5 ha (1.5% of Survey Area) **Sampling:** 18 quadrats (WD74, WDM05, WOC10, WOC19, WOD09, WOE01, WOE02, WOE03, WOE05, WOE13, WOE25, WOJ04, WOJ25, WOJ26, WOJ28, WOJ35, WOK04, WOS07) **Average Taxon Richness per Quadrat:** 31.4 ± 13.7 **Indicator Taxa**: *Acacia sphaerostachya, Acacia stellaticeps, Bonamia alatisemina, Bonamia erecta, Eragrostis eriopoda, Eriachne helmsii, Goodenia forrestii, Hakea lorea subsp. lorea, Panicum australiense var. australiense, Pluchea ferdinandi-muelleri, Pluchea tetranthera* **Significant Taxa:** *Corchorus* aff. *incanus* (potentially undescribed), *Euphorbia clementii* (P3), *Euploca mutica* (P3), *Triodia chichesterensis* (P3) **Variation and Similar VTs**: The tall shrub stratum was variable in terms of dominant species and absent in some areas, with the low shrub stratum of *Acacia stellaticeps* also absent in some areas (**Photo 5.27**). VT 8 is considered to be most similar to VT 7. VT 8 differs in that it generally occurs in minor drainage features or more commonly adjacent to more major drainage lines, and consequently tends to be more species rich, and dominated by *Triodia epactia* in the hummock grassland stratum, and often *Acacia trachycarpa* in the tall shrubland stratum.	 **Photo 5.26: VT 8 (Quadrat WOJ25)**  **Photo 5.27: VT 8 Variation with *Acacia stellaticeps* low shrub stratum absent (Quadrat WOJ28)**

VT	Summary	Photograph
9	**Description**: Isolated low trees dominated by *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia orthocarpa, Grevillea wickhamii* subsp. *hispidula* and often *Acacia maitlandii* and *Acacia tumida* var. *pilbarensis* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Dampiera candicans*, *Goodenia stobbsiana*, *Indigofera monophylla* and *Scaevola browniana* subsp. *browniana* over low hummock grassland dominated by *Triodia epactia* and occasionally *Triodia brizoides* or *Triodia lanigera* on orange, brown or red-brown sandy or clay loam with granite and quartz stones over granite outcropping on undulating plains or low rises. **Location**: Mapped on undulating plains or low rises in association with granite in the south-western, central and central extent of the Survey Area (**Appendix Q**) **Area mapped:** 179.4 ha (1.4% of Survey Area) **Sampling:** 19 quadrats (WD04, WD33, WD37, WD68, WD79, WD81, WD85, WD94, WDK08, WDK09, WDM09, WOC12, WOC13, WOD43, WOE26, WOE27, WOJ31, WOJ34, WOJ37) **Average Taxon Richness per Quadrat:** 35.2 ± 11.6 **Indicator Taxa**: *Acacia maitlandii, Acacia orthocarpa, Aristida contorta, Fimbristylis dichotoma, Scaevola browniana* subsp. *browniana, Tephrosia virens, Tripogonella loliiformis* **Significant Taxa:** *Euphorbia clementii* (P3), *Triodia chichesterensis* (P3) **Variation and Similar VTs**: Although the tree stratum of *Corymbia hamersleyana* was not consistently present, a consistent tall shrubland stratum was present. *Acacia orthocarpa* and *Grevillea wickhamii* subsp. *hispidula* were almost always present and co-dominant, with *Acacia maitlandii* and *Acacia tumida* var. *pilbarensis* also regularly dominating. The low shrub stratum was consistently present but was compositionally variable. Generally *Triodia epactia* dominated, although other *Triodia* species occasionally co-dominated. This VT also sometimes had a defined forb stratum that was relatively species-rich, however this was usually only at locations where there was a relatively large amount of granite outcropping. This VT is not especially similar to any other VTs.	 **Photo 5.28: VT 9 (Quadrat WD85)**  **Photo 5.29: VT 9 (Quadrat WOE26)**

VT	Summary	Photograph
10	**Description:** Low open woodland to isolated trees dominated by *Eucalyptus victrix* and/or *Corymbia hamersleyana* over tall open to sparse shrubland of mixed species dominated by *Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis* and *Melaleuca linophylla* over mid to low open to sparse shrubland of mixed species including *Cajanus pubescens*, *Indigofera monophylla*, *Tephrosia rosea* var. *clementii*, *Corchorus parviflorus* and *Jasminum didymum* subsp. *lineare* over low tussock and hummock grassland to open tussock and hummock grassland of mixed species dominated by *Triodia epactia*, *Cenchrus ciliaris*, *Chrysopogon fallax*, *Cymbopogon ambiguus* and *Eriachne tenuiculmis* on red or brown clay or sandy loam, usually with colluvial stones, in major creeks. **Location**: Mapped in major creeks throughout the west and east extent of the Survey Area (**Appendix Q**) **Area mapped**: 392.8 ha (3.0% of Survey Area) **Sampling:** 37 quadrats (GNH18, HER002, HER006, HER013, HER020, HER023, HER025, HER026, HER027, HER030, HER034, HER037, HER038, HER045, HER056, TRH058, TRH064, TRH065, WD15, WD25, WD64, WD73, WD90, WDM06, WDM25, WOC17, WOD21, WOJ02, WOJ11, WOJ36, WOK01, WOK07, WOK12, WOK15, WOK21, WOM12, WOM24) **Average Taxon Richness per Quadrat:** 45.1 ± 11.3 **Indicator Taxa**: *Abutilon* aff. *hannii, Acacia pyrifolia* var. *pyrifolia, Acacia tumida* var. *pilbarensis, Cajanus cinereus / Cajanus pubescens, Cymbopogon ambiguus, Enneapogon lindleyanus, Eriachne tenuiculmis, Eucalyptus victrix, Gossypium australe, Jasminum didymum* subsp. *lineare, Nellica maderaspatensis, Paspalidium tabulatum, Polymeria ambigua / Polymeria mollis, Pterocaulon sphacelatum, Rhynchosia minima, Themeda triandra* **Significant Taxa:** *Euphorbia clementii* (P3), *Polymeria* sp. (potentially undescribed), *Ptilotus mollis* (P4), *Terminalia supranitifolia* (P3), *Triodia chichesterensis* (P3), *Vigna triodiophila* (P3) **Variation and Similar VTs**: A tree stratum was almost always present, with *Eucalyptus victrix* in particular dominating the larger drainage lines, often with *Corymbia hamersleyana*; in smaller drainage lines the latter tended to dominate. Rarely, no trees were present – in particular, drainage lines higher in the ranges had no trees. The tall shrub strata varied in density, however, was compositionally quite consistent, although *Melaleuca linophylla* was often very sparse or absent, and in sandier drainage lines, occasionally *Acacia trachycarpa* co-dominated. The lower shrub stratum was always present but variable in both structure and composition, with no one taxon generally dominating.	 **Photo 5.30: VT 10 (Quadrat WOK01)**  **Photo 5.31: VT 10 Variation with *Corymbia hamersleyana* dominating upper stratum (Quadrat WOK12)**

VT	Summary	Photograph
	The grassland stratum was similar, with tussock grasses such as *Chrysopogon fallax*, *Cymbopogon ambiguus* and *Eriachne tenuiculmis* often dominating, sometimes with *Triodia epactia*, although in some cases the latter was very sparse. This VT also occasionally had a diverse forb stratum, generally in larger drainage lines where more water collects. This VT is most floristically most similar to VT 11. VT 11 differs in that it tends to occur in more major channels where sandy soils predominate, with taxa preferring higher water flows more common such as *Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca glomerata*.	
11	**Description**: Mid to low open woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca argentea* over tall open shrubland of *Melaleuca glomerata*, *Melaleuca linophylla*, *Acacia trachycarpa* and *Acacia ampliceps* over mid to low open to sparse shrubland, forbland and sedgeland of mixed species including *Crotalaria cunninghamii*, *Cyperus ixiocarpus*, *Afrohybanthus aurantiacus* and *Nellica maderaspatensis* over low sparse hummock grassland of *Triodia epactia* over low tussock grassland of *Cenchrus ciliaris* on orange / light brown sand with colluvial stones in major drainage channels in the Turner River. **Location**: Mapped in major drainage channels within the Turner River in the central extent of the Survey Area (**Appendix Q**). **Area mapped:** 34.1 ha (0.3% of Survey Area) **Sampling:** 4 quadrats (WOC14, WOE04, WOS03, WOS22) **Average Taxon Richness per Quadrat:** 44.8 ± 5.3 **Indicator Taxa**: *Acacia ampliceps, Acacia coriacea* subsp. *pendens, Acacia trachycarpa, Afrohybanthus aurantiacus, Atalaya hemiglauca, Cassytha filiformis, Corynotheca pungens, Crotalaria cunninghamii, Cucumis variabilis, Cyperus blakeanus, Cyperus ixiocarpus, Cyperus vaginatus, Digitaria brownii, Eragrostis speciosa, Eriachne benthamii, Eriachne obtusa, Eucalyptus camaldulensis* subsp. *refulgens, Eulalia aurea, Evolvulus alsinoides / Evolvulus alsinoides* var. *decumbens / Evolvulus alsinoides* var. *villosicalyx, Flueggea virosa* subsp. *melanthesoides, Goodenia lamprosperma, Ipomoea muelleri, Melaleuca argentea, Melaleuca glomerata, Melaleuca linophylla, Microstachys chamaelea, Pterocaulon serrulatum* var. *velutinum, Sorghum plumosum* var. *plumosum, Stemodia viscosa, Tribulus occidentalis, Vigna lanceolata* var. *lanceolata* **Significant Taxa:** *Corchorus aff. incanus* (potentially undescribed), *Gymnanthera cunninghamii* (P3) (preferred habitat)	 **Photo 5.32: VT 11 (Quadrat WOS22)**

VT	Summary	Photograph
	Variation and Similar VTs: In areas where high water flow volumes appear to occur regularly, the shrubland and hummock grassland strata were reduced to isolated plants or were absent entirely (**Photo 5.33**). In these areas, *Melaleuca argentea* was generally the only tree present in the tree stratum; in areas that apparently do not receive regular water flows, this species was absent and *Eucalyptus camaldulensis* subsp. *refulgens* was dominant. Occasionally a mid to low sparse tussock grassland, forbland and sedgeland of a variety of taxa, was present. Floristically similar to VT 10, see under that VT for discussion.	 **Photo 5.33: VT 11 Variation with reduced lower stratum (Quadrat WOE04)**
12	**Description**: Low isolated trees of *Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia hamersleyana* over mid sparse shrubland to isolated shrubs dominated by *Acacia acradenia, Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Indigofera monophyla* and *Tribulus suberosus* over low hummock grassland dominated by *Triodia wiseana*, *Triodia epactia* and occasionally *Triodia brizoides* on red, brown or red-brown clay loam with ironstone, metamorphosed granite or occasionally dolerite or quartz stones over ironstone or metamorphosed granite outcropping on cliffs, ridges and crests and upper to mid slopes of ranges. **Location**: Mapped on cliffs, ridges and crests and upper to mid slopes of ranges in the western and eastern extent of the Survey Area (**Appendix Q**). **Area mapped:** 3,004.4 ha (22.8% of Survey Area) **Sampling:** 115 quadrats (HER004, HER005, HER007, HER008, HER009, HER010, HER016, HER018, HER039, HER040, HER041, HER042, HER043, HER044, HER046, HER047, HER049, HER052, HER053, HER054, HER055, HER058, HER059, HER060, HER063, HER064, HER068, TRH052, TRH056, TRH057, TRH059, TRH061, W01A, W03A, W04A, W05A, W06A, WD05, WD06, WD07, WD09, WD11, WD13, WD17, WD20, WD22, WD23, WD27, WD31, WD34, WD36, WD38, WD41, WD42, WD43, WD47, WD54, WD56, WD58,	 **Photo 5.34: VT 12 (Quadrat HER054)**

VT	Summary	Photograph
	WD66, WD84, WD87, WD88, WD96, WDD05, WDD07, WDD20, WDD23, WDK01, WDK04, WDK05, WDK10, WDK11, WDK15, WDK20, WDK21, WDK22, WDK24, WDK25, WDKX02, WDM10, WDM11, WDM15, WDM18, WDM23, WDM24, WOC15, WOC23, WOC26, WOD04, WOD07, WOD10, WOD13, WOD14, WOD17, WOD22, WOD24, WOD26, WOD35, WOD40, WOD41A, WOD42, WOE21, WOJ03, WOJ15, WOJ20, WOJ21, WOJ30, WOK13, WOK14, WOK20, WOK22, WOM05, WOM16, WOM23) **Average Taxon Richness per Quadrat:** 25.0 ± 8.6 **Indicator Taxa**: *Cheilanthes contigua, Cyperus hesperius, Eriachne mucronata, Eucalyptus leucophloia* subsp. *leucophloia, Euphorbia careyi, Ptilotus incanus, Tribulus macrocarpus, Triumfetta maconochieana, Tribulus suberosus, Triumfetta propinqua* **Significant Taxa:** *Euphorbia clementii* (P3), *Terminalia supranitifolia* (P3) (preferred habitat), *Triodia basitricha* (P3), *Triodia chichesterensis* (P3) (preferred habitat), *Vigna triodiophila* (P3) (preferred habitat) **Variation and Similar VTs**: The upper tree stratum was often absent in this VT. The tall shrubland stratum was usually present, however often only isolated shrub were present, and occasionally these were also absent. *Acacia acradenia* was almost always present when this stratum was present. The hummock grassland was fairly consistently dominated or co-dominated by *Triodia wiseana* and *Triodia epactia*, although *Triodia brizoides* occasionally co-dominated, and rarely dominated. This VT is not especially similar to any other VTs.	 **Photo 5.35: VT 12 Variation with tree stratum absent (Quadrat WD27)**
13	**Description**: Low open woodland to isolated trees of *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia inaequilatera, Acacia bivenosa* and Acacia *acradenia* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* and occasionally *Triodia angusta* on red, red-brown or light brown clay loam with calcrete, quartz and metamorphosed granite stones, occasionally over calcrete outcropping, on colluvial outwashes of ranges and colluvial stony plains. **Location**: Mapped on colluvial outwashes of ranges and colluvial stony plains predominantly in the central to eastern and south-western extent of the Survey Area (**Appendix Q**) **Area mapped:** 1,153.4 ha (8.8% of Survey Area) **Sampling:** 66 quadrats (HER015, HER029, HER031, HER033, TRH063, TRH066, WD03, WD12, WD29, WD35, WD44, WD48, WD55, WD59, WD70, WD77, WD78, WD80, WD89, WDD15, WDD22, WDK02, WDK06, WDK13, WDM03, WDM04, WDM14, WDM20, WDM21, WDM27, WDMX03, WOC09, WOC18, WOC20, WOD03, WOD06, WOD08, WOD11, WOD12, WOD18, WOD23, WOD34, WOE20, WOE22, WOE24, WOE31, WOJ01, WOJ05, WOJ18, WOJ22, WOJ23, WOJ24, WOJ29, WOJ33, WOK03, WOK06, WOK08, WOK10, WOK23, WOM06, WOM07, WOM10, WOM30, WOS02, WOS18, WOS20)	 **Photo 5.36: VT 13 (Quadrat WDD15)**

VT	Summary	Photograph
	Average Taxon Richness per Quadrat: 17.4 ± 7.1 **Indicator Taxa**: *Acacia bivenosa, Triodia chichesterensis* (P3) **Significant Taxa:** *Euphorbia clementii* (P3), *Euploca mutica* (P3), *Ptilotus mollis* (P4), *Terminalia supranitifolia* (P3), *Triodia chichesterensis* (P3) (preferred habitat) **Variation and Similar VTs**: The tree stratum was often absent in this VT. The tall shrub stratum was relatively variable in composition; although *Acacia bivenosa* and *A. inaequilatera* were usually present, occasionally *Acacia acradenia* or *Acacia orthocarpa* replaced them. *Triodia chichesterensis* was always present and usually dominant, with *Triodia wiseana* and *Triodia angusta* often co-dominant; rarely the latter species dominated. VT 13 is most floristically similar to VT 14. VT 14 differs in that it lacks the upper tree stratum and also differs in the composition of the tall shrub stratum with VT 14 dominated by *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia orthocarpa* rather than *Acacia bivenosa* and *Acacia acradenia*. VT 14 also generally occurs in association with granite or dolerite rather than calcrete.	 **Photo 5.37: VT 13 Variation with tree stratum absent (Quadrat WOE31)**
14	**Description**: Tall to mid sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia orthocarpa* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* on brown, red or red-brown clay loam with dolerite, calcrete and quartz stones, often with dolerite or granite outcropping, on low hills. **Location**: Mapped on low hills in the south-western extent of the Survey Area, near Wodgina minesite (**Appendix Q**) **Area mapped:** 792.9 ha (6.0% of Survey Area) **Sampling:** 20 quadrats (HER028, HER035, HER036, HER067, W02A, WD19, WD21, WD46, WD50, WD52, WD83, WD86, WD92, WDK03, WDK23, WDKX01, WDM22, WDM26, WOC16, WOK19) **Average Taxon Richness per Quadrat:** 16.4 ± 6.2 **Indicator Taxa**: *Boerhavia gardneri, Corchorus parviflorus, Cullen leucochaites, Tephrosia* sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)*, Triodia wiseana* **Significant Taxa:** *Euphorbia clementii* (P3), *Terminalia supranitifolia* (P3), *Triodia chichesterensis* (P3) (preferred habitat), *Vigna triodiophila* (P3)	 **Photo 5.38: VT 14 (Quadrat WDM22)**

VT	Summary	Photograph
	Variation and Similar VTs: The tall shrub stratum was generally very sparse, however on some occasions was absent altogether (**Photo 5.39**). *Acacia inaequilatera* and *Grevillea pyramidalis* subsp. *leucadendron* usually dominated this stratum, although occasionally *Acacia orthocarpa* replaced them. *Triodia chichesterensis* was almost always present and usually dominated the hummock grassland stratum or co-dominated with *Triodia wiseana*, although occasionally *Triodia epactia* dominated. VT 14 is most similar to VT 13, see under that VT for discussion.	 **Photo 5.39: VT 14 Variation with tall shrub stratum absent (Quadrat HER035)**

VT	Summary	Photograph
15	**Description**: Mid isolated shrubs of *Acacia synchronicia* over low isolated chenopod shrubs of *Maireana georgei* over mid hummock grassland of *Triodia longiceps* over low sparse forbland, tussock grassland and sedgeland of mixed species including *Portulaca oleracea*, *Ptilotus exaltatus*, *Cynodon prostratus, Sporobolus australasicus* and *Fimbristylis dichotoma* on red clay loam with colluvial stones on slightly saline plains and flats. **Location**: Mapped in one low-lying area in the western extent of the Survey Area, north-east of Wodgina minesite (**Appendix Q**) **Area mapped:** 65.0 ha (0.5% of Survey Area) **Sampling:** 5 quadrats (WD01, WD65, WOD39, WOM33, WOM39) **Average Taxon Richness per Quadrat:** 8.8 ± 1.6 **Indicator Taxa**: *Acacia synchronicia, Maireana georgei, Senna glutinosa* subsp*. glutinosa, Triodia longiceps* **Significant Taxa:** *Triodia chichesterensis* (P3) **Variation and Similar VTs**: *Triodia lanigera* was present in a number of occurrences of this VT; however, dominated only on the rare occasion (**Photo 5.41**). The mid shrub stratum was fairly consistent; however the low sparse forbland, tussock grassland and sedgeland varied in the taxa present. VT 15 is somewhat floristically similar to VT 16, with both occurring on slightly saline plains and both with *Triodia longiceps* often dominating the hummock grassland stratum. However, VT 16 was more varied in the hummock grassland stratum with *Triodia angusta* and *Triodia secunda* also dominating this stratum, and the low shrub layer was dominated by different taxa.	 **Photo 5.40: VT 15 (Quadrat WD01)**  **Photo 5.41: VT 15 Variation with *Triodia lanigera* dominating the hummock grassland stratum (Quadrat WOD39)**

VT	Summary	Photograph
16	**Description:** Low isolated shrubs to sparse shrubland of *Acacia stellaticeps* and *Pluchea ferdinandi-muelleri* over low open hummock grassland to hummock grassland dominated by *Triodia angusta*, *Triodia secunda* and/or *Triodia longiceps* over low sparse forbland and tussock grassland of mixed species including *Trianthema triquetrum*, *Sporobolus australasicus*, *Eriachne obtusa* and *Calandrinia stagnensis* on red-brown or brown sandy clay on low lying, slightly saline plains. **Location:** Mapped on low lying, slightly saline plains adjacent to the Turner River, in the central extent of the Survey Area (**Appendix Q**) **Area mapped:** 31.3 ha (0.2% of Survey Area) **Sampling:** 11 quadrats (WOE11, WOE12, WOE14, WOE16, WOE18, WOJ10, WOL01, WOS01, WOS04, WOS05, WOS06) **Average Taxon Richness per Quadrat:** 15.8 ± 7.0 **Indicator Taxa:** *Sclerolaena densiflora, Triodia secunda* **Significant Taxa:** *Euploca mutica* (P3) **Variation and Similar VTs:** The hummock grassland stratum was variously dominated by *Triodia angusta*, *Triodia secunda* and *Triodia longiceps*, with *Triodia lanigera* and *Triodia epactia* present in some occurrences but rarely forming a dominant component of the stratum. The low shrub stratum was absent in some occurrences of this VT. VT 16 is most floristically similar to VT 15, see under that VT for discussion.	 **Photo 5.42: VT 16 - *Triodia secunda* dominant (Quadrat WOS06)**  **Photo 5.43: VT 16 - *Triodia angusta / Triodia longiceps* dominant (Quadrat WOE18)**

5.2.12 Other Areas Described

Areas where native vegetation has been removed for infrastructure and is no longer present (except for occasional isolated individuals of native taxa) have been mapped as 'Cleared' (C). These areas include roads (and associated infrastructure including culverts), tracks and areas cleared for mining activities. A total of 915.8 ha of Cleared areas have been mapped within the Survey Area (7.0% of the Survey Area) (**Figure 5.7**, **Appendix Q**).

In addition, several areas where vegetation has been historically cleared and the area has either been actively rehabilitated or has been left to regrow naturally, and the vegetation does not clearly resemble any defined VT, have been mapped as Rehabilitated (R). A total of 188.1 ha of Rehabilitated areas were mapped within the Survey Area (1.4% of the Survey Area) (**Figure 5.7**, **Appendix Q**).

5.2.13 Significant Vegetation

None of the vegetation described in the Survey Area is considered to represent significant vegetation for any reason, as per EPA (2016a, 2016b). Based on field observations and aerial photograph interpretation, all VTs are considered likely to occur outside the Survey Area.

VTs 6, 11, 15 and 16 are restricted in occurrence in the context of the Survey Area. However, it is considered that this is because only very small amounts of the landforms that these VTs occur on occur in the Survey Area. Review of aerial photography indicates that the stony drainage lines and flood plains of the eastern extent of the Survey Area where VT 6 occurs clearly extend north and south of the Survey Area. The major drainage channels in the Turner River where VT 11 occurs also extend to the north and south of the Survey Area. Likewise, aerial photography indicates that the saline plains and flats where VTs 15 and 16 occur continue to the north and south of the Survey Area. VTs 11and 16 in particular only occur in the narrow central portion of the Survey Area which accounts for their relatively small spatial extent (less than 1% of the Survey Area).

VT 11 (Turner River Channel) is considered likely to be groundwater dependent vegetation; some occurrences of VT 10 in the Survey Area may also be groundwater dependent vegetation. These VTs and several other VTs are also likely to be surface-water dependent (**Section 5.2.14**). These VTs are not considered to be significant vegetation as defined by EPA (2016a, 2016b) for this reason; however, they may require specific management if surface water flows and groundwater levels are likely to be affected by potential future development in the Survey Area. Although occupying relatively small spatial areas in a landscape context, these VTs are likely to be regionally widespread and common.

As no Pilbara-wide vegetation dataset defined at a similar scale to the Survey Area VT dataset is available, it is not possible to conclusively assess the significance of VTs in a regional context. However, based on the overall taxon composition of the VTs mapped, it is likely that these would be relatively widespread in the general region surrounding the Survey Area; additionally, the landforms and geology that the VTs are associated with are known to occur widely in the region (see **Section 2.2** and **Section 5.1.2**). Although several VTs are characterised by the presence of the somewhat restricted *Triodia chichesterensis* (P3), this species is known to occur relatively widely to the east and north of the Survey Area, and it is considered probable that such VTs would also occur to the east and north of the Survey Area based on the landforms that they occur on.

One listed significant vegetation community is known to occur within the Desktop Study Area, being the Gregory Land System PEC (P3) (**Section 5.1.7**). This land system is comprised of linear dunes up to 12 m in height, with associated sandy swales and restricted sandplains; it was mapped over 113 km^2, equivalent to just 0.06% of the Pilbara survey area of van Vreeswyk et al. (2004). The nearest known occurrence of this PEC is located approximately 6 km west of the Survey Area (**Figure 5.5**); this location is the most easterly mapped location of the PEC. The land system as described and mapped by van Vreeswyk et al. (2004) is comprised of two units, as listed below:

- Linear dunes of deep red sands stretching up to 4 km long and 12 m high, with gently to moderately inclined side slopes, and dune crests with moundy, loose surfaces. Vegetation is typically hummock grasslands of *Triodia pungens*, *Triodia schinzii* (soft spinifex) or *Triodia* spp. (hard spinifex) with numerous shrubs or scattered to moderately close shrublands with *Acacia stellaticeps*, *Acacia trachycarpa* and other *Acacia* species. This unit comprises approximately 60% of the total area of this land system.

- Swales and sandplains with concave, gently inclined marginal slopes near dunes becoming level elsewhere, up to 2 km in extent between dunes. The soil is deep red sands with minor red sandy earths within swales. Vegetation is typically hummock grasslands of *Triodia* spp. (soft and hard spinifex) with numerous shrubs including *Acacia ancistrocarpa*, *Acacia bivenosa*, *Acacia acradenia*, *Acacia stellaticeps* and occasional *Eucalyptus* trees. This unit comprises approximately 40% of the total area of this land system.

No linear dunes or associated swales and sandplains were recorded within the Survey Areas. Some occurrences of VT 1 share some of the typical taxa listed in the description above and occur on relatively sandy plains; however, such taxa are generally common throughout the Pilbara region, and the plains that occurrences were located were vast in size and not associated with linear dunes. Therefore, this PEC is not considered to occur in the Survey Area.

5.2.14 Groundwater and Surface Water Dependent Vegetation

Riparian vegetation is defined as plant habitats and communities occurring in association with watercourses, both ephemeral and permanent. Five VTs mapped in the Survey Area contain riparian vegetation as listed below:

- VT 5: mapped in minor drainage features including flats and small ephemeral creeklines. This VT was mainly located in small drainage lines; however, it was also mapped on associated flats. A total of 431.9 ha of VT 5 was mapped in the Survey Area (**Appendix Q**).

- VT 6: mapped in drainage features and on floodplains in the eastern extent of the Survey Area. A total of 117.5 ha of VT 6 was mapped in the Survey Area (**Appendix Q**).

- VT 8: mapped in minor drainage lines, on drainage line edges and on floodplains. This VT was located in the central and eastern extents of the Survey Area and adjacent to the Turner River in the west. A total of 191.5 ha of VT 8 was mapped in the Survey Area (**Appendix Q**).

- VT 10: mapped in major ephemeral creeklines throughout the west and east extents of the Survey Area. A total of 392.8 ha of VT 10 was mapped in the Survey Area (**Appendix Q**).

- VT 11: mapped in channels of the Turner River in the central extent of the Survey Area, with a total of 34.1 ha mapped in the Survey Area.

As such, VTs 5, 6, 8, 10 and 11 are considered to be at least partially or totally dependent on surface water flows for survival.

Groundwater dependent vegetation is known to occur in the Pilbara and is generally indicated by the presence of one or several phreatophytic taxa (**Section 5.1.3**), and by shallow (no more than 10 m below ground level) depth to groundwater. The obligate phreatophytes *Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca argentea*, and the potential facultative phreatophytes *Acacia ampliceps*, *Atalaya hemiglauca*, *Eucalyptus victrix*, *Melaleuca glomerata* and *Melaleuca linophylla* were recorded in the Survey Area in the Turner River and associated tributaries, which is a known GDE (BoM, 2024b).

Based on the presence of *Melaleuca argentea* and *Eucalyptus camaldulensis* subsp. *refulgens* in particular, and the presumed presence of a shallow water table, VT 11 is likely dependent on groundwater. Some occurrences of VT 10 contain *Eucalyptus camaldulensis* subsp. *refulgens* (but not *Melaleuca argentea*), as well as one or more of the remaining above-noted taxa; it is possible that such occurrences are also dependent on groundwater, if the local water table is within reach of the root systems of these taxa (generally within 10 m of the ground surface). Although *Eucalyptus victrix* and *Melaleuca linophylla* are common in VT 10, available evidence indicates that vegetation that is groundwater dependent is not extensive in the western part of the Survey Area in the vicinity of Wodgina minesite (specifically the 2019 Wodgina Study Area). It should be noted that depth to groundwater within elevated parts of Wodgina (main range) is generally at least 20 m from the surface (Golder, 2018), and therefore would not be accessible to any occurrences of VT 10 in these areas. For the central and eastern extents of the Survey Area, depth to groundwater information in areas where VT 10 has been mapped is required to confirm potential groundwater dependence.

5.2.15 Vegetation Condition

Table 5.12 presents the area (ha) of each VT and corresponding condition rating mapped in the Survey Area. An overview of vegetation condition mapping polygons is presented in **Figure 5.8**, with detailed vegetation condition mapping presented in **Appendix I**.

The majority of the Survey Area (11,240.3 ha / 85.5%) was rated as being in 'Excellent' condition, with such areas generally free of introduced taxa, and no evidence of grazing or other disturbances to the vegetation noted. The vegetation occurring in drainage lines was often rated as 'Very Good' or 'Good', or less commonly 'Poor' or 'Degraded'. The lower condition ratings were due to impacts associated with cattle activity in the area, and the presence of weed taxa, particularly *Cenchrus ciliaris* and *Cenchrus setiger*.

There were some areas within the north-eastern part of the Survey Area which were subject to disturbances associated with historical mining including clearing for mining pits, drill pads and tracks. The larger obvious cleared areas were mapped as 'Cleared', with the areas of vegetation subject to more minor ground disturbances mapped as 'Good'.

Some areas required mapping as mosaics of vegetation condition ratings, including areas mapped as 'Excellent/Very Good', and 'Good/Poor'. Such areas were primarily in drainage lines, and were variable in condition depending on the level of usage by cattle, and consequential weed infestations.

Areas that were mapped as Cleared or Rehabilitation (as per **Section 5.2.12**), were not assigned vegetation condition ratings as it is not considered appropriate to use the vegetation condition scale presented in EPA (2016b) to assess such areas.

Table 5.12 Vegetation Condition Types Mapped in the Survey Areas

VT	Area Mapped (ha)								
	Excellent	Excellent/ Very Good	Very Good	Good	Good/ Poor	Poor	Degraded	Condition Rating Not Applicable	Total
1	2256.9		5.8	14.6		2.6			2280.0
2	777.5		4.5	5.8					787.8
3	952.7					0.1			952.8
4	1290.2		0.8	16.3					1307.3
5	297.1		98.2	19.5		17.1			431.9
6	33.8		50.6	33.2					117.5
7	324.2			0.1		0.6			324.9
8	72.5		113.4	5.4		0.2			191.5
9	174.1		5.2			0.1			179.4
10	97.4	15.9	80.5	136.8	30.0	16.9	15.4		392.8
11			16.5	17.6					34.1
12	2974.2		7.6	22.6					3004.4
13	1109.8		16.5	27.0					1153.4
14	789.1		3.8						792.9
15	65.0								65.0
16	25.8		5.0	0.2		0.3			31.3
R								188.1	188.1
C								915.8	915.8
Total	**11240.3**	**15.9**	**408.6**	**299.0**	**30.0**	**37.8**	**15.4**	**1103.8**	**13150.9**
Percentage of Survey Area	**85.5**	**0.1**	**3.1**	**2.3**	**0.2**	**0.3**	**0.1**	**8.4**	**100**



FIGURE 5.8

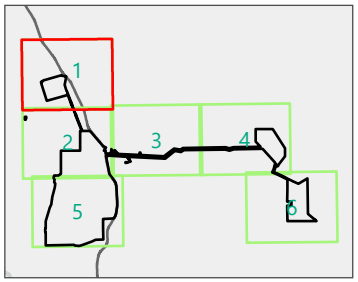
Overview of Vegetation Condition of the Survey Area – Sheet 1

Legend

- Survey Area
- Road
- Railway

Vegetation Condition

- Excellent
- Good
- Cleared Land
- Rehabilitated Land



0 1 2

Kilometres

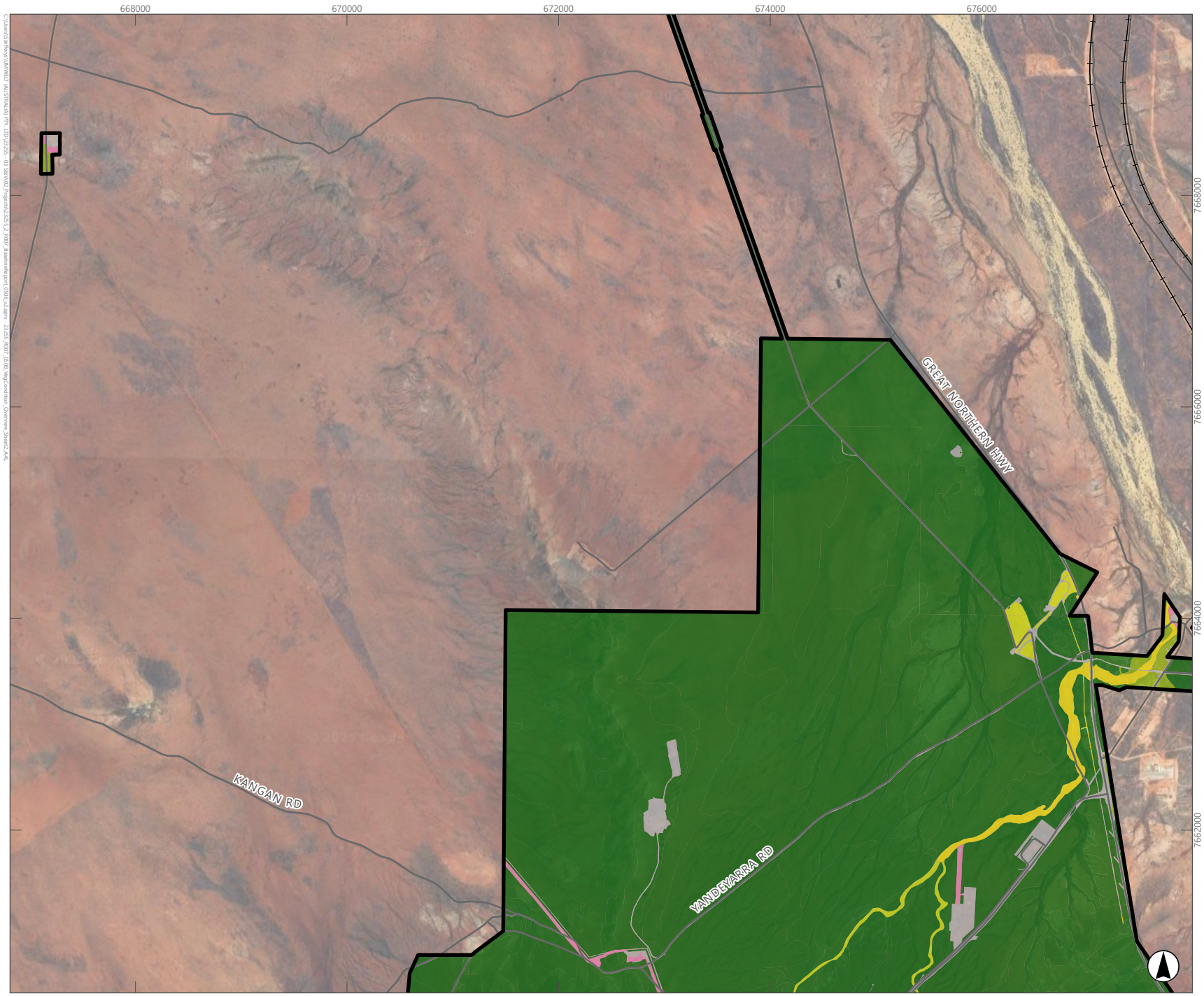
Scale 1:50,000 at A4
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FIGURE 5.8

Overview of Vegetation Condition of the Survey Area – Sheet 2

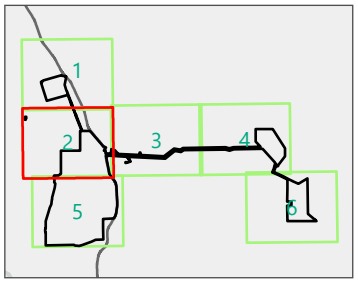


Legend

- Survey Area
- Road
- Railway

Vegetation Condition

- Excellent
- Very Good
- Good
- Good/Poor
- Cleared Land
- Rehabilitated Land



0 1 2

Kilometres

Scale 1:50,000 at A4
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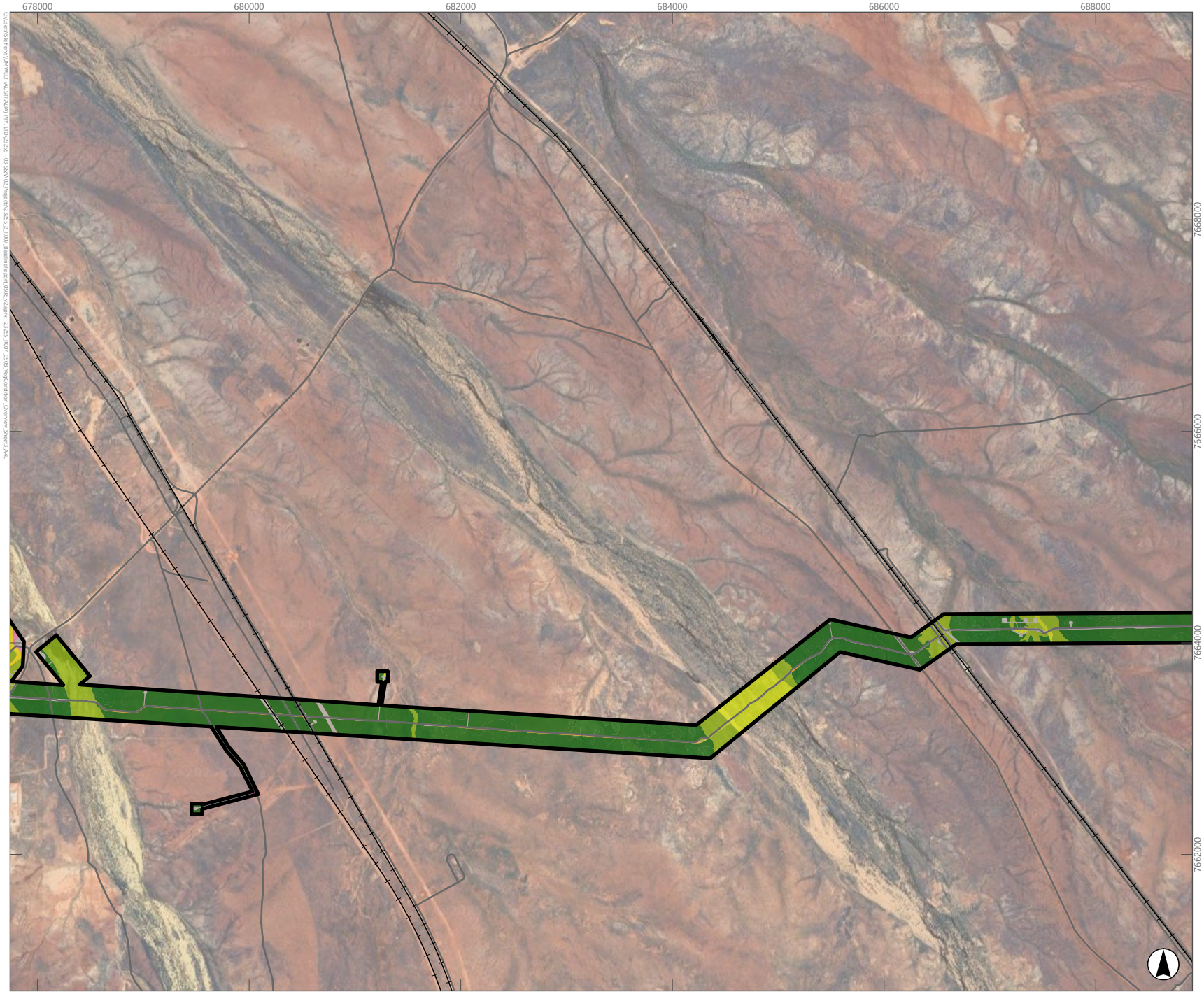


FIGURE 5.8

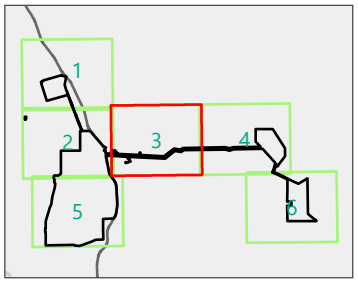
Overview of Vegetation Condition of the Survey Area – Sheet 3

Legend

- Survey Area
- Road
- Railway

Vegetation Condition

- Excellent
- Very Good
- Good
- Good/Poor
- Poor
- Cleared Land
- Rehabilitated Land



0 1 2

Kilometres

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FIGURE 5.8

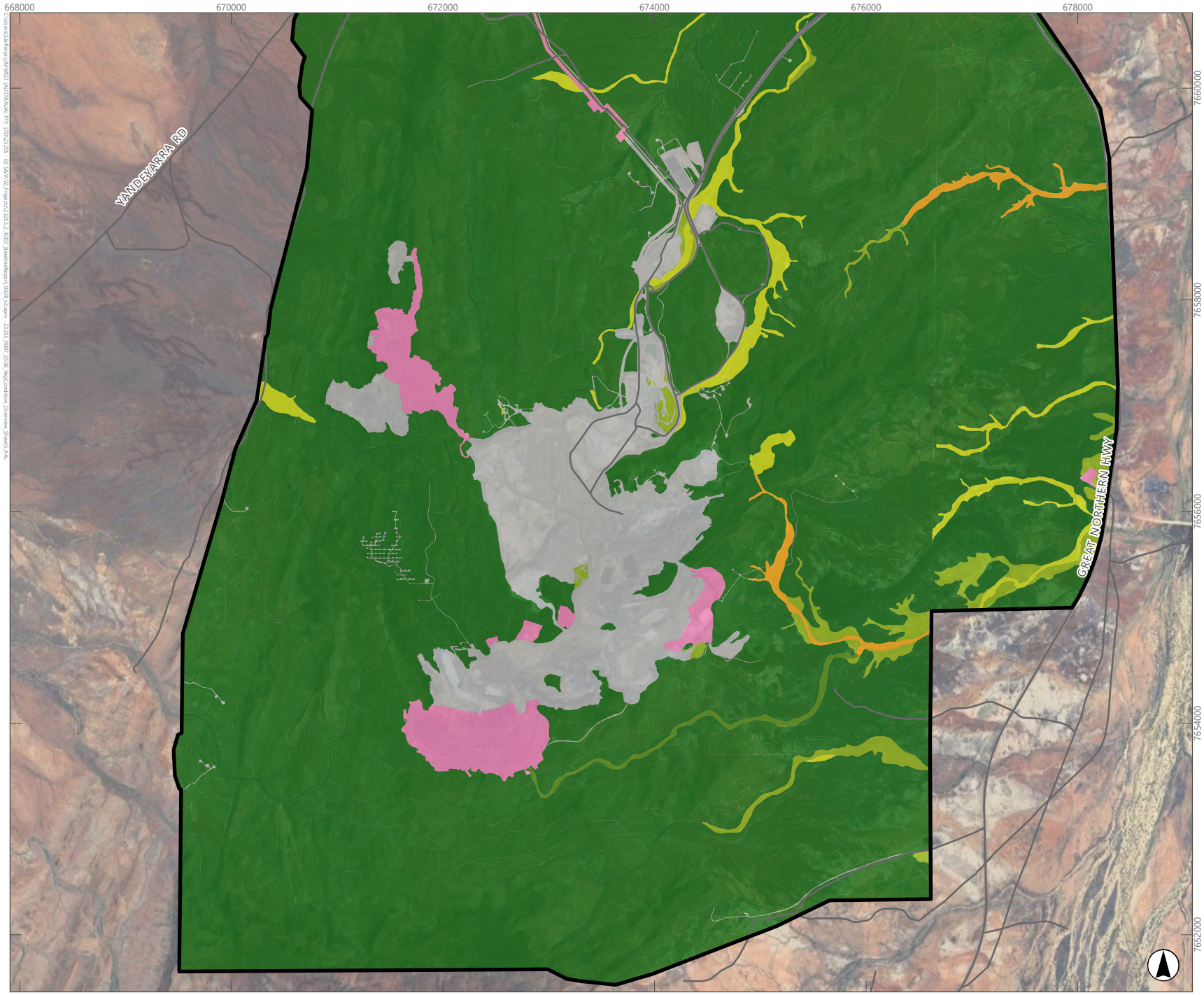
Overview of Vegetation Condition of the Survey Area – Sheet 4

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FIGURE 5.8

Overview of Vegetation Condition of the Survey Area – Sheet 5

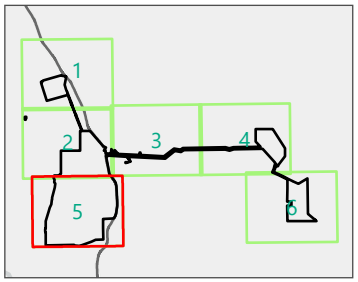


Legend

- Survey Area
- Road

Vegetation Condition

- Excellent
- Excellent/Very Good
- Very Good
- Good
- Good/Poor
- Poor
- Cleared Land
- Rehabilitated Land



0 1 2

Kilometres

Scale 1:50,000 at A4
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FIGURE 5.8

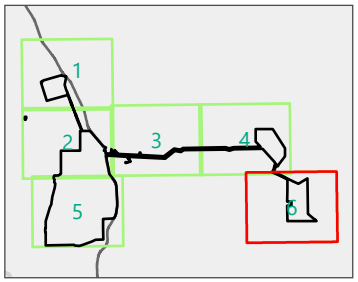
Overview of Vegetation Condition of the Survey Area – Sheet 6

Legend

- Survey Area
- Road

Vegetation Condition

- Excellent
- Very Good
- Good
- Cleared Land



0 1 2

Kilometres

Scale 1:50,000 at A4
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6.0 Discussion and Conclusions

The Survey Area is considered to have moderate diversity in terms of taxon richness, with 400 discrete taxa recorded. This was generally expected given its location in the north of the Pilbara region, and the results of other surveys, including by Umwelt, in the surrounding region. However, there was a relatively wide variety of habitat types present which resulted in somewhat higher diversity that what would be expected in than nearby local areas. This includes the western portion of the Survey Area (2019 Wodgina Study Area); which is considered to be a function of the Wodgina area being a relatively small but steep, isolated range surrounded by plains and large drainage features. Likewise, the central to eastern portion of the Survey Area spans a wide area and includes ranges, plains and drainage features including the Turner River. Therefore, the diversity of VTs is considered to be moderate, but likely higher than surrounding areas.

Extensive searching for significant flora taxa previously recorded by the Woodman Environmental (2020) survey, and taxa identified from the 2023/2024 Desktop Study Area, has been undertaken in the combined 2023 Detailed Survey Area and 2019 Wodgina Study Area, and the 2023 Reconnaissance Survey Area. Based on the level of searching undertaken within the aforementioned areas in 2023 and during previous surveys (including the 2023 revisit and verification of previously recorded significant flora populations), it is considered unlikely that there are further populations of any of the recorded priority-listed significant taxa (seven taxa in total) in these parts of the Survey Area except *Goodenia obscurata* (P3); this taxon was only described and listed as a Priority taxon in 2023, and has therefore not been adequately searched for. Additionally, *Euphorbia clementii* (P3) and *Euploca mutica* (P3) may occur more widely in the Survey Area immediately post-fire; their presence in a given area may be a function of fire history rather than lack of suitable habitat. It is also considered unlikely that any of the significant taxa identified in the desktop assessment which were not recorded during the survey occur in the combined 2023 Detailed Survey Area and 2019 Wodgina Study Area, and the 2023 Reconnaissance Survey Area; however, several taxa, including the Threatened *Quoya zonalis*, may occur in parts of the wider Survey Area that have not been subject to systematic targeted survey.

Two potentially undescribed taxa have been recorded in the Survey Area, and are considered to be potentially significant taxa. It is considered likely that there are additional occurrences of *Corchorus* aff. *incanus* (potentially undescribed) and *Polymeria* sp. (potentially undescribed) within the Survey Area, as these taxa were not considered during systematic targeted survey; however, it is also likely that there are further occurrences of these entities in areas surrounding the Survey Area, and the habitat for these entities is not considered to be restricted.

As previously noted, fire has likely had an effect on the results of previous surveys and the 2023/2024 surveys in the Survey Area. Fire is a strong driver of species composition in the Pilbara; this effect is especially influential in driving the presence of several significant flora taxa in a given area, including *Euphorbia clementii* (P3) and *Euploca mutica* (P3); these taxa apparently may disappear from areas in which they have previously been recorded only a few years post-fire. This effect also may influence floristic classifications, and the ability to confidently map vegetation across the Survey Area. It is considered that these issues have been mitigated by critical review of the floristic classification, as well as on-ground work to clarify vegetation boundaries.

The effects of fire on the floristic classification are compounded by issues such as the generally low taxon diversity of the northern Pilbara, as well as the apparent absence of strong soil, substrate and topographical preferences in many of taxa (e.g. *Triodia epactia*, which occurs on almost all substrates and soil types in the Survey Area); this appears to produce less than optimal classification results, necessitating manual re-assignment of quadrats within analyses. Despite these issues, the sampling strategy and field verification work undertaken provides confidence that the VTs and VT mapping polygons presented in this report adequately characterise the vegetation of the Survey Area based on available data, with the VT dataset considered suitable for use in future impact assessments.

None of the VTs mapped in the Survey Area are considered to represent any formally listed TECs or PECs, nor are they considered significant for any other reasons. All VTs are likely to be present outside these Survey Area, based on taxonomic composition and interpretation of vegetation and topographical patterns on aerial photography. The absence of a regional dataset also makes assessment of the significance of the vegetation of the Pilbara particularly problematic.

Several VTs or occurrences of five VTs (VTs 5, 6, 8, 10 and 11) are considered to represent riparian vegetation and are reliant on surface water. Additionally, based on the presence of obligate phreatophytes (*Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca argentea*) and a number of potential facultative phreatophytes, as well as a presumed shallow water table, the vegetation of the Turner River, which has been defined and mapped as VT 11, is considered to be groundwater dependent. Some occurrences of VT 10 are also considered to potentially be groundwater dependent; however, this assumption is currently based only on the presence of the obligate phreatophyte *Eucalyptus camaldulensis* subsp. *refulgens* and one or more potential facultative phreatophytes. Assessment of hydrological conditions at these occurrences, particularly depth to the water table, is required to confirm their groundwater dependence.

The majority of the vegetation in the Survey Area was considered to be in Excellent condition, with little to no evidence of disturbance and an absence or low levels of introduced flora taxa. However, the majority of larger drainage features, including creeks and flow lines, were considered to be in poorer condition, as a result of the presence of aggressive introduced taxa and obvious grazing and trampling impacts from cattle. This is typical of the vegetation of the Pilbara region, where the predominant land use is for pastoral activities.

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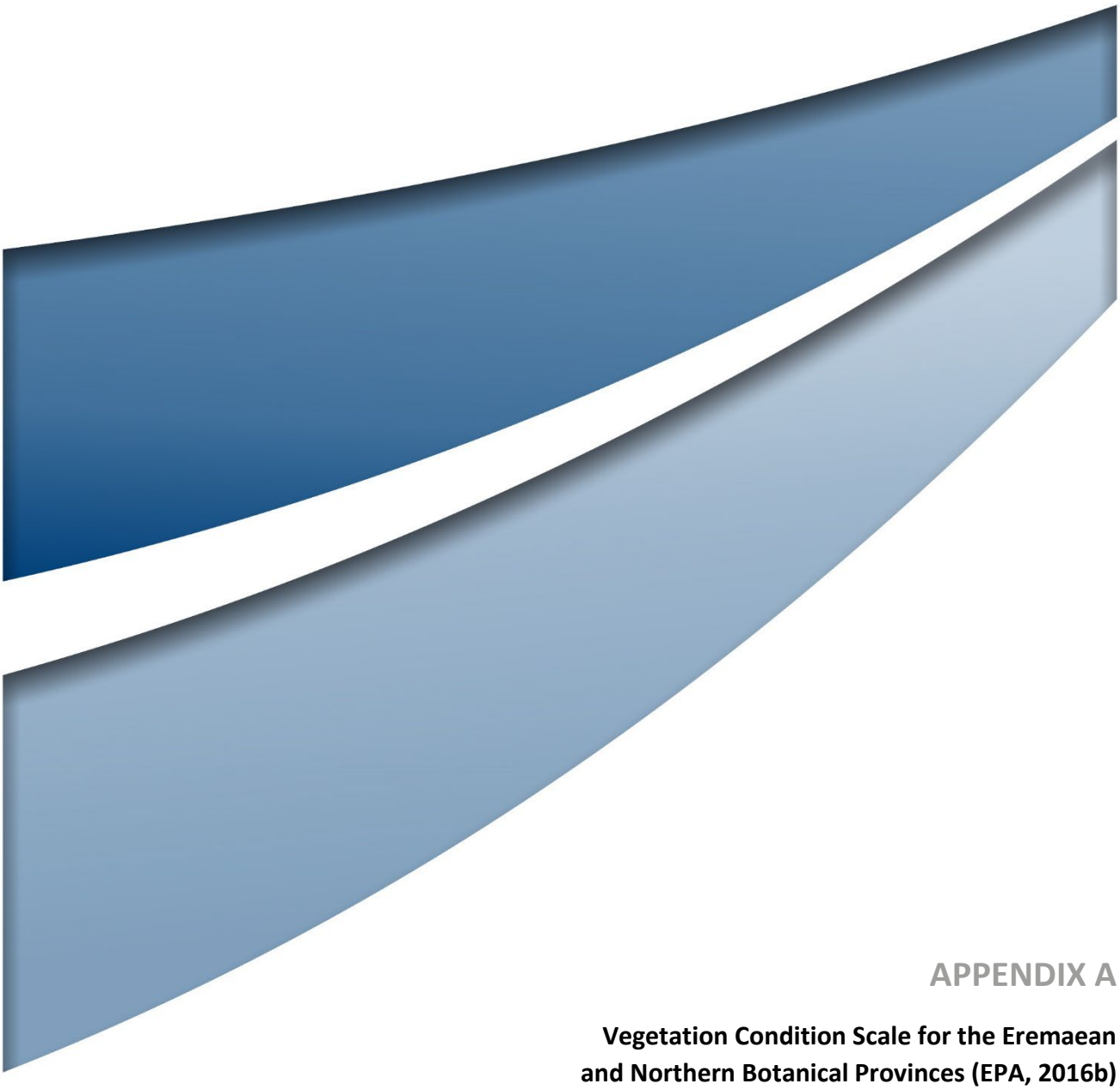
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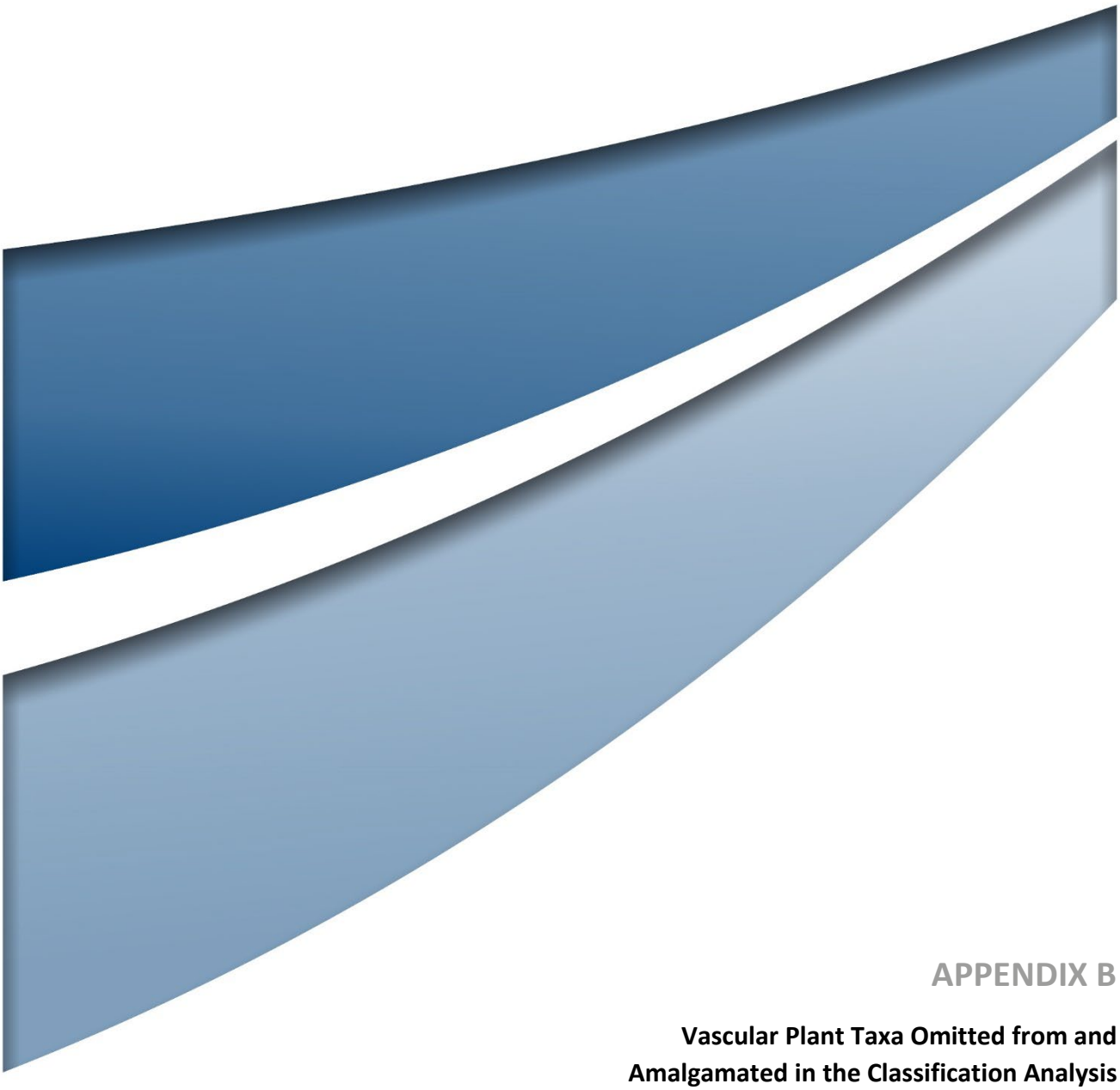
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APPENDIX A

Vegetation Condition Scale for the Eremaean and Northern Botanical Provinces (EPA, 2016b)

Condition Rating	Description
Excellent (E)	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement
Very Good (VG)	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
Good (G)	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
Poor (P)	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds
Degraded (D)	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
Completely Degraded (CD)	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



APPENDIX B

Vascular Plant Taxa Omitted from and Amalgamated in the Classification Analysis

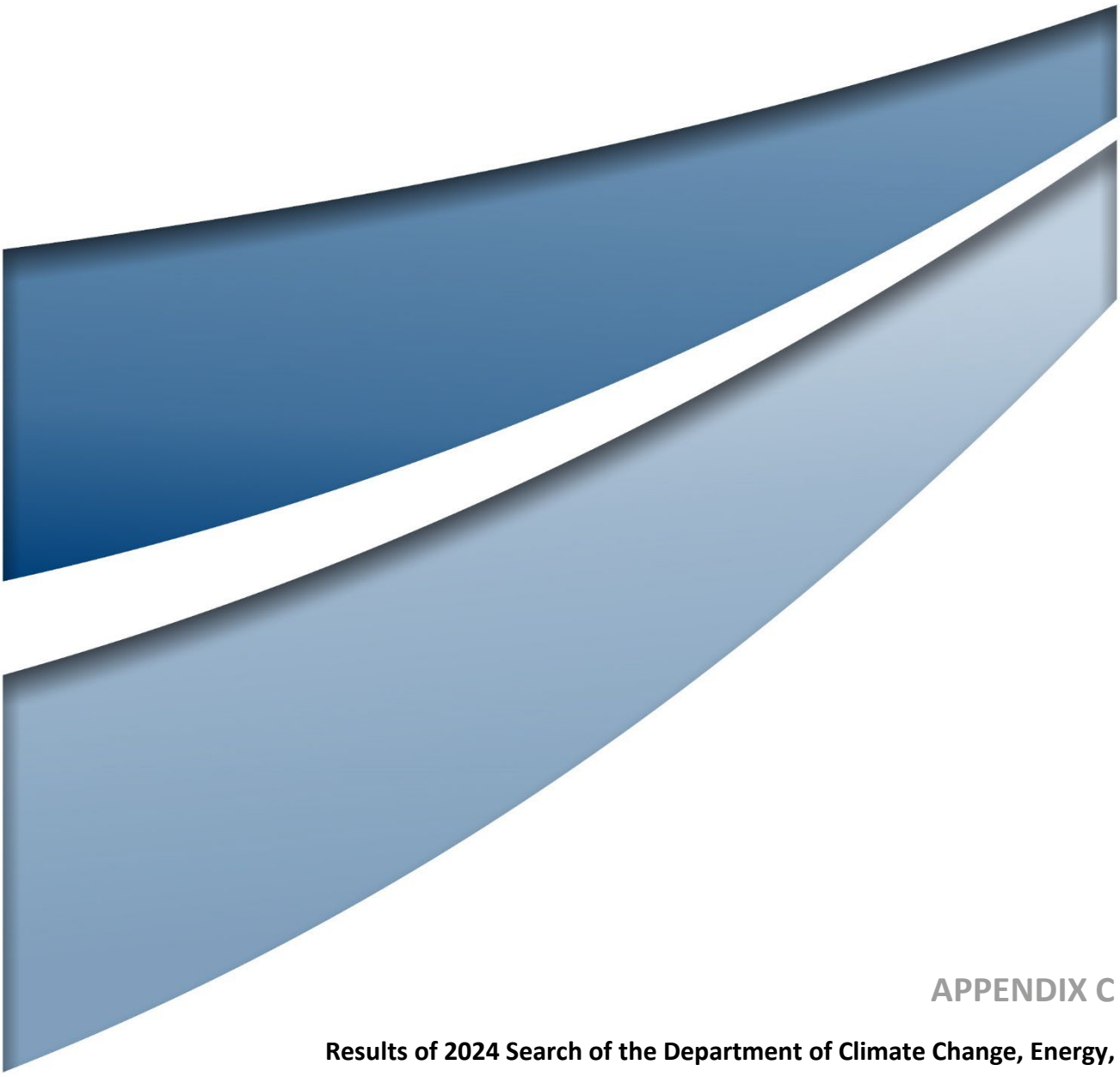
Note: this table does not include taxa belonging to the following categories that were removed prior to the classification analysis (as per **Section 3.6**):

- Annual/ephemeral taxa
- Introduced taxa
- Hybrids
- Singletons.

Action	Taxa	Reasoning
Amalgamated	*Adriana tomentosa* *Adriana tomentosa* var. *tomentosa*	Likely represent the same entity
	Cajanus cinereus *Cajanus pubescens*	Species could not be consistently positively identified due to inadequate material (lack of flowering material)
	Clerodendrum floribundum *Clerodendrum floribundum var. angustifolium*	Likely represent the same entity
	Clerodendrum tomentosum *Clerodendrum tomentosum* var. *lanceolatum* *Clerodendrum tomentosum* var. *tomentosum*	Variants could not be consistently positively identified due to inadequate material
	Crotalaria novae-hollandiae *Crotalaria novae-hollandiae* subsp. *novae-hollandiae*	Likely represent the same entity
	Dysphania rhadinostachya *Dysphania rhadinostachya* subsp. *rhadinostachya*	Likely represent the same entity
	Eriachne pulchella *Eriachne pulchella* subsp. *dominii*	Likely represent the same entity
	Evolvulus alsinoides *Evolvulus alsinoides* var. *decumbens* *Evolvulus alsinoides* var. *villosicalyx*	Variants could not be consistently positively identified due to inadequate material
	Goodenia obscurata *Velleia connata*	Represent the same entity
	Grevillea wickhamii *Grevillea wickhamii* subsp. *hispidula* *Grevillea wickhamii* subsp. *macrodonta*	Subspecies could not be consistently positively identified due to inadequate material
	Hakea lorea *Hakea lorea* subsp. *lorea*	Likely represent the same entity
	Haloragis gossei *Haloragis gossei* var. *gossei*	Likely represent the same entity

Action	Taxa	Reasoning
	Halgania solanacea *Halgania solanacea* var. Mt Doreen (G.M. Chippendale 4206) *Halgania solanacea var. solanacea ms*	Variants could not be consistently positively identified due to inadequate material
	Maireana georgei *Maireana* sp.	Likely represent the same entity
	Polymeria ambigua *Polymeria mollis*	Likely represent the same entity - *Polymeria ambigua* is considered to be an incorrect identification
Amalgamated	*Polycarpaea corymbosa* *Polycarpaea corymbosa* var. *corymbosa*	Likely represent the same entity
	Scaevola browniana *Scaevola browniana* subsp. *browniana*	Likely represent the same entity
	Sorghum plumosum *Sorghum plumosum var. plumosum*	Likely represent the same entity
	Sida cardiophylla *Sida* sp. Pilbara (A.A. Mitchell PRP 1543)	Likely represent the same entity - *Sida cardiophylla* is considered to be an incorrect identification
	Synaptantha tillaeacea *Synaptantha tillaeacea* var. *tillaeacea*	Likely represent the same entity
	Trichodesma zeylanicum *Trichodesma zeylanicum* var. *zeylanicum*	Likely represent the same entity
Omitted	*Abutilon* sp.	Could not be positively identified because of inadequate material
	Acacia sp.	Could not be positively identified because of inadequate material
	Acacia ?*sphaerostachya*	Could not be positively identified because of inadequate material
	Asteraceae sp.	Could not be positively identified because of inadequate material
	Calandrinia ?*stagnensis*	Could not be positively identified because of inadequate material
	Corchorus ?*incanus* subsp. *incanus*	Could not be positively identified because of inadequate material
	Corchorus sp.	Could not be positively identified because of inadequate material
	Corchorus ?*tridens*	Could not be positively identified because of inadequate material
	?*Corymbia hamersleyana*	Could not be positively identified because of inadequate material
	Cymbopogon sp.	Could not be positively identified because of inadequate material

Action	Taxa	Reasoning
	?*Dysphania* sp.	Could not be positively identified because of inadequate material
	Euphorbia ?*australis*	Could not be positively identified because of inadequate material
	Euphorbia ?*trigonosperma*	Could not be positively identified because of inadequate material
	?*Goodenia stobbsiana*	Could not be positively identified because of inadequate material
	Goodeniaceae sp.	Could not be positively identified because of inadequate material
	Hibiscus ?*leptocladus*	Could not be positively identified because of inadequate material
Omitted	*Lepidium* ?*pholidogynum*	Could not be positively identified because of inadequate material
	?*Polymeria ambigua*	Could not be positively identified because of inadequate material
	Ptilotus ?*auriculifolius*	Could not be positively identified because of inadequate material
	Ptilotus ?*exaltatus*	Could not be positively identified because of inadequate material
	?*Ptilotus helipteroides*	Could not be positively identified because of inadequate material
	?*Schenkia australis*	Could not be positively identified because of inadequate material
	?*Sclerolaena* sp.	Could not be positively identified because of inadequate material
	Senna ?*glaucifolia*	Could not be positively identified because of inadequate material
	Sida ?*clementii*	Could not be positively identified because of inadequate material
	Sida sp.	Could not be positively identified because of inadequate material
	Triumfetta sp.	Could not be positively identified because of inadequate material



APPENDIX C

Results of 2024 Search of the Department of Climate Change, Energy, the Environment and Water Species Profile and Threats Database (DCCEEW, 2024)

EPBC Act Protected Matters Report

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

Report created: 26-Mar-2024

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

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	16
Listed Migratory Species:	13

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	18
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	28
Key Ecological Features (Marine):	None
Biologically Important Areas:	1
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.		
Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
MAMMAL		
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat known to occur within area
Macrotis lagotis		
Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Roosting known to occur within area
PLANT		
Quoya zonalis listed as Pityrodia sp. Marble Bar (G.Woodman & D.Coultas GWDC Opp 4)		
Pilbara Foxglove [91588]	Endangered (listed as Pityrodia sp. Marble Bar	Species or species habitat known to occur within area
REPTILE		
Liasis olivaceus barroni		
Pilbara Olive Python [66699]	Vulnerable	Species or species habitat likely to occur within area
Liopholis kintorei		
Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat known to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
[Charadrius veredus](#) Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
[Glareola maldivarum](#) Oriental Pratincole [840]		Species or species habitat may occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
[Pandion haliaetus](#) Osprey [952]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Hemi Gold Project	2023/09556		Referral Decision
Lynas Find Project	2023/09471		Assessment
North Star Magnetite Project Extension	2023/09466		Assessment
Controlled action			
Abydos Direct Shipping Ore (DSO) Project, Stage 2	2013/6985	Controlled Action	Post-Approval
Abydos Direct Shipping Ore Project	2012/6345	Controlled Action	Post-Approval
Additional Rail Infrastructure between Herb Elliott Port Facility and Cloudbreak Mine Site	2010/5513	Controlled Action	Post-Approval
Development of the Wodgina Direct Shipping Ore Project, Stage 2	2011/5975	Controlled Action	Post-Approval
Miralga Creek Project, Pilbara region, WA	2019/8601	Controlled Action	Post-Approval
Mt Dove Direct Shipping Ore Project	2011/5848	Controlled Action	Post-Approval
North Star Hematite Project	2012/6530	Controlled Action	Post-Approval
North Star Magnetite Project	2012/6689	Controlled Action	Post-Approval
Panoram Copper-Zinc mine	2007/3310	Controlled Action	Completed
Port Hedland Outer Harbour Development and associated marine and terrestrial in	2008/4159	Controlled Action	Post-Approval
Roy Hill to Port Hedland Rail Line and Associated Infrastructure	2010/5424	Controlled Action	Post-Approval
Wodgina Direct Shipping Ore Project	2009/5167	Controlled Action	Post-Approval
Not controlled action			

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Development of iron ore resources in eastern Pilbara region, including port at P	2004/1562	Not Controlled Action	Completed
Expansion of the Talison Minerals Storage Facility, Wodgina Mine	2008/4675	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Pilbara Bulk Ore Transport System Project, WA	2016/7637	Not Controlled Action	Completed
Pilbara Transmission Project, Pilbara, WA	2018/8349	Not Controlled Action	Completed
Rail and Port Facilities	2001/474	Not Controlled Action	Completed
Sulphur Springs Copper-Zinc Mining Project, Pilbara Region, WA	2013/6899	Not Controlled Action	Completed
Wodgina Lithium Mine Expansion, Pilbara, NT	2018/8194	Not Controlled Action	Completed
Not controlled action (particular manner)			
Additional Rail Infrastructure	2012/6314	Not Controlled Action (Particular Manner)	Post-Approval
Atlas Boodarie Link Project, WA	2012/6506	Not Controlled Action (Particular Manner)	Post-Approval
Mine the Hercules Deposit under the Wodgina Direct Shipping Ore Project Stage 3	2013/6789	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Mine the Hercules Deposit under the Wodgina Direct Shipping Ore Project ??? Stage 3	2013/6777	Referral Decision	Completed
Outer Harbour Development and associated marine and terrestial infrastructure	2008/4148	Referral Decision	Completed

Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Seabirds		

Scientific Name	Behaviour	Presence
Ardenna pacifica		
Wedge-tailed Shearwater [84292]	Breeding	Known to occur

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

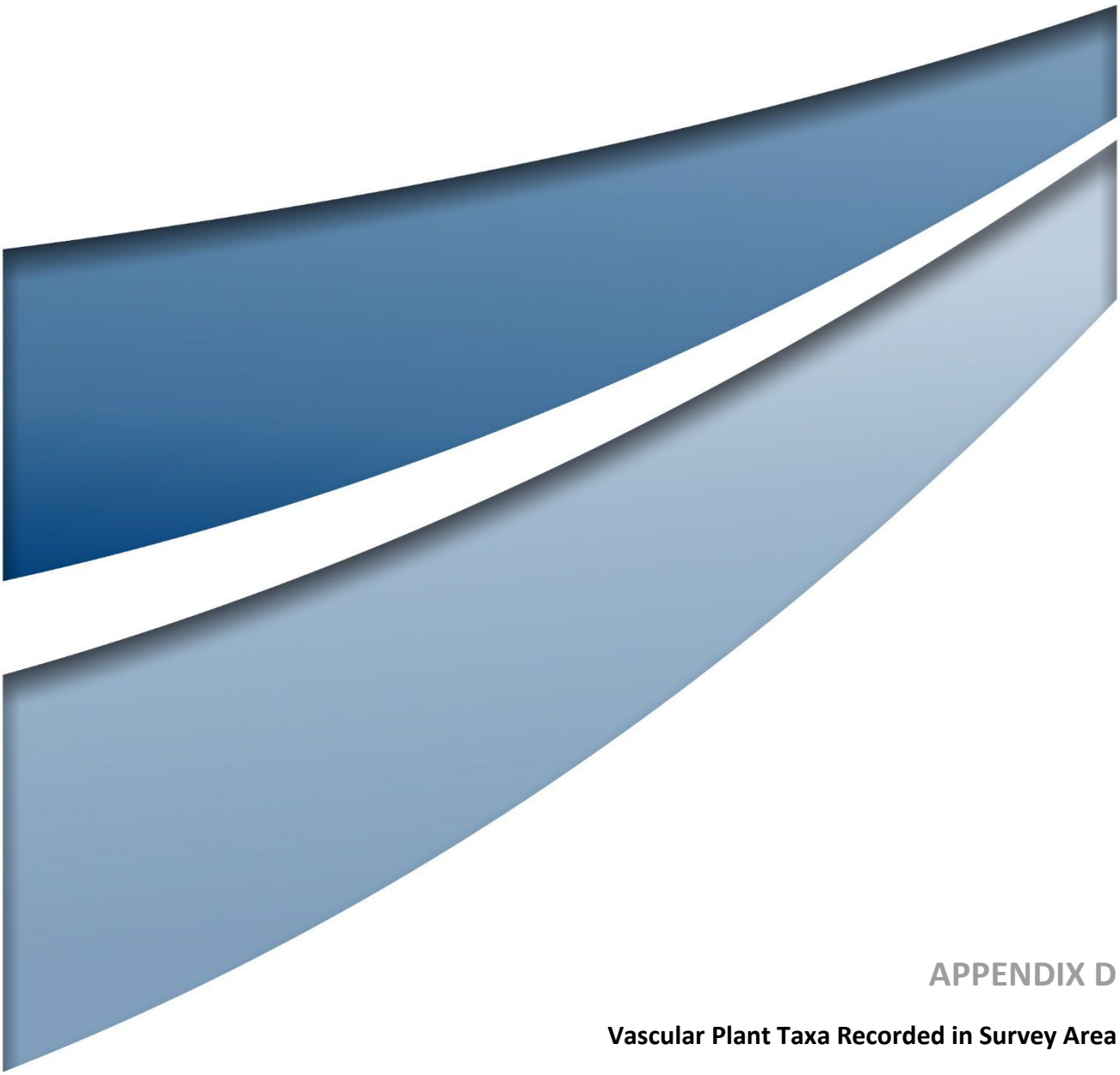
-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management,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

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

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

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APPENDIX D

Vascular Plant Taxa Recorded in Survey Area

*Denotes introduced taxa

Family	Taxon
Aizoaceae	*Trianthema pilosum*
	**Trianthema portulacastrum*
	Trianthema triquetrum
Amaranthaceae	**Aerva javanica*
	Amaranthus interruptus
	Amaranthus undulatus
	Gomphrena cunninghamii
	Gomphrena leptoclada subsp. *leptoclada*
	Ptilotus arthrolasius
	Ptilotus astrolasius
	Ptilotus auriculifolius
	Ptilotus axillaris
	Ptilotus calostachyus
	Ptilotus clementii
	Ptilotus exaltatus
	Ptilotus fusiformis
	Ptilotus helipteroides
	?*Ptilotus helipteroides*
	Ptilotus incanus
	Ptilotus mollis (P4)
	Ptilotus polystachyus
Apocynaceae	**Calotropis procera*
	Carissa lanceolata
	Cynanchum floribundum
	Gymnanthera cunninghamii (P3)
	Gymnema erectum
	Vincetoxicum flexuosum
Araliaceae	*Trachymene oleracea* subsp. *oleracea*
Asteraceae	**Flaveria trinervia*
	Pentalepis trichodesmoides subsp. *trichodesmoides*
	Peripleura virgata
	Pluchea dentex
	Pluchea ferdinandi-muelleri
	Pluchea ferdinandi-muelleri x tetranthera
	Pluchea rubelliflora

Family	Taxon
	Pluchea tetranthera
	Pterocaulon serrulatum var. *velutinum*
	Pterocaulon sphacelatum
	Pterocaulon sphaeranthoides
	Rhodanthe margarethae
	Streptoglossa decurrens
	Streptoglossa macrocephala
	Streptoglossa odora
Bignoniaceae	*Dolichandrone occidentalis*
Boraginaceae	*Ehretia saligna*
	Euploca chrysocarpa
	Euploca cunninghamii
	Euploca mutica (P3)
	Euploca pachyphylla
	Euploca skeleton
	Euploca tenuifolia
	Euploca vestita
	Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)
	Halgania solanacea var. *solanacea* ms
	Heliotropium crispatum
	Trichodesma zeylanicum var. *zeylanicum*
Brassicaceae	*Lepidium pedicellosum*
	Lepidium pholidogynum
Byblidaceae	*Byblis pilbarana*
Cactaceae	**Opuntia* sp.
Campanulaceae	*Wahlenbergia tumidifructa*
Caryophyllaceae	*Polycarpaea corymbosa* var. *corymbosa*
	Polycarpaea holtzei
	Polycarpaea longiflora
Celastraceae	*Stackhousia intermedia*
	Stackhousia muricata
Chenopodiaceae	*Dysphania plantaginella*
	Dysphania rhadinostachya subsp. *rhadinostachya*
	Dysphania sphaerosperma
	Enchylaena tomentosa
	Maireana georgei

Family	Taxon
	Salsola australis
	Sclerolaena densiflora
	Sclerolaena hostilis
Cleomaceae	*Arivela uncifera*
	Arivela viscosa
Combretaceae	*Terminalia circumalata*
	Terminalia supranitifolia (P3)
Convolvulaceae	*Bonamia alatisemina*
	Bonamia erecta
	Bonamia media
	Bonamia pannosa
	Bonamia pilbarensis
	Evolvulus alsinoides var. *decumbens*
	Evolvulus alsinoides var. *villosicalyx*
	Ipomoea coptica
	Ipomoea muelleri
	Ipomoea polymorpha
Convolvulaceae cont.	*Operculina aequisepala*
	Polymeria ambigua
	Polymeria mollis
	Polymeria sp. (potentially undescribed)
Cucurbitaceae	*Cucumis melo*
	Cucumis variabilis
	Trichosanthes cucumerina var. *cucumerina*
Cyperaceae	*Bulbostylis barbata*
	Bulbostylis turbinata
	Cyperus blakeanus
	Cyperus conicus
	Cyperus difformis
	Cyperus hesperius
	Cyperus iria
	Cyperus ixiocarpus
	Cyperus leptocarpus
	Cyperus pulchellus
	Cyperus squarrosus
	Cyperus vaginatus

Family	Taxon
	Fimbristylis dichotoma
	Fimbristylis elegans
	Fimbristylis microcarya
	Fimbristylis rara
	Fimbristylis simulans
	Fuirena ciliaris
Droseraceae	*Drosera finlaysoniana*
Elatinaceae	*Bergia ammannioides*
	Bergia pedicellaris
Euphorbiaceae	*Adriana tomentosa* var. *tomentosa*
	Euphorbia australis var. *subtomentosa*
	Euphorbia biconvexa
	Euphorbia careyi
	Euphorbia clementii (P3)
	Euphorbia tannensis subsp. *eremophila*
	Euphorbia trigonosperma
	Euphorbia vaccaria var. *vaccaria*
	Mallotus nesophilus
	Microstachys chamaelea
Fabaceae	*Acacia acradenia*
	Acacia adoxa var. *adoxa*
	Acacia ampliceps
	Acacia ancistrocarpa
	Acacia ancistrocarpa x arida
	Acacia ancistrocarpa x orthocarpa
	Acacia ancistrocarpa x tumida var. *pilbarensis*
Fabaceae cont.	*Acacia arida*
	Acacia bivenosa
	Acacia colei var. *colei*
	Acacia coriacea subsp. *pendens*
	Acacia cowleana
	Acacia inaequilatera
	Acacia maitlandii
	Acacia orthocarpa
	Acacia orthocarpa x ancistrocarpa
	Acacia pruinocarpa

Family	Taxon
	Acacia ptychophylla
	Acacia pyrifolia var. *morrisonii*
	Acacia pyrifolia var. *pyrifolia*
	Acacia retivenea subsp. *clandestina*
	Acacia sclerosperma subsp. *sclerosperma*
	Acacia sericophylla
	Acacia sphaerostachya
	Acacia spondylophylla
	Acacia stellaticeps
	Acacia synchronicia
	Acacia trachycarpa
	Acacia trachycarpa x tumida var. pilbarensis
	Acacia tumida var. *pilbarensis*
	Alysicarpus muelleri
	Cajanus cinereus
	Cajanus pubescens
	Crotalaria cunninghamii
	Crotalaria medicaginea var. *neglecta*
	Crotalaria novae-hollandiae subsp. *novae-hollandiae*
	Cullen lachnostachys
	Cullen leucanthum
	Cullen leucochaites
	Cullen martinii
	Cullen stipulaceum
	Grona filiformis
	Indigofera colutea
	Indigofera linifolia
	Indigofera monophylla
	Indigofera rugosa
	Indigofera trita
	Isotropis atropurpurea
	Kennedia prorepens
	Leptosema anomalum
	Leptosema chambersii
	Petalostylis labicheoides
Fabaceae cont.	*Rhynchosia minima*

Family	Taxon
	Senna artemisioides subsp. *oligophylla*
	Senna artemisioides subsp. oligophylla x symonii
	Senna artemisioides subsp. olligophylla x glutinosa subsp. glutinosa
	Senna artemisoides subsp. oligophylla × Senna artemisoides subsp. helmsii
	Senna curvistyla
	Senna glutinosa subsp. *glutinosa*
	Senna glutinosa subsp. *pruinosa*
	Senna glutinosa x leursenii
	Senna notabilis
	Senna symonii
	Senna venusta
	Sesbania cannabina
	Swainsona formosa
	Swainsona stenodonta
	Tephrosia clementii
	Tephrosia densa
	Tephrosia rosea var. *clementii*
	Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)
	Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)
	Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)
	Tephrosia supina
	Tephrosia virens
	Vigna lanceolata var. *lanceolata*
	Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)
	Vigna triodiophila (P3)
	Zornia albiflora
Gentianaceae	?*Schenkia australis*
Goodeniaceae	*Dampiera candicans*
	Goodenia connata
	Goodenia cusackiana
	Goodenia forrestii
	Goodenia lamprosperma
	Goodenia microptera
	Goodenia muelleriana
	Goodenia obscurata (P3)
	Goodenia stobbsiana

Family	Taxon
	Goodenia triodiophila
	Scaevola amblyanthera var. *centralis*
	Scaevola browniana subsp. *browniana*
	Scaevola spinescens
Gyrostemonaceae	*Codonocarpus cotinifolius*
Haloragaceae	*Gonocarpus ephemerus*
	Haloragis gossei var. *gossei*
Hemerocallidaceae	*Corynotheca pungens*
Lamiaceae	*Clerodendrum floribundum* var. *angustifolium*
	Clerodendrum tomentosum var. *lanceolatum*
	Clerodendrum tomentosum var. *tomentosum*
Lauraceae	*Cassytha capillaris*
	Cassytha filiformis
Loganiaceae	*Mitrasacme connata*
Lythraceae	*Ammannia baccifera*
	Ammannia multiflora
Malvaceae	*Abutilon amplum*
	Abutilon aff. *hannii*
	Abutilon lepidum
	Abutilon otocarpum
	Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)
	Abutilon sp. Pilbara (W.R. Barker 2025)
	Androcalva luteiflora
	Corchorus aff. incanus
	Corchorus ?*incanus* subsp. *incanus*
	Corchorus laniflorus
	Corchorus lasiocarpus subsp. *lasiocarpus*
	Corchorus parviflorus
	Corchorus tridens
	Gossypium australe
	Gossypium robinsonii
	Hibiscus austrinus var. *austrinus*
	Hibiscus brachychlaenus
	Hibiscus coatesii
	Hibiscus goldsworthii
	Hibiscus leptocladus

Family	Taxon
	Hibiscus sturtii var. *campylochlamys*
	**Malvastrum americanum*
	Melhania oblongifolia
	Seringia nephrosperma
	Sida arenicola
	Sida clementii
	Sida echinocarpa
	Sida fibulifera
	Sida rohlenae subsp. *rohlenae*
	Sida sp. Articulation below (A.A. Mitchell PRP 1605)
	Sida sp. Pilbara (A.A. Mitchell PRP 1543)
	Sida ?sp. Pindan (B.G. Thomson 3398)
	Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)
	Sida spinosa
	Triumfetta chaetocarpa
	Triumfetta clementii
	Triumfetta johnstonii
Malvaceae cont.	*Triumfetta maconochieana*
	Triumfetta propinqua
	Triumfetta ramosa
	Waltheria indica
	Waltheria virgata
Marsileaceae	*Marsilea hirsuta*
	Marsilea mutica
Menispermaceae	*Tinospora smilacina*
Molluginaceae	*Trigastrotheca molluginea*
Montiaceae	*Calandrinia pentavalvis*
	Calandrinia pumila
	Calandrinia stagnensis
	Calandrinia tepperiana
Moraceae	*Ficus aculeata* var. *indecora*
	Ficus brachypoda
Myrtaceae	*Corymbia ferriticola*
	Corymbia hamersleyana
	Corymbia zygophylla
	Eucalyptus camaldulensis subsp. *refulgens*

Family	Taxon
	Eucalyptus leucophloia subsp. *leucophloia*
	Eucalyptus victrix
	Eucalyptus xerothermica
	Melaleuca argentea
	Melaleuca glomerata
	Melaleuca lasiandra
	Melaleuca linophylla
Nyctaginaceae	*Boerhavia burbidgeana*
	Boerhavia coccinea
	Boerhavia gardneri
	Boerhavia repleta
	Boerhavia schomburgkiana
Oleaceae	*Jasminum didymum* subsp. *lineare*
Onagraceae	*Ludwigia perennis*
Orobanchaceae	*Striga curviflora*
	Striga squamigera
Passifloraceae	**Passiflora foetida* var. *hispida*
Phyllanthaceae	*Cathetus exilis*
	Flueggea virosa subsp. *melanthesoides*
	Nellica maderaspatensis
	Notoleptopus decaisnei
Plantaginaceae	*Stemodia grossa*
	Stemodia viscosa
Poaceae	*Aristida burbidgeae*
	Aristida contorta
	Aristida holathera var. *holathera*
Poaceae cont.	**Cenchrus ciliaris*
	**Cenchrus setiger*
	**Chloris barbata*
	Chloris pumilio
	Chrysopogon fallax
	Cymbopogon ambiguus
	Cynodon convergens
	**Cynodon dactylon*
	Cynodon prostratus
	Dactyloctenium radulans

Family	Taxon
	Dichanthium fecundum
	Dichanthium sericeum subsp. *humilius*
	Digitaria brownii
	**Digitaria ciliaris*
	Diplachne fusca subsp. *fusca*
	Enneapogon caerulescens
	Enneapogon lindleyanus
	Enneapogon robustissimus
	Eragrostis crateriformis
	Eragrostis cumingii
	Eragrostis desertorum
	Eragrostis dielsii
	Eragrostis eriopoda
	**Eragrostis minor*
	Eragrostis setifolia
	Eragrostis speciosa
	Eragrostis tenellula
	Eriachne aristidea
	Eriachne benthamii
	Eriachne ciliata
	Eriachne helmsii
	Eriachne mucronata
	Eriachne obtusa
	Eriachne pulchella subsp. *dominii*
	Eriachne pulchella subsp. *pulchella*
	Eriachne sp. Dugald River (B.K. Simon+ 3007)
	Eriachne tenuiculmis
	Eulalia aurea
	Heteropogon contortus
	Neurachne muelleri
	Panicum australiense var. *australiense*
	Panicum decompositum
	Paraneurachne muelleri
	Paspalidium clementii
	Paspalidium rarum
Poaceae cont.	*Paspalidium reflexum*

Family	Taxon
	Paspalidium tabulatum
	Perotis rara
	Schizachyrium fragile
	Sorghum plumosum var. *plumosum*
	Sporobolus actinocladus
	Sporobolus australasicus
	Themeda triandra
	Triodia angusta
	Triodia basitricha (P3)
	Triodia brizoides
	Triodia chichesterensis (P3)
	Triodia epactia
	Triodia lanigera
	Triodia longiceps
	Triodia schinzii
	Triodia secunda
	Triodia wiseana
	Tripogonella loliiformis
Polygalaceae	*Polygala galeocephala*
	Polygala glaucifolia
	Polygala aff. *saccopetala*
Portulacaceae	*Portulaca conspicua*
	Portulaca cyclophylla
	Portulaca oleracea
Proteaceae	*Grevillea pyramidalis* subsp. *leucadendron*
	Grevillea wickhamii subsp. *hispidula*
	Grevillea wickhamii subsp. *macrodonta*
	Hakea lorea subsp. *lorea*
Pteridaceae	*Cheilanthes brownii*
	Cheilanthes contigua
	Cheilanthes lasiophylla
	Cheilanthes sieberi subsp. *sieberi*
Rubiaceae	*Dentella asperata*
	Dolichocarpa crouchiana
	Scleromitrion galioides
	Synaptantha tillaeacea var. *tillaeacea*

Family	Taxon
Santalaceae	*Santalum lanceolatum*
Sapindaceae	*Atalaya hemiglauca*
	Dodonaea coriacea
Solanaceae	*Nicotiana benthamiana*
	Nicotiana occidentalis
	Solanum cleistogamum
	Solanum diversiflorum
	Solanum horridum
Solanaceae cont.	*Solanum phlomoides*
Violaceae	*Afrohybanthus aurantiacus*
Zygophyllaceae	*Tribulopis angustifolia*
	Tribulus hirsutus
	Tribulus macrocarpus
	Tribulus occidentalis
	Tribulus platypterus
	Tribulus suberosus
	**Tribulus terrestris*

APPENDIX E

Raw Data Recorded within Quadrats and Relevés in the Survey Area in 2023 and 2024

GOVERNMENT AGENCY REFERENCE ONLY
NOT FOR PUBLIC DISSEMINATION
CONTAINS LOCATIONS OF SIGNIFICANT FLORA TAXA

Site Name:	GNH17
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 676972E 7663859N
Orientation:	290o/20o from GPS point
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Quartz (other)
Disturbance:	None
Fire:	>10 years
Habitat:	Dense shrubland over hummock grassland with emergent Corymbia

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	3	30
Acacia inaequilatera	1.6	0.1
Acacia tumida var. *pilbarensis*	4	20
Afrohybanthus aurantiacus	0.3	0.1
Bonamia erecta	0.4	0.1
Bulbostylis barbata	0.1	0.1
Chrysopogon fallax	0.6	0.3
Corymbia hamersleyana	6	2
Goodenia stobbsiana	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.6	0.1
Isotropis atropurpurea	0.5	0.1
Paraneurachne muelleri	0.3	0.1
Polygala aff. *saccopetala*	0.1	0.1
Senna glutinosa subsp. *glutinosa*	2.1	0.1
Senna notabilis	0.1	0.1

Tinospora smilacina	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	35
Triodia lanigera	0.4	5

PHOTOS





Site Name:	GNH18
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 677002E 7663577N
Orientation:	0o/90o from GPS point
Landform Type:	Other, Edge of Drainage Line (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Light Clay
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Disturbance:	Grazing, Weeds
Fire:	>5 years
Habitat:	Open woodland over shrubland over tussock and hummock grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus victrix*
Mid Stratum 1:	*Acacia trachycarpa*
Lower Stratum 1:	**Cenchrus ciliaris*, *Dichanthium fecundum*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa x arida	3	0.3
Acacia pyrifolia var. *pyrifolia*	1.5	0.2
Acacia trachycarpa	3	6
Acacia tumida var. *pilbarensis*	2	0.1
**Aerva javanica*	0.6	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.1	0.1
Arivela viscosa	0.1	0.1
Boerhavia coccinea	0.1	0.1
Boerhavia repleta	0.1	0.1
Bonamia erecta	0.3	0.1
Cajanus cinereus	1.2	0.1
**Cenchrus ciliaris*	0.6	30
**Cenchrus setiger*	0.7	0.3
Chrysopogon fallax	0.7	0.2
Corchorus ?incanus subsp. *incanus*	0.2	0.1

Corymbia hamersleyana	6	1.5
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Dichanthium fecundum	1	2
Enneapogon caerulescens	0.2	0.1
Eragrostis cumingii	0.2	0.1
Eucalyptus victrix	8	0.5
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.2	0.1
Euploca cunninghamii	0.2	0.1
Evolvulus alsinoides var. *decumbens*	0.3	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.3	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium australe	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.6	0.2
Paspalidium rarum	0.2	0.1
Polymeria mollis		0.1
Portulaca oleracea	0.1	0.1
Pterocaulon sphacelatum	0.2	0.1
Ptilotus fusiformis	0.3	0.1
Rhynchosia minima		0.1
Senna notabilis	0.2	0.1
Sida echinocarpa	1.1	0.1
Sida fibulifera	0.2	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia rosea var. *clementii*	1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.7	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	15
Triumfetta propinqua	0.2	0.1
Waltheria indica	0.4	0.1

PHOTOS





Site Name:	GNH41
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	WGS84 Zone 50 676906E 7663792N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Loamy sand (other)
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz (other)
Disturbance:	Historical earth works (other)
Fire:	>10 years
Habitat:	Sparse Acacia shrubland over sparse mid Acacia shrubland over dense low clumps of hummock grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia ancistrocarpa*, *Acacia orthocarpa*
Mid Stratum 1:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	4.5
Acacia inaequilatera	0.6	0.1
Acacia orthocarpa	1.4	0.5
Acacia sphaerostachya	0.3	0.1
Acacia stellaticeps	0.5	2
Acacia trachycarpa	2	0.1
Bonamia pilbarensis	0.2	0.1
Codonocarpus cotinifolius	1.2	0.1
Corchorus ?*incanus* subsp. *incanus*	0.4	0.1
Eriachne pulchella	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Maireana georgei	0.1	0.1
Portulaca oleracea		0.1
Ptilotus astrolasius	0.3	0.2
Ptilotus calostachyus	0.4	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1

Senna symonii	0.3	0.1
Sporobolus australasicus	0.1	0.1
Triodia epactia	0.5	0.2
Triodia lanigera	0.3	60

PHOTOS





Site Name:	HER001
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	WGS84 Zone 50 671709E 7660900N
Orientation:	90o and 180o from GPS point
Landform Type:	Plain, Outwash from range (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<2 years
Habitat:	Tall shrubland over hummock grassland
Comments:	Active pebble mouse mound - inactive 2024

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA94	671711	7660904	
Corner 2	GDA94	671762	7660906	
Corner 3	GDA94	671763	7660856	
Corner 4	GDA94	671714	7660860	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia inaequilatera*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*, *Grevillea pyramidalis* subsp. *leucadendron*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	5
Acacia ancistrocarpa	2	0.5
Acacia inaequilatera	4	1.5
Acacia tumida var. *pilbarensis*	4	3
Arivela viscosa	0.3	0.1
Bonamia alatisemina	0.1	0.1

Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.2	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.3
Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.1	0.1
Grevillea pyramidalis subsp. *leucadendron*	2	0.1
Grevillea wickhamii subsp. *hispidula*	3.5	0.2
Hibiscus leptocladus	0.4	0.1
Indigofera monophylla	0.3	0.1
Paspalidium clementii	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Ptilotus exaltatus	0.1	0.1
Senna notabilis	0.3	0.1
Senna symonii	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Triodia epactia	0.3	4

PHOTOS





Site Name:	HER003
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 670795E 7659499N
Orientation:	90o and 180o from GPS point
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Fire:	<2 years
Habitat:	Hummock grassland with emergent shrubs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670797	7659502	
Corner 2	670848	7659499	
Corner 3	670846	7659449	
Corner 4	670795	7659456	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.1
Acacia inaequilatera	3	0.4
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Cyperus hesperius	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia clementii (P3)	0.3	0.1
Fimbristylis simulans	0.1	0.2
Grevillea wickhamii subsp. *hispidula*	3	0.1

Indigofera monophylla	0.4	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Solanum phlomoides	0.4	0.1
Triodia epactia	0.3	15

PHOTOS





Site Name:	HER010
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 672460.5427E 7660580.3N
Orientation:	90o and 180o from GPS point
Landform Type:	Mid Slope
Slope Class:	Very Steep (37°)
Aspect:	N
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	Decayed Granite And Quartz (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	3 years
Habitat:	Corchorus open low shrubland over Triodia grassland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA94	672461	7660580	
Corner 2	GDA94	672456	7660535	
Corner 3	AGD84	672503	7660525	
Corner 4	GDA94	672504	7660580	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Corchorus parviflorus*

Lower Stratum 1: *Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.5	0.1
Acacia ancistrocarpa	1.3	0.1
Acacia inaequilatera	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.2
Cyperus hesperius	0.3	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.2	0.1

Euphorbia careyi	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium australe	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	0.8	0.1
Hibiscus coatesii	0.4	0.1
Indigofera monophylla	0.2	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.4	0.1
Ptilotus exaltatus	0.2	0.1
Senna glutinosa subsp. *glutinosa*	0.7	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.5	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.5	0.1
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	30
Triodia wiseana	0.4	3
Triumfetta propinqua	0.4	0.1

PHOTOS





Site Name:	HER014
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	WGS84 Zone 50 673056E 7659923N
Orientation:	90o and 180o from GPS point
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	E
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<2 years
Habitat:	Open Acacia shrubland over Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia inaequilatera*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.8
Acacia inaequilatera	3.5	0.4
Arivela uncifera	0.6	0.1
Bonamia pilbarensis		0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.3	0.1
Dampiera candicans	0.7	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Eragrostis eriopoda	0.3	0.1
Eriachne pulchella	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Fimbristylis simulans	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii	0.1	0.1
Polycarpaea holtzei	0.1	0.1

Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.3	0.1
Senna notabilis	0.1	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia clementii	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.3	8
Triodia epactia	0.4	10

PHOTOS





Site Name:	HER015
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	WGS84 Zone 50 672845E 7660022N
Orientation:	90o and 180o from GPS point
Landform Type:	Lower Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	Decayed Granite, Quartz, Calcrete (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Quartz, Calcrete (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	<2 years
Habitat:	Very open Acacia shrubland over Triodia grassland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA94	672845	7660025	
Corner 2	GDA94	672896	7660026	
Corner 3	GDA94	672898	7659976	
Corner 4	GDA94	672849	7659978	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.1
Acacia inaequilatera	3	0.2
Boerhavia gardneri		0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania sphaerosperma	0.1	0.1
Enneapogon lindleyanus	0.3	0.1

Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.4	0.1
Indigofera monophylla	0.4	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.3	0.1
Triodia chichesterensis (P3)	0.3	28
Triodia epactia	0.4	0.2
Triodia wiseana	0.4	0.1

PHOTOS





Site Name:	HER018
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 673280.7783E 7659471.233N
Orientation:	90o and 180o from GPS point
Landform Type:	Upper Slope
Slope Class:	Precipitous (60°)
Aspect:	S
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5
Habitat:	Scattered Hakea lorea over Triodia grassland
Comments:	

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673281	7659471	
Corner 2	673329	7659469	
Corner 3	673282	7659425	
Corner 4	673336	7659424	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.3	0.1
Acacia pyrifolia var. *pyrifolia*	1.7	0.1
Afrohybanthus aurantiacus	0.1	0.1
Amaranthus undulatus	0.6	0.1
Arivela viscosa	0.5	0.1
Boerhavia gardneri		0.1
Bulbostylis barbata	0.2	0.1
Cassytha capillaris		0.1

Cheilanthes contigua	0.1	0.1
Corchorus parviflorus	0.2	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.8	0.1
Dolichocarpa crouchiana	0.1	0.1
Enneapogon lindleyanus	0.2	0.1
Eriachne mucronata	0.4	0.1
Euphorbia careyi	0.1	0.1
Euphorbia trigonosperma	0.2	0.1
Gomphrena cunninghamii	0.2	0.1
Gossypium australe	1	0.1
Hakea lorea subsp. *lorea*	1.8	0.1
Hibiscus coatesii	0.4	0.1
Indigofera monophylla	0.5	0.1
Indigofera trita	0.2	0.1
Jasminum didymum subsp. *lineare*	1.5	0.1
Nellica maderaspatensis	0.2	0.1
Nicotiana benthamiana	0.3	0.1
Notoleptopus decaisnei	0.3	0.1
Paspalidium tabulatum	0.2	0.1
Ptilotus auriculifolius	0.5	0.1
Rhynchosia minima		0.1
Senna artemisioides subsp. *oligophylla*	0.4	0.1
Senna glutinosa subsp. *glutinosa*	0.5	0.1
Senna notabilis	0.1	0.1
Solanum phlomoides	0.3	0.1
Stemodia grossa	0.3	0.1
Streptoglossa decurrens	0.1	0.1
Terminalia supranitifolia (P3)		
Tinospora smilacina		0.1
Tribulus suberosus	0.6	0.1
Triodia wiseana	0.7	25
Triumfetta propinqua	0.3	0.1
Vigna triodiophila (P3)		0.1

PHOTOS





Site Name:	HER019
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 673765E 7660486N
Orientation:	90o and 180o from GPS point
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	NE
Soil Type:	Sand
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	~2 years
Habitat:	Open Corymbia woodland over Acacia shrubland over Triodia open grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Corchorus parviflorus*
Lower Stratum 1:	*Bonamia erecta*
Lower Stratum 2:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.7	0.1
Acacia tumida var. *pilbarensis*	3	10
Afrohybanthus aurantiacus	0.4	0.1
Amaranthus undulatus	0.9	0.1
Aristida holathera var. *holathera*	0.5	0.1
Arivela uncifera	0.4	0.1
Arivela viscosa	0.6	0.1
Boerhavia coccinea		0.1
Bonamia erecta	0.6	1
Chrysopogon fallax	1	0.2
Corchorus parviflorus	1.2	2
Corymbia hamersleyana	4	0.4
Eragrostis eriopoda	0.3	0.1
Euphorbia clementii (P3)	0.3	0.1
Euphorbia trigonosperma	0.4	0.1
Euploca skeleton	0.5	0.1
Fimbristylis simulans	0.2	0.1
Goodenia microptera		
Goodenia stobbsiana		

Taxon Name	Avg. Height	Cover Alive
Gossypium australe	1.2	0.1
Grevillea wickhamii		
Hibiscus leptocladus		
Hibiscus sturtii var. *campylochlamys*	0.5	0.1
Indigofera monophylla	0.6	0.1
Isotropis atropurpurea		
Jasminum didymum subsp. *lineare*	1.2	0.1
Panicum australiense var. *australiense*	0.2	0.1
Paraneurachne muelleri	0.5	0.2
Portulaca oleracea		
Ptilotus astrolasius	0.6	0.1
Ptilotus axillaris		0.1
Ptilotus calostachyus		
Ptilotus fusiformis	0.4	0.1
Senna notabilis	0.2	0.1
Senna symonii	0.2	0.1
Sida arenicola	2	0.5
Solanum phlomoides	0.3	0.1
Sporobolus australasicus	0.2	0.1
Streptoglossa decurrens		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tinospora smilacina		0.1
Trianthema pilosum	0.3	0.1
Trigastrotheca molluginea		
Triodia epactia	0.5	1

PHOTOS



Photo: 01/06/2023



Photo: 10/06/2011

Site Name:	HER021
Site Type:	QUADRAT - Rescore
Dimensions:	25m x 100m
Survey Date:	02/06/2023
GPS Location:	WGS84 Zone 50 674798E 7660480N
Orientation:	210o and 120o from GPS point
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3 degrees)
Aspect:	NE
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Granite, Stone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	ca. 2 years
Habitat:	Acacia shrubland over Triodia grassland with scattered Corymbia

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon lepidum		
Abutilon sp. Pilbara (W.R. Barker 2025)	0.9	0.1
Acacia acradenia	1.8	15
Acacia ancistrocarpa	2.5	0.1
Acacia tumida var. *pilbarensis*	3	30
Afrohybanthus aurantiacus	0.4	0.1
Arivela uncifera		
Arivela viscosa	0.6	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.1
Cassytha capillaris	0.1	0.1
Chrysopogon fallax	1	0.2
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	4	0.5
Cucumis variabilis	0.1	0.1
Dampiera candicans	0.2	0.1

Taxon Name	Avg. Height	Cover Alive
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Eragrostis eriopoda		
Eriachne mucronata	0.4	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia clementii (P3)	0.3	0.1
Euphorbia trigonosperma	0.4	0.1
Euploca cunninghamii		
Euploca skeleton		
Fimbristylis simulans	0.2	0.1
Goodenia forrestii	0.3	0.1
Goodenia microptera		
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.2
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.5	0.1
Jasminum didymum subsp. *lineare*	1.5	0.1
Panicum australiense var. *australiense*	0.1	0.1
Polymeria mollis	0.1	0.1
Polymeria sp. (potentially undescribed)	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus		
Ptilotus exaltatus		
Ptilotus fusiformis	0.4	0.1
Rhynchosia minima	0.1	0.1
Senna notabilis	0.1	0.1
Sida arenicola		
Solanum phlomoides	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tinospora smilacina	0.1	0.1
Trigastrotheca molluginea		
Triodia epactia	0.5	30
Triumfetta johnstonii	0.3	0.1

PHOTOS



Photo: 2/06/2023



Photo: 14/06/2011

Site Name:	HER022
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	WGS84 Zone 50 674964E 7660409N
Orientation:	90o and 180o from GPS point
Landform Type:	Simple Slope
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2 years
Habitat:	Open Acacia and Grevillea shrubland over Triodia grassland
Comments:	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.7	2
Acacia inaequilatera	1.5	0.1
Arivela uncifera	0.1	0.1
Bonamia pilbarensis		
Codonocarpus cotinifolius		
Corchorus parviflorus		
Dampiera candicans		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia clementii (P3)		
Euploca cunninghamii		
Euploca skeleton		
Fimbristylis simulans	0.2	0.1
Goodenia connata		
Goodenia microptera		
Goodenia stobbsiana		
Grevillea wickhamii subsp. *hispidula*	2.8	0.2
Polycarpaea holtzei	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus auriculifolius		
Ptilotus calostachyus	0.2	0.1
Ptilotus fusiformis	0.4	0.1
Senna notabilis	0.1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		
Solanum phlomoides		
Tephrosia clementii		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)		
Tribulus hirsutus	0.1	0.1
Triodia epactia	0.5	0.2
Triodia lanigera	0.4	70
Triodia wiseana	0.6	10

PHOTOS



Photo: 2/06/2023



Photo: 14/06/2011

Site Name:	HER032
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 674379E 7660320N
Orientation:	90o and 180o from GPS point
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3 degrees)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Calcrete (other), <2% bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2-3 years
Habitat:	Open Corymbia woodland over Hakea shrubland over Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Pilbara (W.R. Barker 2025)	0.3	0.1
Acacia acradenia	2.5	50
Acacia ancistrocarpa	2	0.1
Acacia inaequilatera	2	0.1
Acacia tumida var. *pilbarensis*	2.2	0.1
Afrohybanthus aurantiacus	0.2	0.1
Aristida holathera		
Arivela viscosa	0.4	0.1
Bonamia erecta	0.3	0.1
Cassytha capillaris	0.1	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	5	1
Euphorbia clementii (P3)	0.2	0.1
Euphorbia trigonosperma	0.5	0.1
Goodenia forrestii	0.3	0.1
Goodenia microptera		
Goodenia stobbsiana	0.4	0.1

Taxon Name	Avg. Height	Cover Alive
Gossypium australe	0.4	0.1
Grevillea wickhamii		
Hibiscus leptocladus	0.7	0.1
Hibiscus sturtii var. *campylochlamys*	0.5	0.1
Indigofera monophylla	0.3	0.1
Notoleptopus decaisnei	0.3	0.1
Panicum australiense var. *australiense*	0.2	0.1
Paspalidium clementii	0.2	0.1
Pluchea dentex	0.4	0.1
Polycarpaea longiflora	0.4	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea		
Pterocaulon sphacelatum	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus axillaris		
Ptilotus calostachyus	0.3	0.1
Senna notabilis	0.3	0.1
Solanum phlomoides	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Triodia epactia	0.4	20
Triodia wiseana	0.4	0.1

PHOTOS



Photo: 1/06/2023



Photo: 12/06/2011

Site Name:	HER033
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 674411E 7660056N
Orientation:	90o and 180o from GPS point
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Calcrete (other), 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	ca. 2 years
Habitat:	Very open Grevillea shrubland over very open Acacia shrubland over Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	0.2
Afrohybanthus aurantiacus		
Arivela uncifera		
Arivela viscosa	0.3	0.1
Bonamia pilbarensis		
Cassytha capillaris	0.1	0.1
Codonocarpus cotinifolius		
Corchorus parviflorus		
Corymbia hamersleyana	1.8	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.2	0.1
Euphorbia clementii (P3)	0.3	
Euphorbia tannensis		
Euploca cunninghamii		
Goodenia microptera		
Grevillea wickhamii subsp. *hispidula*	3	0.3
Ptilotus axillaris		
Ptilotus clementii	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Solanum phlomoides		
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia clementii		
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea		
Triodia chichesterensis (P3)	0.3	70
Triodia epactia	0.4	0.1
Triodia wiseana	0.5	2

PHOTOS



Photo: 1/06/2023



Photo: 12/06/2011

Site Name:	HER026
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	WGS84 Zone 50 674623E 7659273N
Orientation:	90o and 180o from GPS point
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete (other), <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Granite, Quartz (other)
Disturbance:	Cattle tracks (other)
Fire:	<10 years
Habitat:	Eucalyptus victrix woodland over Corymbia hamersleyana open woodland over Melaleuca shrubland over Triodia grassland over Cyperus sedgeland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Upper Stratum 2:	*Corymbia hamersleyana*
Mid Stratum 1:	*Melaleuca linophylla*
Lower Stratum 1:	*Cyperus vaginatus*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*	0.3	0.1
Acacia acradenia	0.3	0.1
Acacia ancistrocarpa	0.1	0.1
Acacia colei var. *colei*	2	0.1
Acacia coriacea subsp. *pendens*	1.6	0.1
Acacia pyrifolia var. *morrisonii*	0.6	0.1
Acacia pyrifolia var. *pyrifolia*	1.7	0.1
Acacia trachycarpa	2	0.1
Acacia tumida var. *pilbarensis*	2	0.1
**Aerva javanica*	0.4	0.1
Ammannia baccifera	0.1	0.1
Arivela viscosa	0.4	0.1
Cajanus cinereus	0.2	0.1
**Cenchrus ciliaris*	0.6	2

Chrysopogon fallax	1.2	0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus parviflorus	0.7	0.1
Corymbia hamersleyana	5	1
Crotalaria medicaginea var. *neglecta*	0.4	0.1
Cymbopogon ambiguus	0.7	0.1
Cyperus vaginatus	1	2
Eragrostis tenellula	0.1	0.1
Eucalyptus victrix	10	5
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.6	0.1
Euphorbia trigonosperma	0.3	0.1
Euploca vestita	0.1	0.1
Hakea lorea subsp. *lorea*	1.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.4	0.1
Jasminum didymum subsp. *lineare*	1	0.1
Melaleuca linophylla	4	3
Nellica maderaspatensis	0.4	0.1
Notoleptopus decaisnei	0.1	0.1
Pluchea rubelliflora	0.1	0.1
Pluchea tetranthera	0.4	0.1
Ptilotus astrolasius	0.3	0.1
Rhynchosia minima		0.1
Salsola australis	0.6	0.1
?*Schenkia australis*	0.1	0.1
Sesbania cannabina	0.6	0.1
Solanum phlomoides	0.2	0.1
Stemodia grossa	0.4	0.1
Tephrosia rosea var. *clementii*	0.9	0.1
Triodia epactia	0.6	40
Waltheria indica	0.3	0.1

PHOTOS





Site Name:	HER034
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 673706.0652E 7658679.963N
Orientation:	240o and 150o from GPS point
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Aspect:	NE
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete (other), <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Shale, Riverstones (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing, Weeds
Fire:	5+ years
Habitat:	Open Eucalyptus woodland over open Acacia shrubland over Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus victrix*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Cymbopogon ambiguus*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*	0.6	0.1
Acacia acradenia	3	2
Acacia colei var. *colei*	2	0.1
Acacia pyrifolia var. *pyrifolia*	2.5	5
**Aerva javanica*	0.9	0.1
Afrohybanthus aurantiacus	0.1	0.1
Amaranthus undulatus	0.8	0.1
Arivela viscosa	0.7	0.1
Boerhavia coccinea		0.1
Boerhavia gardneri	0.1	0.1
Boerhavia schomburgkiana		0.1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	1.2	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.5	0.3

Chrysopogon fallax	1	0.2
Corchorus parviflorus	0.5	0.1
Corchorus tridens		0.1
Corymbia hamersleyana	6	1
Crotalaria medicaginea var. *neglecta*	0.7	0.1
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.2	0.1
Cucumis variabilis		0.1
Cullen leucochaites	0.4	0.1
Cymbopogon ambiguus	1.1	1
Cyperus vaginatus	1	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.2	0.1
Enneapogon caerulescens	0.2	0.1
Eragrostis tenellula	0.2	0.1
Eriachne benthamii	0.4	0.1
Eriachne mucronata	0.3	0.1
Eucalyptus victrix	10	2
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euphorbia trigonosperma	0.2	0.1
**Flaveria trinervia*	0.3	0.1
Flueggea virosa subsp. *melanthesoides*	1.7	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	1.3	0.1
Grevillea wickhamii	3.5	0.1
Hibiscus coatesii	0.3	0.1
Indigofera linifolia	0.1	0.1
Indigofera monophylla	0.6	0.1
Jasminum didymum subsp. *lineare*		0.1
Lepidium ?pholidogynum		0.1
Melaleuca linophylla	2	0.1
Nellica maderaspatensis	0.3	0.1
Nicotiana benthamiana	0.3	0.1
Notoleptopus decaisnei	0.2	0.1
Paspalidium clementii	0.1	0.1
Pluchea rubelliflora	0.2	0.1
Polymeria mollis		0.1
Portulaca oleracea	0.1	0.1
Pterocaulon sphacelatum	0.2	0.1
Ptilotus auriculifolius	0.2	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	2	0.1
Senna notabilis	0.1	0.1
Solanum horridum	0.2	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1

Stemodia grossa	0.2	0.1
Swainsona formosa	0.3	0.1
Tephrosia rosea var. *clementii*	0.5	0.1
Themeda triandra	1	0.1
Trachymene oleracea subsp. *oleracea*	0.4	0.1
**Trianthema portulacastrum*		0.1
Triodia brizoides	0.4	0.1
Triodia epactia	0.7	70
Triodia longiceps	0.7	0.1
Triodia wiseana	0.4	1
Triumfetta clementii	0.1	0.1
Triumfetta propinqua	0.2	0.1

PHOTOS





Site Name:	HER038
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 672479E 7657214N
Orientation:	90o and 180o from GPS point
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3 degrees)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Calcrete, Shale (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2 years
Habitat:	Open Corymbia woodland over Acacia shrubland over Triodia wiseana grassland over open Cyperus sedgeland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia wiseana*
Lower Stratum 2:	*Cyperus vaginatus*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*	0.1	0.1
Acacia acradenia	2.5	50
Acacia ampliceps	0.3	0.1
Acacia bivenosa	0.4	0.1
Acacia coriacea subsp. *pendens*	3	0.1
Acacia inaequilatera	2	0.1
Acacia tumida var. *pilbarensis*	3	0.2
**Aerva javanica*	0.1	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.2	0.1
Aristida holathera var. *holathera*	0.3	0.1
Arivela viscosa	0.2	0.1
Boerhavia burbidgeana	0.1	0.1
Boerhavia gardneri	0.2	0.1
Bonamia pilbarensis	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Bonamia pilbarensis		0.1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	0.1	0.1
Cassytha capillaris		0.2
**Cenchrus ciliaris*	0.6	0.1
Clerodendrum tomentosum var. *tomentosum*	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	5	1
Crotalaria medicaginea var. *neglecta*	0.3	0.1
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.1	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	1.1	0.1
Cyperus vaginatus	0.8	2
Dactyloctenium radulans	0.1	0.1
Dodonaea coriacea	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.2	0.1
Enneapogon lindleyanus	0.3	0.1
Eragrostis cumingii	0.2	0.1
Eragrostis speciosa	0.9	0.1
Eragrostis tenellula	0.3	0.1
Eriachne aristidea	0.2	0.1
Eriachne obtusa	0.2	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	1	0.1
Euphorbia trigonosperma	0.2	0.1
Euploca cunninghamii	0.3	0.1
**Flaveria trinervia*	0.1	0.1
Flueggea virosa subsp. *melanthesoides*	1.6	0.1
Goodenia microptera	0.3	0.1
Goodenia muelleriana	0.3	0.1
Gossypium australe	1.5	0.1
Grevillea wickhamii subsp. *hispidula*	3.5	0.2
Hibiscus coatesii	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera linifolia	0.1	0.1
Indigofera monophylla	0.4	0.1
Jasminum didymum subsp. *lineare*	1.5	0.1
Notoleptopus decaisnei	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
**Passiflora foetida* var. *hispida*		0.1
**Passiflora foetida* var. *hispida*		0.1
Pluchea rubelliflora	0.4	0.1
Polymeria mollis		0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.3	0.1
Ptilotus axillaris	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus calostachyus	1	0.1
Ptilotus exaltatus	0.2	0.1
Rhynchosia minima		0.1
Salsola australis	0.2	0.1
Senna artemisioides subsp. *oligophylla*	0.3	0.1
Senna glutinosa subsp. *glutinosa*	0.2	0.1
Senna notabilis	0.1	0.1
Senna symonii	0.5	0.1
Senna venusta	1.6	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	1	2
Sporobolus australasicus	0.1	0.1
Stemodia grossa	0.6	0.1
Streptoglossa decurrens	0.2	0.1
Swainsona formosa	0.5	0.1
Tinospora smilacina		0.1
**Trianthema portulacastrum*	0.1	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus	0.7	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.8	0.1
Triodia chichesterensis (P3)	0.3	3
Triodia epactia	0.2	0.1
Triodia wiseana	0.7	5

PHOTOS



Photo: 1/06/2023



Photo: 9/06/2011

Site Name:	HER036
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 673592.0567E 7657559.547N
Orientation:	90o and 180o from GPS point
Landform Type:	Hillock
Slope Class:	Steep (23°)
Aspect:	S
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Granite, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Clearing - Road adjacent to quadrat, power station nearby
Fire:	<5 years
Habitat:	Triodia grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673592	7657560	
Corner 2	673640	7657561	
Corner 3	673636	7657513	
Corner 4	673588	7657517	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	0.3	0.1
Boerhavia gardneri		0.1
Bonamia pilbarensis		0.1
Bulbostylis barbata	0.1	0.1
Clerodendrum tomentosum var. *tomentosum*	2.3	0.1
Corchorus parviflorus	0.1	0.1
Crotalaria medicaginea var. *neglecta*	0.4	0.1
Cymbopogon ambiguus	0.5	0.1
Dolichocarpa crouchiana	0.1	0.1

Dysphania rhadinostachya subsp. *rhadinostachya*	0.3	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*		0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.5	0.1
Gomphrena cunninghamii	0.2	0.1
Gossypium australe	0.6	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.3	0.1
Hakea lorea subsp. *lorea*		
Indigofera rugosa	0.3	0.1
Paspalidium clementii	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus auriculifolius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.3	0.1
Sporobolus australasicus	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.2	0.1
Tribulus suberosus	0.3	0.1
Triodia chichesterensis (P3)	0.3	0.1
Triodia epactia	0.4	50
Triodia wiseana	0.3	0.1
Triumfetta clementii	0.1	0.1

PHOTOS





Site Name:	HER056
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 670564E 7657000N
Orientation:	90o and 180o from GPS point
Landform Type:	Drainage Line, Broad flat (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz, Alluvial material (other)
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Weeds
Fire:	<5 and >5
Habitat:	Open woodland over tall shrubland over hummock grassland
Comments:	Weeds

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Indigofera monophylla*, *Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.5	0.1
Acacia pyrifolia var. *pyrifolia*	4	5
Acacia tumida var. *pilbarensis*	4	5
**Aerva javanica*	0.5	1
Afrohybanthus aurantiacus	0.3	0.1
Amaranthus undulatus	1	0.5
Arivela viscosa	0.3	0.2
Boerhavia coccinea	0.1	0.1
Boerhavia gardneri	0.2	0.1
Bulbostylis barbata	0.1	0.1
**Cenchrus ciliaris*	0.3	0.1
Clerodendrum tomentosum var. *tomentosum*	0.5	0.1
Corchorus parviflorus	0.3	0.1

Corchorus tridens	0.1	0.1
Corymbia hamersleyana	8	2
Cucumis variabilis	0.1	0.2
Cyperus hesperius	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.3	0.2
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.2	0.1
Euphorbia careyi	0.1	0.2
Flueggea virosa subsp. *melanthesoides*	3	0.1
Gomphrena cunninghamii	0.3	0.1
Gossypium australe	0.5	0.2
Grevillea wickhamii subsp. *hispidula*	2	0.1
Indigofera monophylla	0.3	10
Jasminum didymum subsp. *lineare*	2	0.1
Melhania oblongifolia	0.3	0.1
Nellica maderaspatensis	0.4	0.1
Notoleptopus decaisnei	0.3	0.3
Operculina aequisepala	0.1	0.1
Paspalidium clementii	0.2	0.1
Paspalidium tabulatum	0.3	1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.1	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Pterocaulon sphacelatum	0.3	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Salsola australis	1	0.3
Senna artemisioides subsp. *oligophylla*	0.4	0.1
Senna glutinosa subsp. *glutinosa*	2	0.1
Senna notabilis	0.1	0.1
Solanum phlomoides	0.1	0.1
Sporobolus australasicus	0.2	0.1
Striga squamigera	0.1	0.1
Tephrosia rosea var. *clementii*	0.4	0.1
Trachymene oleracea subsp. *oleracea*	0.2	0.1
Trianthema pilosum	0.1	0.1
**Trianthema portulacastrum*	0.2	0.4
Tribulus suberosus	0.4	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	20
Triodia wiseana	0.3	10
Triumfetta propinqua	0.2	0.1

PHOTOS





Site Name:	HER057
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 670404E 7656854N
Orientation:	90o and 180o from GPS point
Landform Type:	Hillock
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Loam
Soil Colour:	Red
Rock Outcrop:	Granite, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Open shrubland over hummock grassland
Comments:	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.5
Acacia ancistrocarpa	0.3	0.1
Acacia inaequilatera	3	0.3
Arivela viscosa	0.2	0.1
Boerhavia coccinea	0.1	0.1
Corchorus parviflorus	0.1	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.3
Goodenia stobbsiana	0.3	0.2
Grevillea pyramidalis subsp. *leucadendron*	1.5	0.2
Grevillea wickhamii subsp. *hispidula*	3	0.5
Indigofera monophylla	0.3	0.3
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.3	0.1

Ptilotus calostachyus	0.4	0.1
Tribulus suberosus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.3	70
Triodia wiseana	0.3	0.1

PHOTOS





Site Name:	HER058
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 670502E 7657398N
Orientation:	90o and 180o from GPS point
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Open shrubland over hummock grassland
Comments:	Reduced species due to time since last fire

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	3	2
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.3	0.2
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.3	0.1
Euphorbia careyi	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.2
Indigofera monophylla	0.3	0.1
Paspalidium clementii	0.1	0.1

Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Tephrosia clementii	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	1.5	0.1
Triodia epactia	0.3	30
Triodia wiseana	0.4	40

PHOTOS





Site Name:	HER064
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 670859E 7659946N
Orientation:	90o and 180o from GPS point
Landform Type:	Crest, Hillock, Upper slope (other)
Slope Class:	Precipitous (60°)
Soil Type:	Loam
Soil Colour:	Red
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm, >2000mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<2 years
Habitat:	Shrubland over hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670857	7659947	
Corner 2	670863	7659896	
Corner 3	670912	7659898	
Corner 4	670904	7659947	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ancistrocarpa*, *Grevillea wickhamii* subsp. *hispidula*

Lower Stratum 1: *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.5	0.5
Acacia ancistrocarpa	2	1
Acacia inaequilatera	0.5	0.1
Amaranthus undulatus	0.4	0.2
Arivela viscosa	0.4	0.1
Boerhavia coccinea	0.2	0.1
Boerhavia gardneri	0.2	0.1
Bulbostylis barbata	0.1	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1

Dysphania rhadinostachya subsp. *rhadinostachya*	0.3	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne mucronata	0.3	0.2
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	0.4	1
Grevillea wickhamii subsp. *hispidula*	3	0.1
Hibiscus coatesii	0.3	0.1
Indigofera monophylla	0.3	0.1
Nicotiana benthamiana	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.4	0.1
Ptilotus calostachyus	0.8	0.1
Senna glutinosa subsp. *pruinosa*	0.3	0.1
Solanum phlomoides	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Tribulus suberosus	0.1	0.1
Triodia epactia	0.3	0.2
Triodia wiseana	0.4	50

PHOTOS





Site Name:	HER067
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 672736E 7657385N
Orientation:	90o and 180o from GPS point
Landform Type:	Upper Slope
Slope Class:	Very Steep (37 degrees)
Aspect:	S
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Granite, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	Mosaic of 1-2 years and > 5 years
Habitat:	Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	0.8	0.1
Arivela viscosa	0.2	0.1
Boerhavia gardneri		0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Cullen leucochaites	0.5	0.1
Cullen leucochaites	0.5	0.1
Cymbopogon ambiguus	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.6	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.1	0.1
Goodenia muelleriana	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Goodenia stobbsiana	0.1	0.1
Gossypium australe	0.6	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.8	0.1
Hibiscus coatesii	0.2	0.1
Indigofera linifolia	0.1	0.1
Indigofera monophylla	0.3	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus clementii	0.4	0.1
Ptilotus exaltatus	0.1	0.1
Rhynchosia minima		0.1
Salsola australis	0.2	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.1	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa odora	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus	0.5	0.1
Tribulus suberosus	0.3	0.1
Triodia brizoides	0.6	1
Triodia chichesterensis (P3)	0.3	90
Triodia wiseana	0.5	1.5

PHOTOS



Photo: 1/06/2023

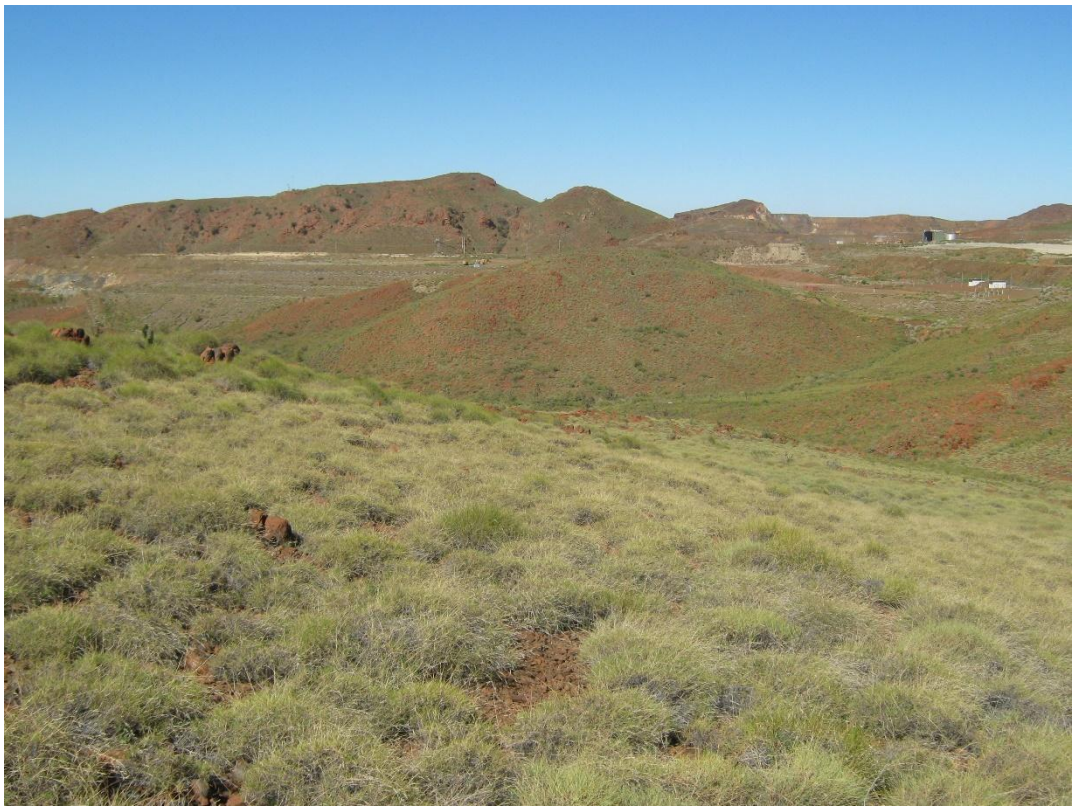


Photo: 9/06/2011

Site Name:	HER069
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	WGS84 Zone 50 673689E 7659945N
Orientation:	90o and 180o from GPS point
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Grazing - cattle, Clearing - Fresh track adjacent
Fire:	<2 years
Habitat:	Open Acacia shrubland over Triodia grassland with scattered Corymbia
Comments:	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.1
Acacia inaequilatera	2.5	10
Acacia pyrifolia var. *pyrifolia*	2.7	0.1
Acacia tumida var. *pilbarensis*	0.5	0.1
Aristida holathera var. *holathera*	0.5	0.1
Arivela uncifera	0.1	0.1
Arivela viscosa	0.4	0.1
Boerhavia coccinea	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cassytha capillaris	0.1	0.1
Chrysopogon fallax	0.9	0.1
Corchorus parviflorus	0.7	0.1

Corymbia hamersleyana	4	0.2
Cucumis variabilis	0.1	0.1
Cullen martinii	0.3	0.1
Eragrostis eriopoda	0.3	0.1
Eriachne aristidea	0.3	0.1
Eriachne obtusa	0.4	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia clementii (P3)	0.4	0.1
Euphorbia tannensis subsp. *eremophila*	0.7	0.1
Goodenia forrestii	0.3	0.1
Gossypium australe	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	1.8	0.1
Hakea lorea subsp. *lorea*	1.2	0.1
Hibiscus leptocladus	0.3	0.1
Indigofera colutea	0.1	0.1
Indigofera monophylla	0.3	0.1
Jasminum didymum subsp. *lineare*	1	0.1
Mitrasacme connata	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.4	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Schizachyrium fragile	0.4	0.1
Senna notabilis	0.1	0.1
Sida echinocarpa	0.3	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trianthema pilosum	0.2	0.2
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	5
Triodia lanigera	0.7	60

PHOTOS





Site Name:	HER070
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	WGS84 Zone 50 674301E 7660500N
Orientation:	90o and 180o from GPS point
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2-3 years
Habitat:	Acacia shrubland over Triodia grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.3	0.1
Acacia ancistrocarpa	3	40
Acacia inaequilatera	2	0.1
Arivela viscosa	0.3	0.1
Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.2	0.1
Euphorbia clementii (P3)	0.3	0.1
Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Euploca cunninghamii		
Goodenia microptera		
Gossypium australe	0.3	0.1
Grevillea wickhamii		
Indigofera monophylla	0.4	0.1
Panicum australiense var. *australiense*	0.2	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus fusiformis	0.5	0.1
Senna notabilis	0.2	0.1
Solanum phlomoides	0.3	0.1
Trianthema pilosum	0.2	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea		
Triodia epactia	0.4	0.1
Triodia lanigera	0.4	50

PHOTOS



Photo: 1/06/2023



Photo: 14/06/2011

Site Name:	TRH052
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 671815E 7653405N
Landform Type:	Crest
Slope Class:	Moderately Inclined (10 degrees)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Depth:	Skeletal
Rock Outcrop:	Ironstone, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	600-2000mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 5 years
Comments:	Updated species from old Atlas10-08 quadrat

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	3
Acacia spondylophylla	0.4	6
Afrohybanthus aurantiacus	0.2	0.1
Boerhavia gardneri	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.8	0.5
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.1
Dampiera candicans	0.2	0.2
Dolichocarpa crouchiana	0.1	0.1
Dolichocarpa crouchiana	0.2	0.1
Eriachne mucronata	0.3	2
Euphorbia careyi	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca cunninghamii	0.1	0.1
Euploca skeleton	0.4	0.1
Goodenia microptera	0.3	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea pyramidalis subsp. *leucadendron*	0.6	0.4
Grevillea wickhamii	0.4	0.1
Hibiscus coatesii	0.1	0.1
Indigofera monophylla	0.1	0.3

Taxon Name	Avg. Height	Cover Alive
Pluchea tetranthera	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.2	0.1
Ptilotus exaltatus	0.1	0.1
Ptilotus incanus	0.4	0.1
Senna glutinosa subsp. *glutinosa*	2	0.2
Senna notabilis	0.2	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.5	0.1
Streptoglossa decurrens	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus	0.2	0.1
Tribulus suberosus	0.4	0.1
Triodia brizoides	0.2	20
Triodia wiseana	0.3	64
Triumfetta maconochieana	0.2	0.1
Triumfetta propinqua	0.6	0.1
Triumfetta propinqua	0.1	0.1

PHOTOS



Photo: 28/06/2018

Site Name:	TRH058
Site Type:	QUADRAT - Rescore
Dimensions:	25m x 100m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 673796E 7653684N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	ENE
Soil Type:	Sandy Loam
Soil Colour:	Red
Soil Depth:	Shallow
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	River stones (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2 years
Comments:	Updated species from old Atlas10-08 quadrat

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon otocarpum	0.2	0.1
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.6	0.1
Acacia pyrifolia var. *pyrifolia*	2	35
Acacia tumida var. *pilbarensis*	1	3
Afrohybanthus aurantiacus	0.1	0.5
Amaranthus undulatus	1	0.5
Aristida holathera var. *holathera*	0.5	0.1
Arivela viscosa	0.1	0.1
Boerhavia coccinea	0.1	0.1
Boerhavia gardneri	0.3	0.2
Cajanus pubescens	0.4	0.2
**Calotropis procera*	0.7	0.1
**Cenchrus ciliaris*	0.1	0.1
Chrysopogon fallax	0.2	3
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	1.8	15
Cucumis variabilis	0.5	0.1
Cymbopogon ambiguus	0.3	3
Cyperus hesperius	0.2	0.1
Dolichocarpa crouchiana	0.2	0.1
Enneapogon caerulescens	0.2	0.1
Enneapogon lindleyanus	0.5	0.1
Eriachne mucronata	0.1	2
Eriachne tenuiculmis	0.2	5
Eucalyptus victrix	1.6	10

Taxon Name	Avg. Height	Cover Alive
Euphorbia careyi	0.1	0.1
Euphorbia clementii (P3)	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.7	0.1
Euploca tenuifolia	0.1	0.1
Goodenia microptera	0.4	0.1
Gossypium australe	0.3	3
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.4	5
Jasminum didymum subsp. *lineare*		0.5
Melaleuca linophylla	2	3
Nellica maderaspatensis	0.3	0.1
Notoleptopus decaisnei	0.5	0.1
Paspalidium clementii	0.1	0.1
Polymeria mollis	0.1	1
Pterocaulon sphacelatum	0.6	0.1
Ptilotus auriculifolius	0.3	0.2
Ptilotus exaltatus	0.3	0.1
Rhynchosia minima		0.3
Senna notabilis	0.1	0.3
Solanum phlomoides	0.2	0.1
Stemodia grossa	0.3	0.1
Streptoglossa odora	0.4	0.1
Swainsona formosa	0.2	0.1
Tephrosia rosea var. *clementii*	0.2	0.1
Themeda triandra	0.7	0.1
Tribulus suberosus	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.9	0.1
Triodia epactia	0.4	1
Triodia wiseana	0.1	0.5
Triumfetta propinqua	0.4	0.3

PHOTOS



Photo: 31/05/2023



Photo: 28/06/2018

Site Name:	TRH060
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 674326E 7654183N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Moderately Inclined (10 degrees)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Depth:	Skeletal
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm, 2-6mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	2-3 years
Comments:	Updated species from old Atlas10-08 quadrat. Placed in ecotone. Part burn since quadrat established

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1	0.3
Acacia maitlandii	1.5	2
Acacia orthocarpa	1.5	25
Acacia spondylophylla	0.4	10
Acacia stellaticeps	0.8	4
Acacia tumida var. *pilbarensis*	2	3
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	8	1.5
Dampiera candicans	0.5	0.2
Eriachne pulchella subsp. *pulchella*	0.2	0.1
Euphorbia tannensis subsp. *eremophila*	0.6	0.1
Euploca cunninghamii		
Euploca tenuifolia	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.3	0.1
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	2	3
Hibiscus coatesii	0.2	0.1
Pluchea tetranthera	0.4	0.2
Ptilotus calostachyus	1.2	0.1

Taxon Name	Avg. Height	Cover Alive
Scaevola browniana subsp. *browniana*	0.5	0.1
Senna notabilis	0.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum diversiflorum	0.4	0.1
Solanum horridum	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Trigastrotheca molluginea		
Triodia brizoides	0.3	65
Triodia epactia	0.4	25
Triodia lanigera	0.6	0.1

PHOTOS

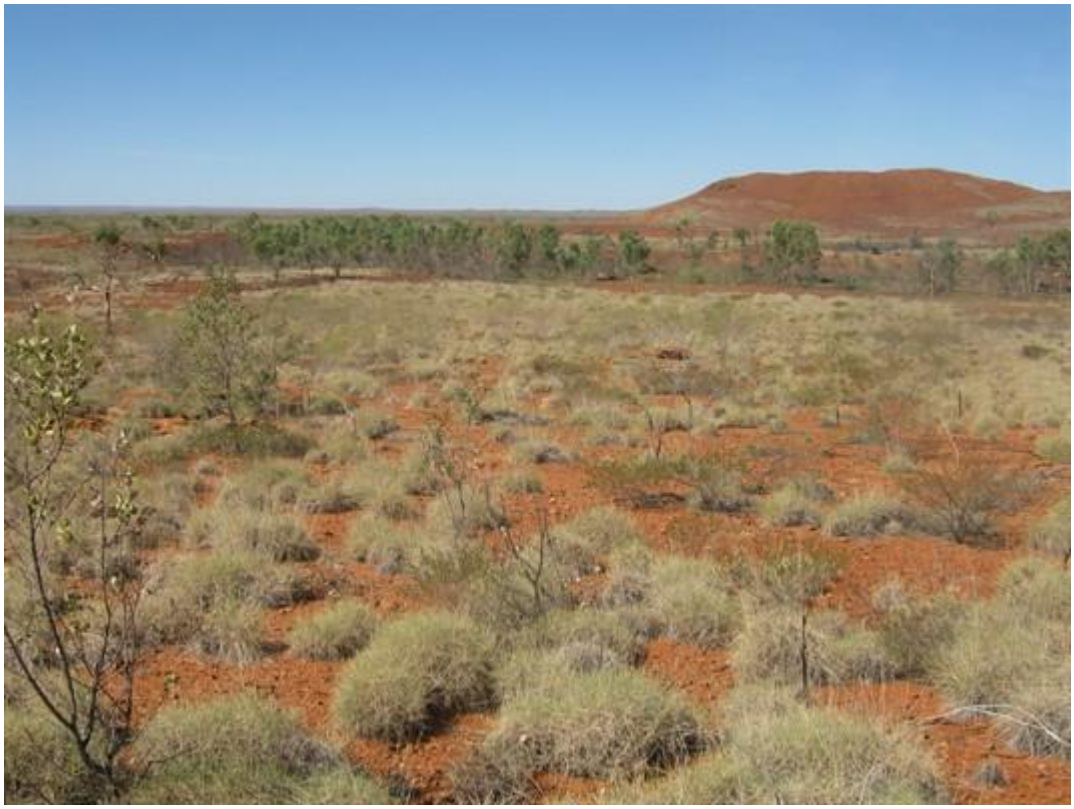


Photo: 31/05/2023

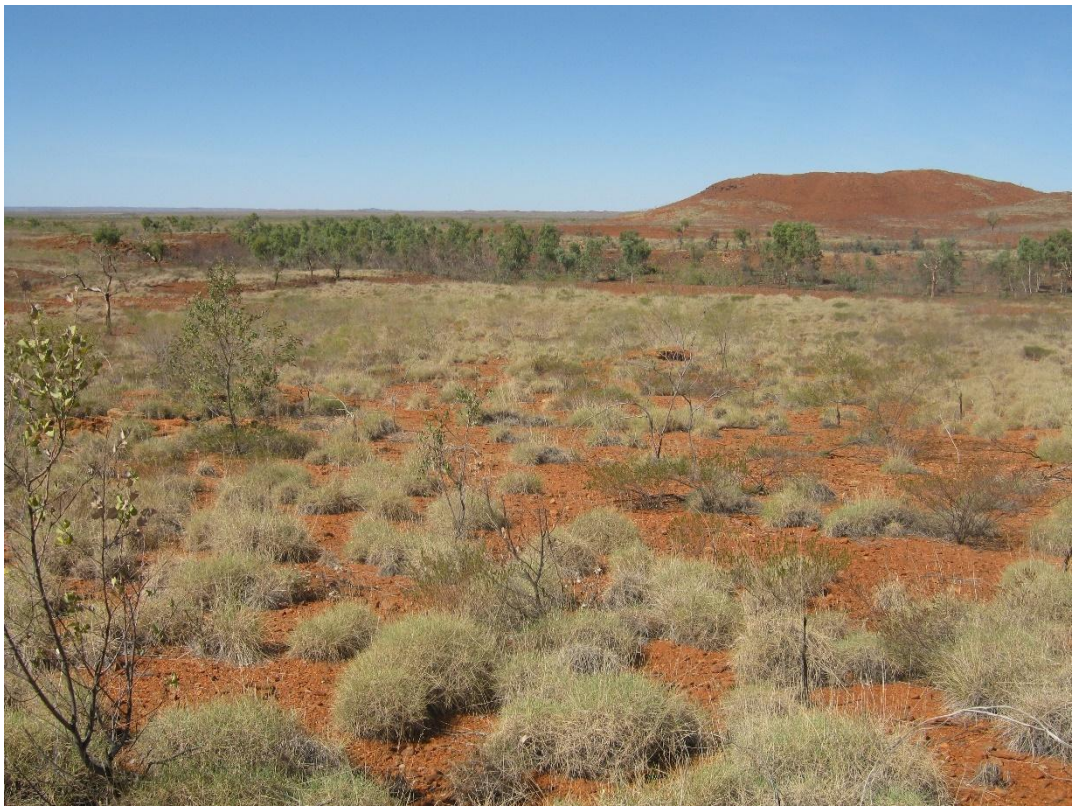


Photo: 28/06/2018

Site Name:	TRH067
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 675351E 7655801N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	E
Soil Type:	Sandy Loam
Soil Colour:	Red
Soil Depth:	Skeletal
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 2 years
Comments:	Updated species from old Atlas10-08 quadrat

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.5
Acacia orthocarpa	2.2	4
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corymbia hamersleyana	4	1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella subsp. *pulchella*	0.1	0.1
Euploca cunninghamii	0.1	0.1
Euploca skeleton	0.5	0.1
Goodenia microptera	0.4	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	0.3	0.1
Indigofera monophylla	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.3	0.1
Senna glutinosa subsp. *pruinosa*	1.2	0.5
Solanum horridum	0.1	0.1
Solanum phlomoides	0.3	0.1
Streptoglossa decurrens	0.4	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia epactia	0.3	4
Triodia lanigera	0.3	88

PHOTOS



Photo: 31/05/2023



Photo: 2/07/2018

Site Name:	WD01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 676365E 7663344N
Orientation:	0/270
Landform Type:	Other, Stony plain (other)
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 5 years + an unburnt patch
Habitat:	Hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia synchronicia	0.5	0.1
**Cenchrus ciliaris*	0.4	0.1
Corchorus parviflorus	0.3	0.1
Cynodon prostratus	0.1	0.1
Enchylaena tomentosa	0.6	0.1
Eragrostis setifolia	0.2	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca pachyphylla	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.1	0.1
Maireana sp.	0.4	0.1
Nellica maderaspatensis	0.2	0.1
Portulaca ?cyclophylla	1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus exaltatus	0.3	0.1
Senna notabilis		
Sida fibulifera	0.2	0.1
Solanum diversiflorum	0.2	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa decurrens	0.2	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia longiceps	0.5	45

PHOTOS



Photo: 27/05/2023



Photo: 26/06/2018

Site Name:	WD02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677314E 7661282N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Clayey Sand
Soil Colour:	Red
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz (other)
Disturbance:	Ground disturbance (other)
Fire:	<3 years
Comments:	Minor soil disturbance on road verge; pushed up debris

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Lower Stratum 1:	*Acacia stellaticeps*
Lower Stratum 2:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.2	0.1
Acacia orthocarpa	2	2
Acacia stellaticeps	0.6	0.2
Aristida holathera var. *holathera*	0.3	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Eragrostis eriopoda	0.2	0.1
Eriachne pulchella	0.1	0.1
Euploca skeleton	0.4	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Indigofera monophylla	0.4	0.1
Panicum australiense var. *australiense*	0.1	0.1
Pluchea tetranthera	0.4	0.1
Ptilotus astrolasius	0.4	0.1

Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.2	0.1
Triodia lanigera	0.3	2

PHOTOS





Site Name:	WD04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 676965E 7660809N
Orientation:	90/180
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	SW
Soil Type:	Clayey Sand
Soil Colour:	Orange
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Fire:	<3 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	2.5	3.5
Acacia tumida var. *pilbarensis*	1.2	0.5
Afrohybanthus aurantiacus	0.4	0.1
Aristida contorta	0.1	0.1
Aristida holathera var. *holathera*	0.5	0.1
Arivela uncifera	0.1	0.1
Arivela viscosa	0.7	0.1
Bonamia alatisemina	0.1	0.1
Bonamia media		
Bonamia pannosa	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.5	0.1
Euphorbia vaccaria var. *vaccaria*		0.1
Euploca skeleton	0.4	0.1
Euploca vestita	0.1	0.1
Evolvulus alsinoides var. *decumbens*	0.2	0.1
Evolvulus alsinoides var. *villosicalyx*	0.2	0.1

Fimbristylis dichotoma	0.3	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.4	0.1
Grona filiformis	0.1	0.1
Hibiscus leptocladus	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.5	0.1
Indigofera monophylla	0.2	0.1
Ipomoea muelleri		0.1
Isotropis atropurpurea	0.7	0.1
Panicum australiense var. *australiense*	0.1	0.1
Pluchea ferdinandi-muelleri	0.5	0.1
Pluchea tetranthera	0.6	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.8	0.1
Ptilotus exaltatus	0.3	0.1
Rhynchosia minima		0.1
Schizachyrium fragile	0.2	0.1
Senna notabilis	0.1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum diversiflorum	0.5	0.2
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa decurrens	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tephrosia virens	0.9	0.1
Trachymene oleracea subsp. *oleracea*	1.2	0.2
Tribulus hirsutus	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.9	20
Triodia lanigera	0.8	1
Tripogonella loliiformis	0.1	0.1
Triumfetta johnstonii	0.6	0.1
Zornia albiflora	0.1	0.1

PHOTOS





Site Name:	WD11
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	GDA94 Zone 50 672173E 7656268N
Orientation:	320/50
Landform Type:	Upper Slope
Slope Class:	Steep (23 degrees)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Metamorphic (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Metamorphic, Quartz (other)
Fire:	>10 years
Habitat:	Isolated low trees over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.3
Boerhavia gardneri	0.4	0.1
Bulbostylis barbata	0.1	0.1
Cheilanthes contigua	0.1	0.1
Clerodendrum tomentosum var. *tomentosum*	0.5	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	2.5	0.3
Cymbopogon ambiguus	0.1	0.1
Dampiera candicans	0.5	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.2	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4	1
Euphorbia careyi	0.1	0.1
Fimbristylis simulans	0.1	0.1
**Flaveria trinervia*	0.3	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	1	0.2
Hakea lorea subsp. *lorea*	1.5	0.2
Indigofera monophylla	0.1	0.1
Jasminum didymum subsp. *lineare*	1	0.1
Polycarpaea holtzei	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus auriculifolius	0.1	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus exaltatus	0.4	0.1
Ptilotus incanus	0.2	0.1
Salsola australis	0.5	0.1
Senna glutinosa subsp. *glutinosa*	0.2	0.1
Senna notabilis	0.2	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.1	0.1
Tinospora smilacina		0.1
Trachymene oleracea	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus suberosus	0.6	0.1
Triodia brizoides	0.1	3
Triodia wiseana	0.5	35
Triumfetta maconochieana	0.1	0.1

PHOTOS



Photo: 1/06/2023



Photo: 27/06/2018

Site Name:	WD12
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 677015E 7661962N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	NW
Soil Type:	Sandy Clay
Soil Colour:	Light brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz (other)
Fire:	2-3 years
Comments:	Red sandy clay drainage line passing through quadrat

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia orthocarpa*
Lower Stratum 1:	*Triodia angusta*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa		
Acacia bivenosa	1.3	0.1
Acacia inaequilatera	1.3	0.1
Acacia orthocarpa	2	0.2
Acacia stellaticeps	0.8	0.1
Afrohybanthus aurantiacus	0.4	0.1
Bonamia pilbarensis	0.1	0.1
**Cenchrus ciliaris*	0.4	0.1
Chrysopogon fallax	1	0.1
Codonocarpus cotinifolius	3	0.1
Corchorus parviflorus	0.2	0.1
Corymbia hamersleyana	4	0.3
Euphorbia clementii (P3)	0.2	0.1
Euphorbia tannensis		
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca cunninghamii		
Euploca pachyphylla		
Euploca tenuifolia	0.1	0.1
Goodenia microptera	0.3	0.1
Indigofera monophylla	0.4	0.1

Taxon Name	Avg. Height	Cover Alive
Nellica maderaspatensis		
Panicum australiense var. *australiense*	0.1	0.1
Pluchea ferdinandi-muelleri	0.6	0.1
Pluchea tetranthera	0.5	0.1
Polymeria mollis	0.1	0.1
Polymeria mollis		
Ptilotus astrolasius	0.2	0.1
Ptilotus axillaris		0.1
Rhynchosia minima		0.1
Senna notabilis	0.1	0.1
Solanum diversiflorum		
Sporobolus australasicus	0.1	0.1
Streptoglossa decurrens		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia angusta	0.7	75
Triodia epactia	0.5	0.1
Triodia wiseana	0.7	0.2

PHOTOS



Photo: 27/06/2018

Site Name:	WD14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 676768E 7661888N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Clay
Soil Colour:	Red-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Fire:	<3 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia bivenosa*
Lower Stratum 1:	*Acacia stellaticeps*
Lower Stratum 2:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.5	2
Acacia sphaerostachya	1.3	0.1
Acacia stellaticeps	0.2	0.2
Bonamia erecta	0.4	0.2
Eriachne pulchella	0.1	0.1
Euploca vestita	0.1	0.1
Goodenia microptera	0.1	0.1
Pluchea tetranthera	0.5	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.8	0.1
Ptilotus exaltatus	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	0.1
Triodia lanigera	0.3	3

PHOTOS





Site Name:	WD19
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 671622E 7654093N
Orientation:	290/200
Landform Type:	Other, Low rise (other)
Slope Class:	Moderately Inclined (10 degrees)
Aspect:	WSW
Soil Type:	Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Dolerite, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Quartz (other)
Fire:	< 5 years
Habitat:	Mid sparse shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	2.5
Acacia inaequilatera	2	0.3
Acacia tumida	0.3	0.1
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Clerodendrum tomentosum var. *tomentosum*	1	0.1
Corchorus parviflorus	0.3	0.1
Crotalaria medicaginea var. *neglecta*	0.4	0.1
Cymbopogon ambiguus	1.2	0.1
Dampiera candicans	0.2	0.1
Dolichocarpa crouchiana	0.2	0.1
Eriachne pulchella subsp. *pulchella*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	1	0.1
Euploca cunninghamii	0.1	0.1
Euploca skeleton	0.5	0.1
Goodenia microptera	0.3	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.5
Hibiscus coatesii	0.2	0.1
Indigofera monophylla	0.1	0.1
Pluchea tetranthera	0.2	0.1
Ptilotus auriculifolius	0.3	0.1

Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.2	0.1
Ptilotus exaltatus	0.1	0.1
Ptilotus incanus	0.3	0.1
Salsola australis	0.1	0.1
Senna notabilis	0.2	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus	0.3	0.1
Triodia brizoides	0.4	15
Triodia chichesterensis (P3)	0.3	15
Triodia wiseana	0.5	25
Triumfetta maconochieana	0.1	0.1

PHOTOS



Photo: 27/06/2018

Site Name:	WD21
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 674174E 7653998N
Orientation:	200/290
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3 degrees)
Aspect:	ESE
Soil Type:	Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Metamorphic (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 5 years
Habitat:	Tall sparse shrubland over low hummock grassland
Comments:	Signs of possible old trickle burning

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.5
Acacia inaequilatera	4.5	4
Arivela uncifera	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.3	0.1
Corchorus parviflorus		
Corymbia hamersleyana	2.5	0.5
Dampiera candicans	0.5	0.1
Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.3	0.1
Euploca skeleton	0.4	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.4	0.1
Indigofera monophylla	0.5	0.1
Ptilotus astrolasius	0.5	0.3
Ptilotus calostachyus	1	0.1
Ptilotus fusiformis	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum phlomoides	0.4	0.1
Streptoglossa decurrens	0.3	0.1
Streptoglossa decurrens	0.2	0.1
Tribulus hirsutus	0.2	0.1
Tribulus platypterus	0.6	0.1

Taxon Name	Avg. Height	Cover Alive
Triodia epactia	0.4	5
Triodia lanigera	0.4	40
Triodia wiseana	0.4	10

PHOTOS



Photo: 28/06/2018

Site Name:	WD20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675286E 7659513N
Orientation:	90/180
Landform Type:	Crest
Slope Class:	Moderately Inclined (10°)
Aspect:	W
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Quartz (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Quartz (other)
Fire:	<5 years

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.6	0.5
Acacia tumida var. *pilbarensis*	2	0.1
Arivela viscosa	0.3	0.1
Bulbostylis barbata	0.1	0.1
Cheilanthes contigua	0.1	0.1
Corymbia hamersleyana	3.5	0.5
Cymbopogon ambiguus	0.6	0.1
Dampiera candicans	0.6	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Euphorbia careyi	0.1	0.1
Ficus brachypoda	3	0.5
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	2	3
Paspalidium tabulatum	0.4	0.1
Polycarpaea holtzei	0.1	0.1

Ptilotus calostachyus	0.3	0.1
Senna venusta	0.4	0.1
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	1.6	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum diversiflorum	0.1	0.1
Solanum phlomoides	0.3	0.1
Tephrosia virens	1.5	0.1
Tribulus suberosus	1.1	0.1
Triodia epactia	0.6	30
Triumfetta maconochieana	0.7	0.1
Triumfetta propinqua	0.4	0.1

PHOTOS







Site Name:	WD26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675815E 7660146N
Orientation:	90/180
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NE
Soil Type:	Sandy Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz (other)
Fire:	3 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.2	0.2
Acacia inaequilatera	0.7	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	1.3	0.1
Dampiera candicans	0.3	0.1
Eriachne pulchella	0.2	0.1
Euploca skeleton	0.4	0.1
Fimbristylis simulans	0.2	0.1
Goodenia obscurata (P3)	0.4	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	1.8	0.1
Indigofera monophylla	0.3	0.1
Pluchea tetranthera	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.6	0.1
Triodia lanigera	0.5	6

PHOTOS







Site Name:	WD29
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 669865E 7653424N
Orientation:	195/105
Landform Type:	Other, Outwash plain (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	> 5 years
Habitat:	Low isolated trees over mid sparse shrubland over low hummock grassland
Comments:	Many species lost due to time since last fire

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.6	0.2
Acacia inaequilatera	2	3
Arivela uncifera	0.3	0.1
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.2	0.8
Corymbia hamersleyana	5	1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Euploca pachyphylla	0.3	0.1
Euploca skeleton	0.4	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.3	0.1
Goodenia stobbsiana	0.3	3
Indigofera monophylla	0.2	0.1
Ptilotus astrolasius	0.5	15
Ptilotus calostachyus	1	0.1
Solanum diversiflorum	0.2	0.1
Tephrosia clementii	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1

Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia brizoides	0.4	20
Triodia chichesterensis (P3)	0.3	3
Triodia wiseana	0.3	0.2

PHOTOS





Site Name:	WD31
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 669634E 7653542N
Orientation:	270/180
Landform Type:	Ridge
Slope Class:	Steep (23°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Dolerite, Shale (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Shale (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Tall isolated shrubs over low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669634	7653545	
Corner 2	669585	7653547	
Corner 3	669583	7653501	
Corner 4	669634	7653501	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.3
**Aerva javanica*	0.5	0.1
Afrohybanthus aurantiacus	0.2	0.1
Arivela viscosa	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.2	0.1
Corchorus parviflorus	0.8	2
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.2	0.1
Cullen leucochaites	2	2
Cymbopogon ambiguus	0.3	0.1
Cyperus hesperius	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.2	0.1
Enneapogon lindleyanus	0.2	0.1

Eriachne mucronata	0.3	0.2
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.2	1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.3	0.1
Gossypium australe	1	0.1
Grevillea wickhamii subsp. *hispidula*	0.3	0.1
Hibiscus coatesii	0.4	0.1
Indigofera rugosa	0.6	0.3
Paspalidium clementii	0.1	0.1
Paspalidium tabulatum	0.4	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.3	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.4	0.1
Ptilotus exaltatus	0.3	0.1
Ptilotus fusiformis	0.3	0.1
Senna glutinosa subsp. *glutinosa*	0.7	0.1
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.2	0.1
Swainsona formosa	0.4	0.1
Tephrosia densa	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.5	0.2
Triodia brizoides	0.3	5
Triodia chichesterensis (P3)	0.3	0.1
Triodia wiseana	0.3	15
Triumfetta maconochieana	0.2	0.1
Triumfetta propinqua	0.3	0.2

PHOTOS





Site Name:	WD33
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 669486E 7653745N
Orientation:	245/335
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Tall open shrubland over low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669487	7653745	
Corner 2	669445	7653716	
Corner 3	669419	7653760	
Corner 4	669456	7653787	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	1	8
Aristida contorta	0.2	0.2
Aristida holathera var. *holathera*	0.4	3
Arivela uncifera	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.6	4
Dampiera candicans	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne aristidea	0.2	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Euphorbia clementii (P3)	0.3	0.1
Euploca cunninghamii	0.2	0.1
Euploca tenuifolia	0.2	0.1
Fimbristylis dichotoma	0.2	0.1

Fimbristylis simulans	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Hibiscus coatesii	1	0.1
Hibiscus leptocladus	0.6	0.2
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.4	0.5
Indigofera rugosa	0.2	0.1
Panicum australiense var. *australiense*	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.2	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	1	0.1
Ptilotus ?exaltatus	0.1	0.1
Ptilotus incanus	0.4	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Senna notabilis	0.2	0.2
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.3	0.4
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia brizoides	0.3	15
Triodia epactia	0.3	0.2
Triodia wiseana	0.3	0.2

PHOTOS





Site Name:	WD35
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 669878E 7654237N
Orientation:	250/160
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Shale (other), <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Calcrete, Quartz, Shale (other)
Fire:	~ 2 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland
Comments:	Many species missing because of time since last fire

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.6	0.1
Acacia acradenia	0.2	0.2
Acacia inaequilatera	3	2
Arivela uncifera	0.3	0.1
Arivela viscosa	0.3	0.1
Boerhavia gardneri	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.2	0.1
Corchorus parviflorus	0.5	25
Corymbia hamersleyana		
Cymbopogon ambiguus	0.5	0.1
Dampiera candicans	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne aristidea	0.3	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	1	0.1
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Hibiscus coatesii	0.3	0.1

Indigofera monophylla	0.3	0.1
Indigofera rugosa	0.4	0.2
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia clementii	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.2	15
Triodia epactia	0.3	0.2
Triodia wiseana	0.3	10

PHOTOS





Site Name:	WD37
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 669822E 7654602N
Orientation:	155/245
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Dolerite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Mid open shrubland over low hummock grassland
Comments:	Many species not present due to time since last fire

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.3	0.1
Acacia inaequilatera	1	0.1
Acacia orthocarpa	1.5	7
Aristida holathera var. *holathera*	0.4	2
Arivela uncifera	0.4	2
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.5	0.1
Bonamia alatisemina	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.6	30
Corymbia hamersleyana	0.2	0.1
Cullen leucochaites	0.2	0.1
Cymbopogon ambiguus	0.7	0.1
Cyperus hesperius	0.2	0.1
Dampiera candicans	0.4	3
Eriachne mucronata	0.5	0.2
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	1.2	0.1
Euploca cunninghamii	0.2	0.1
Fimbristylis dichotoma	0.1	0.1

Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea pyramidalis subsp. *leucadendron*	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.2
Indigofera monophylla	0.3	0.2
Mitrasacme connata	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.1	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Schizachyrium fragile	0.2	0.1
Senna notabilis	0.2	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.4	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia virens	0.4	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.3	10
Triodia epactia	0.3	3
Tripogonella loliiformis	0.1	0.1
Triumfetta clementii	0.2	0.1
Triumfetta propinqua	0.5	0.1

PHOTOS





Site Name:	WD38
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	GDA94 Zone 50 674402E 7657466N
Orientation:	90/180
Landform Type:	Crest
Slope Class:	Steep (23 degrees)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Fire:	< 8 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Gossypium australe*, *Grevillea pyramidalis* subsp. *leucadendron*, *Grevillea wickhamii* subsp. *hispidula*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Corchorus parviflorus*, *Indigofera monophylla*
Lower Stratum 2:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.3	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.2	0.1
Boerhavia gardneri	0.2	0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.2	0.1
Corchorus parviflorus	0.4	0.2
Cucumis variabilis		0.1
Cullen leucochaites		
Cymbopogon ambiguus	0.3	0.1
Cyperus hesperius	0.3	0.1
Eriachne mucronata	0.3	0.1
Euphorbia careyi	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.3	0.1
Goodenia stobbsiana	0.1	0.1
Gossypium australe	1.2	0.2
Grevillea pyramidalis subsp. *leucadendron*	1.2	0.1
Grevillea wickhamii subsp. *hispidula*	1.5	0.1
Hakea lorea subsp. *lorea*	1.6	0.1

Taxon Name	Avg. Height	Cover Alive
Hibiscus coatesii	0.5	0.1
Indigofera monophylla	0.4	0.4
Indigofera rugosa		
Polygala glaucifolia	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Ptilotus incanus	0.2	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	0.1	0.1
Solanum phlomoides	0.2	0.1
Tribulus suberosus	0.5	0.1
Triodia wiseana	0.3	30
Triumfetta propinqua	0.4	0.1

PHOTOS



Photo: 1/06/2023

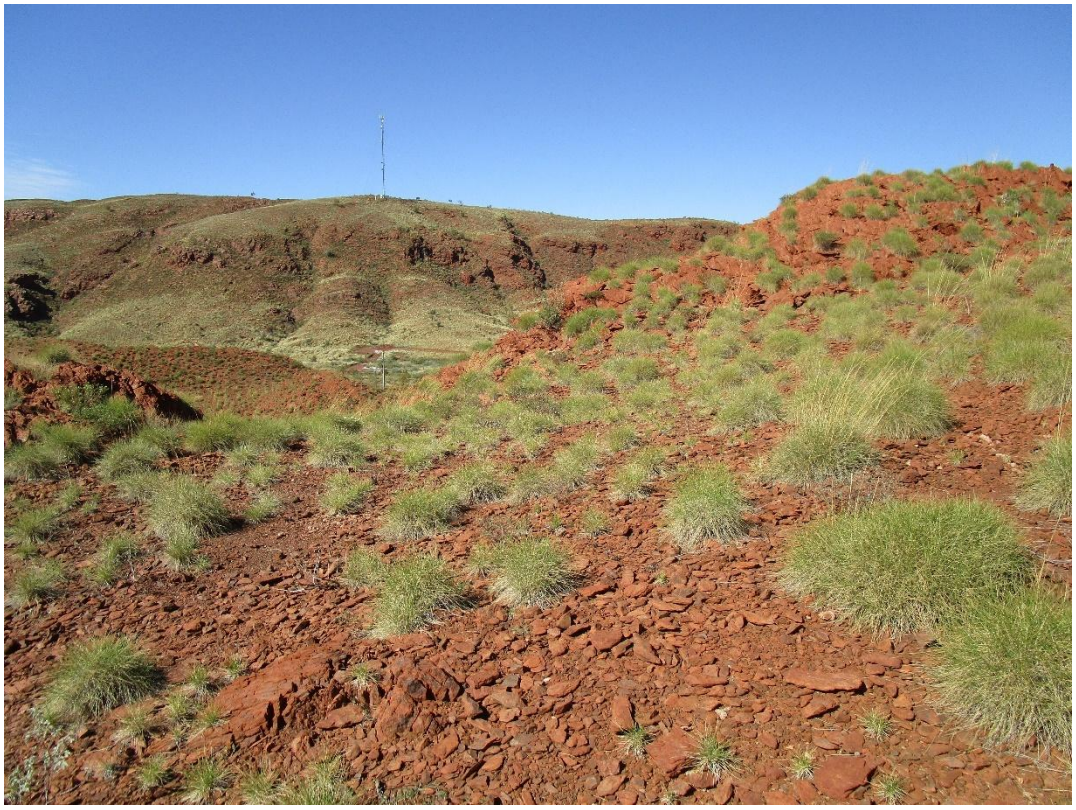


Photo: 29/06/2018

Site Name:	WD40
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 674945E 7657380N
Orientation:	90/180
Landform Type:	Lower Slope
Slope Class:	Steep (23°)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Fire:	<3 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.5
Acacia inaequilatera	2.5	0.1
Bonamia pilbarensis		0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.3	0.1
Cyperus hesperius	0.3	0.1
Dampiera candicans	0.4	0.5
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Euphorbia careyi	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	1.6	0.3
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Senna symonii	0.7	0.1

Solanum phlomoides	0.2	0.1
Tephrosia virens	1.3	0.1
Tribulus suberosus	0.3	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.4	60
Triodia wiseana	0.4	10
Triumfetta propinqua	0.7	0.1

PHOTOS





Site Name:	WD44
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674656E 7658575N
Orientation:	90/180
Landform Type:	Other, Low rise (other)
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Dolerite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Quartz (other)
Fire:	<3

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.3	0.1
Acacia inaequilatera	2.5	2.5
Acacia orthocarpa	1	0.1
Afrohybanthus aurantiacus	0.8	0.1
Boerhavia gardneri	0.3	0.1
Bonamia pilbarensis	0.2	0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	4	2
Euphorbia tannensis subsp. *eremophila*	0.8	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus exaltatus	0.4	0.1
Salsola australis	0.4	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Senna notabilis	0.3	0.1
Swainsona formosa	0.6	0.1

Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus platypterus	0.3	0.1
Triodia chichesterensis (P3)	0.3	35
Triodia wiseana	0.4	1

PHOTOS





Site Name:	WD47
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 670127E 7656414N
Orientation:	310/220
Landform Type:	Ridge
Slope Class:	Very Steep (37°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Dolerite, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Dolerite
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<5
Habitat:	Low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.2	0.1
**Aerva javanica*	0.5	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.3	0.1
Boerhavia gardneri	0.5	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Clerodendrum tomentosum var. *tomentosum*	0.7	0.1
Corchorus parviflorus	0.5	0.2
Cymbopogon ambiguus	0.5	4
Cyperus hesperius	0.3	0.1
Enneapogon lindleyanus	0.3	0.1
Eriachne mucronata	0.3	0.3
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.3	2
Evolvulus alsinoides var. *villosicalyx*	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	1.8	2
Grevillea wickhamii subsp. *hispidula*	0.3	0.1
Hibiscus leptocladus	0.2	0.1
Jasminum didymum subsp. *lineare*		0.1
Nicotiana benthamiana	0.1	0.1
Notoleptopus decaisnei	0.1	0.1

Polycarpaea longiflora	0.2	0.1
Ptilotus auriculifolius	0.1	0.1
Rhynchosia minima		0.2
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.5	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.3	0.1
Terminalia supranitifolia (P3)	2.5	0.3
Tinospora smilacina		0.1
Tribulus suberosus	1	1
Trichosanthes cucumerina var. *cucumerina*		0.1
Triodia brizoides	0.4	0.5
Triodia wiseana	0.5	20
Triumfetta propinqua	0.5	0.2

PHOTOS





Site Name:	WD52
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674821E 7658360N
Orientation:	90/180
Landform Type:	Upper Slope
Slope Class:	Steep (23°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Dolerite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Dolerite, Calcrete, Quartz (other)
Fire:	<3 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Lower Stratum 1:	*Triodia brizoides*, *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	3	2
Boerhavia gardneri	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.3	0.1
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.3	0.1
Euphorbia tannensis subsp. *eremophila*	1	0.1
Euploca cunninghamii	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus platypterus	0.3	0.1
Triodia brizoides	0.3	1

Triodia chichesterensis (P3)	0.3	30
Triodia epactia	0.4	0.2
Triodia wiseana	0.4	4

PHOTOS





Site Name:	WD54
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675087E 7656669N
Orientation:	90/180
Landform Type:	Upper Slope
Slope Class:	Precipitous (60°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Ironstone, 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	> 10 years
Comments:	"Significant weed cover" not present in 2024 rescore. Many skeletons of old low shrubs

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	**Aerva javanica*, *Corchorus parviflorus*, *Indigofera monophylla*
Lower Stratum 2:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.4	0.1
Acacia acradenia	1.4	1
**Aerva javanica*	0.1	0.1
Arivela viscosa	0.2	0.1
Boerhavia gardneri	0.3	0.1
**Cenchrus ciliaris*	0.3	0.1
Clerodendrum tomentosum var. *tomentosum*	1.7	0.1
Corchorus parviflorus	0.6	10
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Cyperus hesperius	0.2	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne mucronata	0.3	0.1
Euphorbia careyi	0.2	0.1
Gomphrena cunninghamii	0.1	0.1

Gossypium australe	1.2	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.5	0.1
Indigofera monophylla	0.5	1
Jasminum didymum subsp. *lineare*		0.1
Notoleptopus decaisnei	0.4	0.1
Paspalidium tabulatum	0.5	0.1
Ptilotus auriculifolius	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Solanum horridum	0.2	0.1
Tinospora smilacina		0.1
Tribulus suberosus	0.4	0.1
Triodia epactia	0.3	0.1
Triodia wiseana	0.7	40
Triumfetta propinqua	0.2	0.1

PHOTOS





Site Name:	WD57
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675036E 7662111N
Orientation:	45/315
Landform Type:	Other, Stony plain (other)
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz (other)
Fire:	<3 years
Habitat:	Tall open shrubland over hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.5	0.2
Acacia inaequilatera	1.4	0.2
Acacia tumida var. *pilbarensis*	1.8	2
Aristida holathera var. *holathera*	0.5	0.5
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.3
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.6	0.2
Eriachne pulchella	0.1	0.1
Euphorbia ?trigonosperma	0.4	0.1
Euploca skeleton	0.4	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.5
Hakea lorea subsp. *lorea*	2	0.2
Indigofera monophylla	0.5	1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Senna notabilis	0.4	0.1
Sida arenicola	1	0.1
Tephrosia clementii	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trigastrotheca molluginea	0.1	0.1

Triodia epactia	0.5	10
Triodia lanigera	0.1	0.2

PHOTOS





Site Name:	WD59
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2018
GPS Location:	GDA94 Zone 50 675360E 7662097N
Orientation:	320/50
Landform Type:	Other, Stony plain (other)
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Calcrete, Quartz (other)
Fire:	>3 years
Habitat:	Low open woodland over tall sparse shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	0.5
Acacia inaequilatera	3	3
Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4.5	1.5
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.1	0.1
Euploca skeleton	0.3	0.1
Goodenia microptera	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.3
Indigofera monophylla	0.5	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Tephrosia clementii	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.3	40
Triodia epactia	0.5	10
Triodia wiseana	0.4	0.2

PHOTOS





Site Name:	WD63
Site Type:	QUADRAT - Rescore
Dimensions:	25m x 100m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 676034E 7662982N
Orientation:	195/105
Landform Type:	Other, Flat/Minor drainage line (other)
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Quartz (other)
Fire:	3-4 years
Habitat:	Low open woodland over tall shrubland over low sparse shrubland over hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	5
Acacia bivenosa	0.4	0.1
Acacia pyrifolia var. *pyrifolia*	2	0.1
Acacia stellaticeps	0.4	0.1
Acacia tumida var. *pilbarensis*	3	20
Afrohybanthus aurantiacus	0.6	0.5
Aristida holathera var. *holathera*	0.4	0.1
Arivela uncifera	0.4	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	0.5
Bulbostylis barbata	0.1	0.1
Cajanus pubescens	1.8	0.2
Cassytha capillaris		0.2
Chrysopogon fallax	0.6	5
Codonocarpus cotinifolius	0.6	0.1
Corchorus parviflorus	1	1.5
Corymbia hamersleyana	5.5	6
Dampiera candicans	0.5	0.5
Eragrostis eriopoda	0.4	0.2
Eriachne mucronata	0.4	0.1
Eulalia aurea	0.5	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.4	0.5
Goodenia microptera	0.4	0.1
Goodenia muelleriana	0.4	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Grevillea wickhamii subsp. *hispidula*	3	5
Indigofera monophylla	0.4	0.1
Isotropis atropurpurea	0.6	0.1
Notoleptopus decaisnei	0.5	0.1
Paraneurachne muelleri	0.3	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.5	1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.7	0.1
Ptilotus exaltatus	0.7	0.1
Senna notabilis	0.3	0.1
Senna symonii	1.5	0.1
Solanum diversiflorum	0.6	0.1
Streptoglossa decurrens	0.4	0.1
Streptoglossa odora	0.4	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.6	30
Triodia lanigera	0.4	0.2

PHOTOS



Photo: 30/05/2023



Photo: 1/07/2018

Site Name:	WD66
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674839E 7653710N
Orientation:	65/155
Landform Type:	Mid Slope
Slope Class:	Steep (23°)
Aspect:	NE
Soil Type:	Clayey Sand
Soil Colour:	Brown
Rock Outcrop:	Granite, Quartz (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Fire:	<5
Comments:	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Gossypium australe*
Lower Stratum 1:	*Acacia spondylophylla*
Lower Stratum 2:	*Triodia brizoides*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.2	0.2
Acacia spondylophylla	0.6	2
Afrohybanthus aurantiacus	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.8	0.1
Cyperus hesperius	0.3	0.1
Dampiera candicans	0.5	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca skeleton	0.4	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium australe	1.5	0.2
Hibiscus coatesii	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.6	0.1

Ptilotus astrolasius	0.5	0.1
Ptilotus calostachyus	0.7	0.1
Senna glutinosa subsp. *glutinosa*	1.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.5	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.5	0.1
Tribulus suberosus	0.7	0.2
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.2	30
Triodia epactia	0.3	30
Triumfetta maconochieana	0.3	0.1

PHOTOS





Site Name:	WD68
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675114E 7653723N
Orientation:	0/270
Landform Type:	Other, Undulating plain (other)
Slope Class:	Moderately Inclined (10°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Fire:	<5

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Mid Stratum 2:	*Acacia maitlandii*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia maitlandii	1.4	20
Acacia orthocarpa	2	1
Acacia spondylophylla	0.6	0.1
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius		
Corchorus parviflorus	0.6	0.1
Dampiera candicans	0.4	0.1
Eriachne mucronata	0.4	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Euploca pachyphylla	0.3	0.1
Euploca skeleton	0.5	0.1
Euploca tenuifolia	0.2	0.1
Fimbristylis dichotoma	0.2	0.1
Goodenia microptera	0.2	0.1

Goodenia stobbsiana	0.3	0.5
Grevillea wickhamii subsp. *hispidula*	2.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Isotropis atropurpurea	0.8	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.6	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Seringia nephrosperma	0.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.6	0.1
Solanum phlomoides	0.3	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	55
Triodia wiseana	0.5	1
Tripogonella loliiformis	0.2	0.1

PHOTOS





Site Name:	WD70
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/06/2024
GPS Location:	GDA94 Zone 50 675261E 7653742N
Orientation:	0/270
Landform Type:	Open Depression
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Sandy Clay
Soil Colour:	Grey-brown (other)
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other), Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia bivenosa*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.5	1.5
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4	0.4
Euploca chrysocarpa	0.2	0.1
Euploca tenuifolia	0.2	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.5	0.1
Paraneurachne muelleri	0.5	0.1
Petalostylis labicheoides	1.3	0.1
Ptilotus clementii	0.2	0.1
Ptilotus exaltatus	0.1	0.1

Ptilotus polystachyus	0.3	0.1
Salsola australis	0.2	0.1
Senna artemisioides subsp. *oligophylla*	0.4	0.1
Senna artemisioides subsp. oligophylla x symonii	0.4	0.1
Solanum phlomoides	0.6	0.1
Stackhousia muricata	0.2	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.2	75
Triodia wiseana	0.4	0.1

PHOTOS





Site Name:	WD72
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675062E 7653892N
Orientation:	0/270
Landform Type:	Other, Undulating plain (other)
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	Patchy <5 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia maitlandii	1.6	0.1
Acacia orthocarpa	2.5	3
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.6	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	0.4	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Solanum phlomoides	0.4	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.4	50
Triodia lanigera	0.4	0.1

PHOTOS





Site Name:	WD77
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674958E 7652144N
Orientation:	158/68
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Dolerite, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Clearing
Fire:	<5
Habitat:	Low open woodland over mid sparse shrubland over low sparse shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	2	2.5
Acacia orthocarpa	0.5	0.1
Boerhavia gardneri	0.4	0.3
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.5	0.3
Corymbia hamersleyana	4	4
Euphorbia tannensis subsp. *eremophila*	1	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Haloragis gossei	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.4	0.2
Indigofera rugosa	0.6	0.5
Ptilotus astrolasius	0.2	0.1
Ptilotus axillaris	0.1	0.1
Scaevola browniana subsp. *browniana*	0.2	0.1
Streptoglossa decurrens	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tribulus platypterus	0.3	0.1

Triodia chichesterensis (P3)	0.2	40
Triodia wiseana	0.4	5

PHOTOS





Site Name:	WD78
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 675030E 7654362N
Orientation:	0/90
Landform Type:	Open Depression
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	WSW
Soil Type:	Sandy Clay
Soil Colour:	Grey-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz (other)
Fire:	8-9 years
Comments:	

SITE POINTS

Label	Easting	Northing	Comments
Other	675012	7654402	Waypoint from NW corner during 2023 survey.

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia bivenosa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	2
Acacia bivenosa	1.5	3
Acacia stellaticeps	1	0.1
Acacia tumida var. *pilbarensis*	1.5	0.5
Afrohybanthus aurantiacus	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	1	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	5	1
Dodonaea coriacea	0.6	0.1
Euploca chrysocarpa	0.3	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii	1	0.1
Hakea lorea subsp. *lorea*	1.3	0.1
Hibiscus coatesii	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Paraneurachne muelleri	0.5	0.1
Polymeria mollis	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.4	0.1
Ptilotus axillaris		0.1
Ptilotus exaltatus	0.2	0.1
Sclerolaena densiflora	0.1	0.1
Senna symonii	0.8	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.3	1
Triodia chichesterensis (P3)	0.2	40
Triodia epactia	0.4	2

PHOTOS



Photo: 31/05/2023



Photo: 1/07/2018

Site Name:	WD79
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	02/07/2018
GPS Location:	GDA94 Zone 50 674920E 7652361N
Orientation:	330/240
Landform Type:	Other, Undulating plain (other)
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Granite, 2-10% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5
Habitat:	Low open woodland over mid open shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia maitlandii	0.5	0.4
Acacia orthocarpa	2	6
Acacia spondylophylla	0.3	0.1
Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.4	0.1
Bonamia alatisemina		0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.4
Corymbia hamersleyana	4.5	2.5
Dampiera candicans	0.4	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca tenuifolia	0.2	0.1
Fimbristylis dichotoma	0.1	0.2
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.3	0.5
Grevillea wickhamii subsp. *hispidula*	1	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.3	0.5
Pluchea dentex		
Pluchea ferdinandi-muelleri	0.4	0.1

Pluchea tetranthera	0.4	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.2	0.1
Scaevola browniana subsp. *browniana*	0.4	0.3
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.3	0.1
Stemodia grossa	0.2	0.1
Tephrosia rosea var. *clementii*	1	0.2
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.3	0.3
Triodia epactia	0.3	20
Triodia lanigera	0.3	20

PHOTOS





Site Name:	WD81
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674608E 7651960N
Orientation:	270/180
Landform Type:	Other, Undulating plain (other)
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	> 5 years
Habitat:	Mid open shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia maitlandii	0.3	0.1
Acacia orthocarpa	3	2
Acacia spondylophylla	0.4	0.1
Acacia tumida var. *pilbarensis*	3	2
Afrohybanthus aurantiacus	0.3	0.1
Arivela uncifera	0.3	0.1
Bonamia alatisemina		0.1
Bonamia media		0.1
Corchorus parviflorus	0.6	0.5
Corymbia hamersleyana	4	0.5
Dampiera candicans	0.5	0.2
Eriachne mucronata	0.3	0.2
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Euploca skeleton	0.4	0.1
Euploca tenuifolia	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	3	3
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.3	0.3

Isotropis atropurpurea	0.4	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.3	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Solanum phlomoides	0.5	0.1
Tephrosia virens	1.2	0.2
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	12
Triodia epactia	0.4	20
Triodia lanigera	0.4	8

PHOTOS





Site Name:	WD83
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674337E 7651847N
Orientation:	230/320
Landform Type:	Other, Undulating plain (other)
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Shale (other), 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Calcrete, Quartz, Shale (other)
Fire:	<5
Habitat:	Tall sparse shrubland over low sparse shrubland over low hummock grassland

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	3	1.5
Arivela viscosa	0.5	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.6	0.1
Cullen leucochaites	0.8	0.1
Indigofera rugosa	1	1
Ptilotus exaltatus	0.4	0.1
Senna artemisioides subsp. *oligophylla*	0.5	0.1
Solanum phlomoides	0.2	0.1
Triodia chichesterensis (P3)	0.2	50
Triodia epactia	0.5	0.5
Triodia wiseana	0.4	5

PHOTOS





Site Name:	WD84
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 673946E 7653210N
Orientation:	0/270
Landform Type:	Mid Slope
Slope Class:	Precipitous (60 degrees)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Fire:	< 5 years

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*, *Hakea lorea* subsp. *lorea*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*, *Triodia wiseana*
Lower Stratum 2:	*Eriachne mucronata*, *Themeda triandra*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	1	0.1
Acacia acradenia	1.5	0.2
Acacia inaequilatera	2.5	0.5
**Aerva javanica*	0.3	0.1
Arivela viscosa	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cheilanthes contigua	0.1	0.1
Clerodendrum tomentosum var. *tomentosum*	0.2	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	3	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.1
Cyperus hesperius	0.3	0.1
Dampiera candicans	0.2	0.1
Eriachne mucronata	0.3	1
Eucalyptus leucophloia subsp. *leucophloia*	4.5	2
Euphorbia careyi	0.1	0.1
Euploca cunninghamii	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	0.5	0.1
Hakea lorea subsp. *lorea*	2	0.1
Hibiscus goldsworthii	0.2	0.1
Indigofera monophylla	0.2	0.1
Indigofera trita	0.3	0.2
Jasminum didymum subsp. *lineare*		0.1
Ptilotus fusiformis	0.2	0.1
Rhynchosia minima		0.1
Senna artemisioides subsp. *oligophylla*	0.8	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Solanum horridum	0.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Themeda triandra	0.4	0.2
Tribulus suberosus	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	78
Triodia epactia	0.4	0.5
Triodia wiseana	0.5	2
Triumfetta propinqua	0.3	0.1

PHOTOS



Photo: 2/07/2018

Site Name:	WD86
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 673941E 7653144N
Orientation:	90/180
Landform Type:	Lower Slope
Slope Class:	Moderately Inclined (10 degrees)
Aspect:	SSW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Calcrete (other)
Fire:	> 10 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.2
Acacia inaequilatera	2	2
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus		
Eucalyptus leucophloia		
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Gossypium australe		
Indigofera monophylla	0.6	0.1
Ptilotus calostachyus	0.8	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia brizoides	0.3	0.1
Triodia chichesterensis (P3)	0.3	2
Triodia epactia	0.5	30
Triodia wiseana	0.5	40

PHOTOS



Photo: 31/05/2023

Site Name:	WD90
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 674043E 7652926N
Orientation:	90/180
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Aspect:	ENE
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	River stones (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<5

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Cajanus cinereus*
Lower Stratum 1:	*Corchorus parviflorus*, *Tephrosia rosea* var. *clementii*
Lower Stratum 2:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*	0.8	0.1
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.7	0.1
Acacia pyrifolia var. *pyrifolia*	2	0.5
Acacia tumida var. *pilbarensis*	2.5	1
**Aerva javanica*	0.3	0.1
Afrohybanthus aurantiacus	0.2	0.1
Alysicarpus muelleri	0.3	0.1
Amaranthus undulatus	0.1	0.1
Arivela viscosa	0.6	0.1
Boerhavia schomburgkiana		0.1
Cajanus cinereus	1.2	1
**Cenchrus ciliaris*	0.1	0.1
Corchorus parviflorus	0.6	1
Corchorus tridens		0.1
Crotalaria medicaginea var. *neglecta*	0.3	0.1

Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Cyperus vaginatus	0.6	0.1
Dampiera candicans	0.4	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Enneapogon lindleyanus	0.4	0.1
Eriachne tenuiculmis	0.4	0.5
Eucalyptus victrix	8	3
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia careyi	0.3	0.1
Euphorbia trigonosperma	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Flueggea virosa subsp. *melanthesoides*	2.5	0.2
Goodenia stobbsiana	0.4	0.1
Gossypium australe	1.2	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.1
Hibiscus leptocladus	0.5	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.6	0.2
Ipomoea muelleri		0.1
Isotropis atropurpurea		
Jasminum didymum subsp. *lineare*		
Nellica maderaspatensis	0.4	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri		
Petalostylis labicheoides		
Polymeria mollis	0.1	0.1
Pterocaulon sphacelatum	0.4	0.1
Pterocaulon sphaeranthoides	0.4	0.1
Ptilotus astrolasius		
Ptilotus axillaris	0.1	0.1
Ptilotus exaltatus	0.1	0.1
Rhynchosia minima		0.1
Senna artemisioides subsp. *oligophylla*		
Senna notabilis	0.4	0.1
Sida clementii	0.3	0.1
Solanum diversiflorum		
Solanum phlomoides	0.3	0.1
Swainsona formosa	0.1	0.1
Tephrosia rosea var. *clementii*	0.7	0.5
Themeda triandra		
Trachymene oleracea subsp. *oleracea*	0.3	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.2	0.1
Triodia epactia	0.5	20
Triodia wiseana	0.6	0.5
Triumfetta propinqua	0.4	0.1

PHOTOS



Site Name:	WD96
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	02/07/2018
GPS Location:	GDA94 Zone 50 674388E 7652488N
Orientation:	180/270
Landform Type:	Upper Slope
Slope Class:	Precipitous (60°)
Aspect:	SW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-brown (other)
Rock Outcrop:	Ironstone, 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Ironstone
Fire:	>5
Comments:	most plants dead from drought

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.1
Arivela viscosa	0.2	0.1
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.3	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Cyperus hesperius	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.3	0.1
Euphorbia careyi	0.1	0.1
Gossypium australe	1	0.1
Hakea lorea subsp. *lorea*	1.5	0.1
Indigofera monophylla	0.2	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.2	0.1
Rhynchosia minima		0.1

Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia epactia	0.5	65
Triodia wiseana	0.5	20
Triumfetta propinqua	0.2	0.1

PHOTOS





Site Name:	WDD12
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	25/05/2023
GPS Location:	GDA94 Zone 50 674031.83E 7662652.01N
Orientation:	75/165
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clayey Sand
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Metamorphic, Quartz (other)
Disturbance:	None
Fire:	< 2 years
Habitat:	Low isolated trees over tall open shrubland over low hummock grassland.
Comments:	Many additional short-lived species during 2023 survey, due to fire. Covers were not reviewed due to fire.

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia zygophylla*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	9
Acacia tumida var. *pilbarensis*	2.5	7
Bonamia alatisemina		
Bonamia erecta	0.3	0.2
Codonocarpus cotinifolius		
Corchorus parviflorus		
Corymbia zygophylla	4	1
Dampiera candicans		
Eragrostis eriopoda		
Eriachne mucronata	0.4	0.1
Eriachne pulchella		
Euphorbia clementii (P3)		
Euploca vestita		
Goodenia microptera		
Goodenia stobbsiana		
Halgania solanacea var. *solanacea* ms	0.2	0.1
Indigofera monophylla	0.1	0.1
Ptilotus astrolasius	0.4	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus calostachyus	0.5	0.1
Ptilotus fusiformis		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)		
Trigastrotheca molluginea		
Triodia lanigera	0.4	35
Triodia schinzii	0.5	0.2

PHOTOS



Photo: 25/05/2023



Photo: 19/06/2019

Site Name:	WDD15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675744.64E 7663848.15N
Orientation:	200/290
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Light brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<2 years
Habitat:	Low open woodland over tall sparse shrubland over mid sparse shrubland over low hummock grassland.

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia bivenosa*, *Codonocarpus cotinifolius*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.3	0.1
Acacia bivenosa	1.5	1.5
Acacia inaequilatera	4	3
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Chrysopogon fallax	1.2	0.1
Codonocarpus cotinifolius	1.5	2.5
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	5	1.5
Dolichocarpa crouchiana	0.1	0.1
Eragrostis eriopoda	0.4	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.3	0.1

Goodenia microptera	0.1	0.1
Goodenia muelleriana	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.3
Indigofera monophylla	0.3	0.1
Pluchea tetranthera	0.3	0.1
Ptilotus astrolasius	0.4	0.2
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Solanum phlomoides	0.1	0.1
Tinospora smilacina		0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.1	2.5

PHOTOS





Site Name:	WDD16
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675803.36E 7663908.65N
Orientation:	0/90
Landform Type:	Drainage Line
Slope Class:	Level (0°)
Soil Type:	Clayey Sand
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Quartz, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<2 years
Habitat:	Low open woodland over tall open shrubland over low sparse shrubland over low hummock/tussock grassland.

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia acradenia*, *Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*

Mid Stratum 2: *Corchorus parviflorus*, *Indigofera monophylla*

Lower Stratum 1: *Chrysopogon fallax*, *Sorghum plumosum* var. *plumosum*, *Themeda triandra*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	5
Acacia ancistrocarpa	2	1
Acacia inaequilatera	0.5	0.1
Acacia tumida var. *pilbarensis*	2	1
**Aerva javanica*	0.4	0.1
Afrohybanthus aurantiacus	0.4	0.1
Arivela uncifera	0.1	0.1
Arivela viscosa	0.1	0.1
Bonamia erecta	0.4	0.3
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	2	1
Cassytha capillaris		0.1

Chrysopogon fallax	0.4	12
Codonocarpus cotinifolius	0.6	0.1
Corchorus parviflorus	1	1.5
Corymbia hamersleyana	5	8
Cucumis variabilis	0.1	0.1
Dampiera candicans	0.3	0.1
Eragrostis eriopoda	0.4	0.1
Eriachne mucronata	0.4	0.5
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Euploca pachyphylla	0.3	0.2
Goodenia microptera	0.1	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.4	0.2
Grevillea wickhamii subsp. *hispidula*	2.5	5
Hibiscus brachychlaenus	0.3	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.8	1
Isotropis atropurpurea	0.8	0.2
Jasminum didymum subsp. *lineare*	0.8	0.1
Petalostylis labicheoides	3	1
Polymeria mollis	0.1	1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.4	0.2
Ptilotus axillaris	0.1	0.1
Rhynchosia minima		0.1
Senna notabilis	0.4	0.1
Solanum phlomoides	0.6	0.1
Sorghum plumosum var. *plumosum*	0.5	10
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Themeda triandra	1	3
Tinospora smilacina		0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	12

PHOTOS





Site Name:	WDD17
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675884.56E 7663953.84N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Metamorphic, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<2 years
Habitat:	Tall open shrubland over low hummock grassland.

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.6	0.2
Acacia bivenosa	2	0.5
Acacia inaequilatera	3	0.5
Acacia stellaticeps	0.8	0.4
Acacia tumida var. *pilbarensis*	3	0.6
Bonamia erecta	0.3	0.3
Cassytha capillaris		0.1
Chrysopogon fallax	0.5	0.1
Corchorus parviflorus	0.3	0.1
Eragrostis eriopoda	0.4	0.1
Euploca pachyphylla	0.3	0.1
Goodenia microptera	0.3	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	1.7	0.2
Indigofera monophylla	0.2	0.1
Ptilotus astrolasius	0.5	0.3
Ptilotus calostachyus	0.6	0.1

Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.6	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	13
Triodia lanigera	0.4	8

PHOTOS





Site Name:	WDD19
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 671576.9E 7661746.33N
Orientation:	260/350
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clayey Sand
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<2 years
Habitat:	Mid sparse shrubland over low sparse shrubland over low hummock grassland.

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*
Mid Stratum 2:	*Bonamia erecta*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.4
Acacia pyrifolia var. *pyrifolia*	1.5	0.4
Aristida holathera var. *holathera*	0.1	0.1
Arivela uncifera	0.3	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	2
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.3	0.1
Eragrostis eriopoda	0.3	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.2	0.1
Goodenia microptera	0.3	0.1
Gossypium australe	0.3	0.1
Indigofera monophylla	0.2	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.6	0.1
Senna artemisioides subsp. *oligophylla*	1.6	0.3

Sida clementii	0.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	0.1
Triodia lanigera	0.2	1.5
Triodia schinzii	0.6	0.2

PHOTOS





Site Name:	WDD23
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 672696.52E 7661630.02N
Orientation:	275/5
Landform Type:	Crest
Slope Class:	Steep (23°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Metamorphic (other), >50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Metamorphic (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>2 years on slops, crest >5 years
Habitat:	Mid sparse shrubland over low hummock grassland.

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.6	3.5
Acacia ancistrocarpa	0.4	0.1
Aristida holathera var. *holathera*	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	2.5	0.3
Cymbopogon ambiguus	0.3	0.1
Cyperus hesperius	0.2	0.1
Dampiera candicans	0.4	0.1
Eragrostis eriopoda	0.2	0.1
Eriachne mucronata	0.3	0.3
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.1	0.2
Euploca skeleton	0.4	0.1
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	2	4

Hibiscus leptocladus	0.3	0.1
Indigofera monophylla	0.3	0.2
Polycarpaea holtzei	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.8	0.2
Ptilotus clementii	0.4	0.1
Ptilotus fusiformis	0.2	0.1
Ptilotus incanus	0.1	0.1
Senna notabilis	0.1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	0.1
Solanum cleistogamum	0.2	0.1
Solanum phlomoides	0.4	0.1
Terminalia circumalata		
Terminalia supranitifolia (P3)	1.3	0.2
Tribulus platypterus	0.4	0.1
Tribulus suberosus	0.4	0.2
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.2	0.1
Triodia epactia	0.4	13
Triodia wiseana	0.4	9
Triumfetta maconochieana	0.4	0.1
Triumfetta propinqua	0.3	0.1

PHOTOS





Site Name:	WDD24
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 672948.4E 7661370.83N
Orientation:	330/60
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clayey Sand
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>2 years
Habitat:	Low open woodland over tall sparse shrubland over low hummock grassland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672949	7661373	
Corner 2	672926	7661416	
Corner 3	672973	7661434	
Corner 4	672998	7661393	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Corymbia zygophylla*
Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	3
Acacia tumida var. *pilbarensis*	2.5	0.2
Arivela viscosa	0.1	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.2	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	4	0.5
Corymbia zygophylla	4	3
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1

Eragrostis eriopoda	0.2	0.1
Eriachne aristidea	0.3	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia clementii (P3)	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	0.5	0.1
Hibiscus leptocladus	0.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.6	0.2
Indigofera monophylla	0.4	0.1
Notoleptopus decaisnei	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
Ptilotus arthrolasius	0.3	0.3
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	1	0.5
Ptilotus fusiformis	0.1	0.1
Rhynchosia minima		0.1
Senna artemisioides subsp. *oligophylla*	2	0.8
Senna artemisoides subsp. oligophylla × Senna artemisoides subsp. helmsii	0.6	0.5
Senna notabilis	0.1	0.1
Sida arenicola	1.2	0.1
Sida ?sp. Pindan (B.G. Thomson 3398)	0.4	0.1
Solanum diversiflorum	0.1	0.1
Solanum phlomoides	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.2
Tinospora smilacina		0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trianthema pilosum	0.1	0.1
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.6	2
Triodia lanigera	0.6	14
Triodia schinzii	0.6	14
Triumfetta chaetocarpa	0.1	0.1

PHOTOS





Site Name:	WDK01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675763.28E 7656809.17N
Orientation:	90/180
Landform Type:	Mid Slope
Slope Class:	Very Steep (37°)
Aspect:	SE
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown (other)
Rock Outcrop:	Chert (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone, Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>10 years
Comments:	Acacia resprouting, perhaps light fire in last 5 years

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.1
Acacia inaequilatera	2	0.3
Arivela viscosa	0.2	0.1
Boerhavia gardneri	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	1	0.1
Dampiera candicans	0.6	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Eriachne mucronata	0.3	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1

Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Gossypium australe	0.1	0.1
Grevillea pyramidalis subsp. *leucadendron*	0.6	0.1
Grevillea wickhamii	0.6	0.1
Hibiscus coatesii	0.4	0.1
Indigofera monophylla	0.4	0.1
Nicotiana benthamiana	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus exaltatus	0.1	0.1
Senna notabilis	0.1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	0.1
Solanum phlomoides	0.5	0.1
Swainsona formosa	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.4	0.1
Triodia epactia	0.8	70
Triodia wiseana	0.5	0.1
Triumfetta propinqua	0.1	0.1

PHOTOS





Site Name:	WDK02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675732.76E 7656635.43N
Orientation:	90/180
Landform Type:	Lower Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	SE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<5 years
Comments:	Appears that previous fire scar overlaps quadrat (burnt since last survey). Triodia cover has reduced significantly (from 60%)

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	3	0.3
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	1.5	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Swainsona formosa	0.1	0.1
Swainsona stenodonta	0.1	0.1
Tribulus platypterus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1

Triodia chichesterensis (P3)	0.3	3
Triodia epactia	0.5	2
Triodia wiseana	0.5	6

PHOTOS





Site Name:	WDK03
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 675676.99E 7656265.33N
Orientation:	90/180
Landform Type:	Hillock
Slope Class:	Very Steep (37 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Shale (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Disturbance:	None
Fire:	>5 years, ~ 2 years

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	0.5	0.1
**Aerva javanica*		
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.3	0.2
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	0.5	0.1
Dolichocarpa crouchiana	0.1	0.1
Euphorbia careyi		
Goodenia stobbsiana		
Gossypium australe	0.4	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus incanus		
Rhynchosia minima		0.1
Solanum horridum		
Solanum phlomoides		
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus		
Triodia chichesterensis (P3)	0.4	0.1
Triodia epactia	0.4	0.1
Triodia wiseana	0.5	50

PHOTOS



Photo: 2/06/2023



Photo: 17/06/2019

Site Name:	WDK04
Site Type:	QUADRAT - Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 675680.61E 7655262.24N
Orientation:	180/270
Landform Type:	Crest
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	SW
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown (other)
Rock Outcrop:	Ironstone, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Disturbance:	None
Fire:	1-2 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.1
Acacia orthocarpa	3.5	5
Acacia tumida var. *pilbarensis*	2.5	2
Afrohybanthus aurantiacus	0.3	0.1
Aristida holathera var. *holathera*	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	3	
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca pachyphylla	0.2	0.1
Euploca skeleton	0.5	0.1
Goodenia microptera	0.4	0.1
Goodenia muelleriana	0.3	0.1
Goodenia stobbsiana	0.3	2
Grevillea wickhamii subsp. *hispidula*	2.4	0.5
Haloragis gossei var. *gossei*	0.1	0.1
Hibiscus leptocladus	0.3	0.1
Indigofera monophylla	0.5	0.1
Petalostylis labicheoides	2	0.2

Taxon Name	Avg. Height	Cover Alive
Ptilotus astrolasius	0.4	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.4	0.1
Ptilotus exaltatus	0.5	0.1
Ptilotus fusiformis	0.3	0.1
Ptilotus incanus	0.3	0.1
Senna notabilis	0.3	0.1
Sida arenicola	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	0.1
Solanum diversiflorum	0.4	0.1
Solanum phlomoides	0.6	0.1
Streptoglossa odora	0.1	0.1
Tribulus hirsutus	0.2	0.1
Triodia epactia	0.4	5

PHOTOS



Photo: 2/06/2023



Photo: 18/06/2019

Site Name:	WDK05
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 675753.72E 7655351.04N
Orientation:	140/230
Landform Type:	Mid Slope
Slope Class:	Steep (23 degrees)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Ironstone, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone
Disturbance:	None
Fire:	>5 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia bivenosa*, *Senna glutinosa* subsp. *glutinosa*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.1
Acacia bivenosa	1.2	0.2
Acacia maitlandii	0.1	0.1
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.2	0.1
Goodenia microptera	0.3	0.1
Goodenia muelleriana	0.3	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	0.5	0.1
Haloragis gossei var. *gossei*	0.1	0.1
Hibiscus coatesii	0.2	0.1
Indigofera monophylla	0.2	0.1
Petalostylis labicheoides	0.4	0.1
Polygala glaucifolia	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus astrolasius	0.3	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus clementii	0.4	0.1
Ptilotus exaltatus	0.1	0.1
Ptilotus incanus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.2
Senna notabilis	0.1	0.1
Senna symonii	0.9	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	0.4	0.1
Tribulus hirsutus	0.2	0.1
Tribulus suberosus	0.1	0.1
Triodia epactia	0.4	0.2
Triodia wiseana	0.5	65

PHOTOS

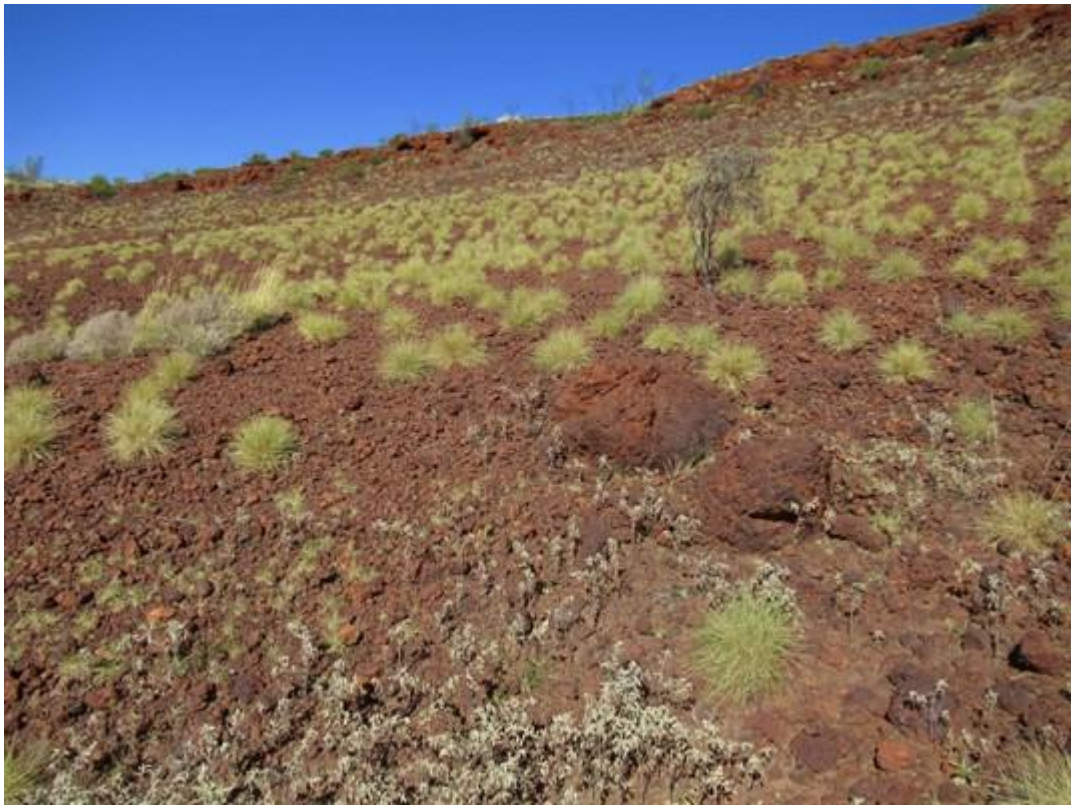


Photo: 2/06/2023



Photo: 18/06/2019

Site Name:	WDK06
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 675682.99E 7655796.02N
Orientation:	90/180
Landform Type:	Hillock
Slope Class:	Moderately Inclined (10 degrees)
Aspect:	N
Soil Type:	Sandy Clay
Soil Colour:	White
Rock Outcrop:	Calcrete? (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Ironstone, Quartz, Calcrete (other)
Disturbance:	None
Fire:	>5 years, 1-2 years

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia bivenosa*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	2.5	2
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4	0.2
Dolichocarpa crouchiana	0.1	0.1
Dysphania sphaerosperma	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne mucronata	0.4	0.1
Euploca cunninghamii	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Haloragis gossei var. *gossei*	0.2	0.1
Pluchea ferdinandi-muelleri	0.4	0.1
Pluchea tetranthera	0.4	0.1
Polygala glaucifolia		
Polygala glaucifolia	0.1	0.1
Ptilotus axillaris	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus calostachyus	0.6	0.1
Ptilotus clementii	0.1	0.1
Senna symonii	1.3	0.1
Solanum phlomoides	0.5	0.1
Stackhousia muricata	0.2	0.1
Stemodia grossa	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus platypterus	0.5	0.1
Triodia chichesterensis (P3)	0.45	40
Triodia wiseana	0.4	0.1

PHOTOS



Photo: 2/06/2023



Photo: 18/06/2019

Site Name:	WDK07
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 676299.84E 7656119.15N
Orientation:	90/180
Landform Type:	Other, Low rise (other)
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz (other)
Disturbance:	None
Fire:	>5 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.2
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus parviflorus	0.1	0.1
Dampiera candicans	0.2	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca cunninghamii	0.1	0.1
Euploca skeleton	0.4	0.1
Fimbristylis simulans	0.1	0.1
Goodenia muelleriana	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	0.1	0.1
Indigofera monophylla	0.3	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus clementii	0.1	0.1
?*Ptilotus helipteroides*	0.1	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.5	0.1
Triodia lanigera	0.5	35

PHOTOS



Photo: 2/06/2023



Photo: 18/06/2019

Site Name:	WDK08
Site Type:	QUADRAT – Rescore
Dimensions:	50m x 50m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 676141.28E 7656576.15N
Orientation:	90/180
Landform Type:	Hillock
Slope Class:	Steep (23 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Granite
Disturbance:	None
Fire:	~ 2 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Acacia orthocarpa*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	1
Acacia orthocarpa	4	2
Acacia tumida var. *pilbarensis*	3	0.1
Afrohybanthus aurantiacus	0.4	0.1
Amaranthus undulatus	0.1	0.1
Aristida contorta	0.1	0.1
Aristida holathera		
Arivela viscosa	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	2.5	0.1
Cullen stipulaceum		
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.5	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca cunninghamii		
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Gomphrena cunninghamii	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Goodenia stobbsiana		
Grevillea wickhamii subsp. *hispidula*	2.5	3
Hakea lorea subsp. *lorea*	2	0.1
Hibiscus coatesii	0.7	0.1
Hibiscus sturtii var. *campylochlamys*		
Indigofera monophylla	0.3	0.1
Pluchea tetranthera	0.6	0.1
Polycarpaea longiflora	0.2	0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus auriculifolius		
Ptilotus axillaris		
Ptilotus calostachyus		
Ptilotus fusiformis		
Ptilotus incanus		
Rhodanthe margarethae	0.2	0.1
Scaevola browniana subsp. *browniana*	0.4	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Senna notabilis	0.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		
Solanum horridum	0.1	0.1
Solanum phlomoides	0.1	0.1
Streptoglossa decurrens		
Tephrosia virens	1.2	0.1
Tinospora smilacina	0.3	0.1
Tribulus hirsutus		
Tribulus platypterus		
Tribulus suberosus	0.7	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	40
Triumfetta maconochieana		

PHOTOS



Photo: 2/06/2023



Photo: 18/06/2019

Site Name:	WDK10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 676129.84E 7657457.08N
Orientation:	90/180
Landform Type:	Mid Slope
Slope Class:	Very Steep (37°)
Aspect:	SE
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	Ironstone (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Ironstone
Disturbance:	None
Fire:	<3

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Grevillea wickhamii* subsp. *hispidula*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.4	0.1
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cheilanthes contigua	0.1	0.1
Corchorus parviflorus	0.5	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea pyramidalis subsp. *leucadendron*	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.2
Hakea lorea subsp. *lorea*	0.6	0.2
Indigofera monophylla	0.3	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus exaltatus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1

Senna symonii	0.5	0.1
Solanum horridum	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia epactia	0.4	1
Triodia wiseana	0.4	50

PHOTOS





Site Name:	WDK11
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 675712.77E 7657330.77N
Orientation:	90/180
Landform Type:	Crest
Slope Class:	Gently Inclined (3°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	Chert (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Granite, Quartz (other)
Disturbance:	None
Fire:	<5

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.9	0.2
Corymbia hamersleyana	0.9	0.1
Cymbopogon ambiguus	0.4	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.2
Eucalyptus leucophloia subsp. *leucophloia*	4.5	0.3
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	0.4	0.1
Hakea lorea subsp. *lorea*		
Indigofera monophylla	0.3	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus incanus	0.1	0.1

Schizachyrium fragile	0.1	0.1
Stemodia grossa	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Triodia epactia	0.4	30
Triodia wiseana	0.5	0.2
Triumfetta propinqua	0.1	0.1

PHOTOS





Site Name:	WDK13
Site Type:	QUADRAT – Rescore
Dimensions:	25m x 100m
Survey Date:	02/06/2023
GPS Location:	GDA94 Zone 50 676470.95E 7657056.26N
Orientation:	90/180
Landform Type:	Other, Low rise (other)
Slope Class:	Gently Inclined (3 degrees)
Aspect:	SE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Quartz, Shale (other)
Disturbance:	None
Fire:	~ 2 years

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	0.5
Acacia inaequilatera	3	2
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	3	0.2
Cucumis variabilis	0.6	0.1
Cullen leucochaites		
Cymbopogon ambiguus	0.7	0.1
Cyperus hesperius	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1
Euphorbia vaccaria		
Euploca cunninghamii		
Euploca tenuifolia	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera		
Goodenia stobbsiana		
Grevillea pyramidalis subsp. *leucadendron*	2	0.1
Grevillea wickhamii subsp. *hispidula*	0.6	0.1
Indigofera monophylla	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Polycarpaea corymbosa	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus axillaris		
Ptilotus calostachyus		
Ptilotus clementii		
Ptilotus incanus		
Senna symonii	1.2	0.1
Solanum phlomoides	0.7	0.1
Streptoglossa decurrens		
Swainsona formosa	0.1	0.1
Swainsona stenodonta	0.2	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea		
Triodia chichesterensis (P3)	0.3	60
Triodia epactia	0.9	0.1

PHOTOS



Photo: 2/06/2023

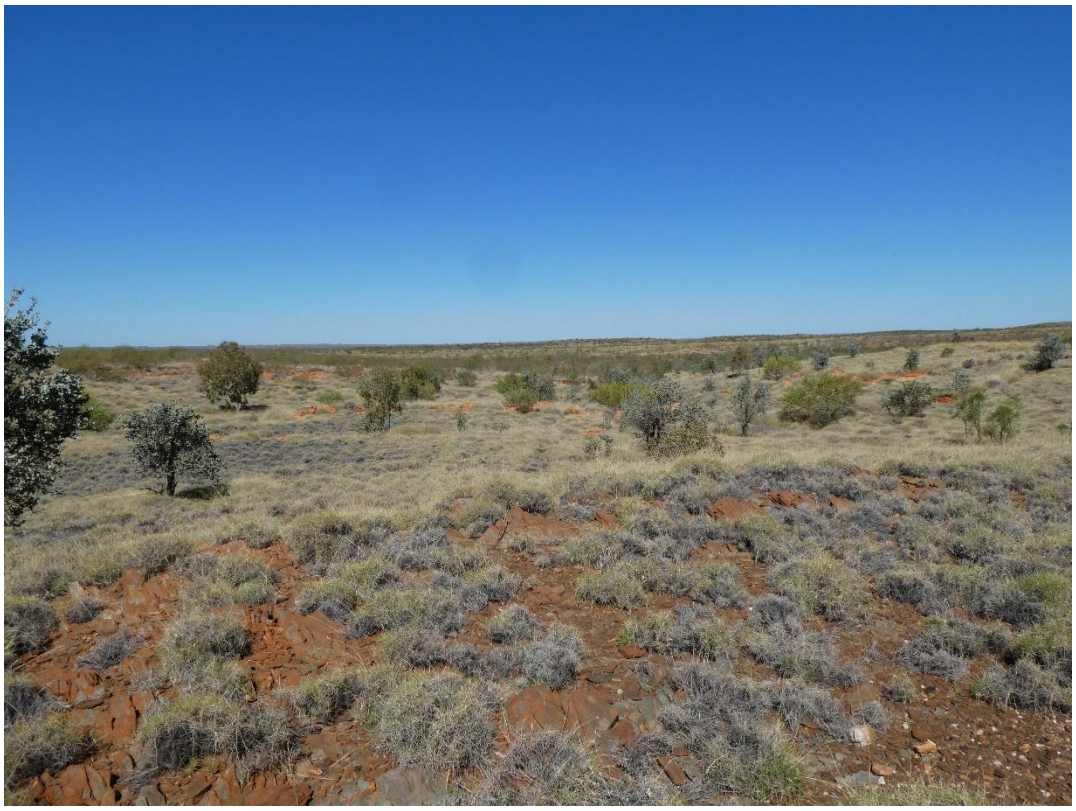


Photo: 19/06/2019

Site Name:	WDK20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 670702.62E 7656167.77N
Orientation:	90/180
Landform Type:	Crest
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Soil Condition:	Soil is wet and very dark
Rock Outcrop:	Quartz (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Quartz (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<5, has been burnt again
Comments:	Plants missing, recently burnt

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	3
Acacia tumida var. *pilbarensis*	1.2	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4.5	0.3
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.4	0.2
Grevillea wickhamii subsp. *hispidula*	1.8	0.5
Hakea lorea subsp. *lorea*	0.9	0.1

Polygala glaucifolia	0.1	0.1
Ptilotus calostachyus	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.4	0.1
Solanum phlomoides	0.4	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Triodia brizoides	0.4	0.1
Triodia epactia	0.4	40
Triodia wiseana	0.8	0.1
Triumfetta maconochieana	0.4	0.1

PHOTOS





Site Name:	WDKX01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 671875E 7653030N
Orientation:	90/180
Landform Type:	Other, Crest, ridge, upper slope (other)
Slope Class:	Moderately Inclined (10 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Quartz, Granite, Calcrete (other), >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 3 years
Habitat:	Scattered tall shrubland over open hummock grassland, low shrubland mixed.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671875	7653030	
Corner 2	671925	7653032	
Corner 3	671925	7652982	
Corner 4	671875	7652983	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.1
Acacia spondylophylla	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.1	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana		
Cullen leucochaites	1.7	0.3
Dampiera candicans	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Hakea lorea subsp. *lorea*	0.3	0.1
Indigofera rugosa	0.6	0.1
Ptilotus auriculifolius	0.3	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Senna artemisioides subsp. *oligophylla*	0.5	0.1
Senna notabilis	0.1	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.1	0.1
Streptoglossa decurrens	0.3	0.1
Tephrosia rosea var. *clementii*	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus suberosus	0.6	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.2	25
Triodia wiseana	0.5	5

PHOTOS



Site Name:	WDKX02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 672766E 7653042N
Orientation:	90/180
Landform Type:	Other, Crest, upper, mid and lower slope (other)
Slope Class:	Steep (23 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Dolerite, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Dolerite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672766	7653042	
Corner 2	672816	7653042	
Corner 3	672815	7652990	
Corner 4	672764	7652993	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.1	0.1
Acacia inaequilatera	2.2	0.1
Arivela viscosa	0.6	0.1
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.2	0.1
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.1	0.1
Cymbopogon ambiguus	0.3	0.2
Cyperus hesperius	0.1	0.1
Dolichocarpa crouchiana	0.1	0.2
Eriachne mucronata	0.3	0.2
Euphorbia careyi	0.2	0.2
Euploca cunninghamii	0.1	0.1
Euploca skeleton	0.3	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	1	0.1
Hakea lorea subsp. *lorea*	0.5	0.1

Taxon Name	Avg. Height	Cover Alive
Hibiscus coatesii	0.1	0.1
Indigofera monophylla	0.3	0.2
Paraneurachne muelleri	0.2	0.1
Pluchea tetranthera	0.2	0.1
Polycarpaea longiflora	0.1	0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.3	0.1
Ptilotus exaltatus	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Ptilotus incanus	0.2	0.1
Rhodanthe margarethae	0.1	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.1
Senna notabilis	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum horridum	0.2	0.1
Solanum phlomoides	0.1	0.1
Streptoglossa macrocephala	0.4	0.1
Tephrosia rosea var. *clementii*	0.4	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Tribulus suberosus	0.4	0.1
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.5	20
Triodia chichesterensis (P3)	0.1	0.2
Triodia epactia	0.1	0.1
Triodia wiseana	0.3	15
Triumfetta maconochieana	0.1	0.1

PHOTOS



Site Name:	WDKX03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 675222E 7665688N
Orientation:	90/180
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	6-20mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	ca. 5 years
Habitat:	Scattered Acacia inaequilatera over hummock grassland of Triodia lanigera.
Comments:	No disturbance, but cattle in the area.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675222	7665688	
Corner 2	675272	7665688	
Corner 3	675273	7665639	
Corner 4	675222	7665641	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.5	0.2
Acacia bivenosa	0.4	0.1
Acacia inaequilatera	3	1
Aristida holathera var. *holathera*	0.2	0.1
Arivela uncifera	0.3	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.5	0.1
Bonamia pilbarensis	0.1	0.1
Bonamia pilbarensis	0.2	0.1
Corchorus parviflorus	0.4	0.1

Taxon Name	Avg. Height	Cover Alive
Eragrostis eriopoda	0.4	0.1
Euploca pachyphylla	0.3	0.1
Euploca skeleton	0.5	0.1
Euploca vestita	0.2	0.1
Goodenia microptera	0.3	0.1
Hakea lorea subsp. *lorea*	1.7	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	1.2	0.1
Ptilotus fusiformis	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.6	40
Triodia schinzii	0.8	0.1

PHOTOS



Site Name:	WDKX04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 675284E 7664990N
Orientation:	90/180
Landform Type:	Other, Flow line (other)
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	NE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	4-5 years
Habitat:	Scattered C. hamerslyana over mid open shrubland of A. tumida over hummock grassland of T. lanigera.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675284	7664990	NW corner
Corner 2	675334	7664989	NE corner
Corner 3	675332	7664939	SE corner
Corner 4	675283	7664939	SW corner

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia lanigera*
Lower Stratum 2:	*Bonamia erecta*, *Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.9	1.5
Acacia inaequilatera	0.4	0.1
Acacia tumida var. *pilbarensis*	1.8	5
Aristida holathera var. *holathera*	0.4	0.1
Arivela uncifera	0.4	0.1
Bonamia alatisemina	0.2	0.1

Taxon Name	Avg. Height	Cover Alive
Bonamia alatisemina	0.4	0.1
Bonamia erecta	0.5	0.3
Cassytha capillaris	0.4	0.1
Chrysopogon fallax	1.5	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	3.1	1
Dampiera candicans	0.7	0.1
Eragrostis eriopoda	0.5	0.2
Euploca pachyphylla	0.3	0.1
Euploca skeleton	0.7	0.1
Euploca vestita	0.3	0.2
Goodenia microptera	0.7	0.3
Gossypium australe	1	0.1
Grevillea wickhamii subsp. *macrodonta*	2	0.1
Halgania solanacea	0.5	0.1
Indigofera monophylla	0.5	0.1
Isotropis atropurpurea	0.5	0.1
Paraneurachne muelleri	0.5	0.1
Polymeria mollis	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	1.2	0.1
Seringia nephrosperma	0.6	0.1
Solanum diversiflorum	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Tribulus hirsutus	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	1	0.1
Triodia lanigera	1.2	55

PHOTOS



Site Name:	WDKX05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 674192E 7665603N
Orientation:	90/180
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	6-20mm
CF Types:	Dolerite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>10 years
Habitat:	Scattered C. hamerslyana over moderately dense A. ancistrocarpa over T. lanigera hummock grassland. Apex version of community.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674192	7665603	NW corner
Corner 2	674241	7665602	NE corner
Corner 3	674241	7665552	SE corner
Corner 4	674191	7665552	SW corner

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia zygophylla*
Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	20
Acacia inaequilatera	2	0.1
Acacia tumida var. *pilbarensis*	2	0.3
Bonamia erecta	0.4	0.2
Corymbia zygophylla	4	1
Goodenia stobbsiana	0.2	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	1	0.1

Taxon Name	Avg. Height	Cover Alive
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	1	50

PHOTOS



Site Name:	WDKX06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	01/06/2023
GPS Location:	GDA94 Zone 50 675324E 7664822N
Orientation:	90/180
Landform Type:	Other, Undulating plain (other)
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5 years
Habitat:	Scattered C. hamerslyana over mid open shrubland of A. tumida, A. ancistrocarpa over hummock grassland of T. schinzii and T. lanigera.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675324	7664822	NW corner
Corner 2	675373	7664821	NE corner
Corner 3	675372	7664771	SE corner
Corner 4	675323	7664772	SW corner

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia schinzii*
Lower Stratum 2:	*Ptilotus astrolasius*, *Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.5
Acacia inaequilatera	0.7	0.1
Acacia tumida var. *pilbarensis*	2.1	1
Afrohybanthus aurantiacus	0.5	0.1
Aristida holathera var. *holathera*	0.4	0.1
Arivela uncifera	0.5	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.5	0.1

Taxon Name	Avg. Height	Cover Alive
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cassytha capillaris		0.1
Chrysopogon fallax	1.4	0.2
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	5	20
Eragrostis eriopoda	0.4	0.5
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.2	0.1
Euploca skeleton	0.5	0.1
Euploca vestita	0.3	0.1
Goodenia microptera	0.4	0.1
Grevillea wickhamii	0.6	0.1
Hibiscus leptocladus	0.4	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.6	0.1
Nellica maderaspatensis	0.5	0.1
Polymeria mollis	0.3	0.1
Ptilotus astrolasius	0.4	1
Rhynchosia minima	0.1	0.1
Solanum diversiflorum	0.3	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	1
Tinospora smilacina	2.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	1.1	2
Triodia lanigera	2	5
Triodia schinzii	1.5	45

PHOTOS



Site Name:	WDM21
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675500.67E 7658467.17N
Orientation:	300/30
Landform Type:	Lower Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Clayey Sand
Soil Colour:	Light brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Granite, Ironstone, Quartz, Calcrete (other)
Disturbance:	None
Fire:	1-2 years
Habitat:	Low open woodland over low open hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.6
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.1	0.1
Corymbia hamersleyana	5	2
Dysphania sphaerosperma	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Ptilotus clementii	0.1	0.1
Salsola australis	0.1	0.1
Solanum phlomoides	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.3	18
Triodia wiseana	0.6	7

PHOTOS





Site Name:	WDM22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 675239.86E 7658543.25N
Orientation:	270/0
Landform Type:	Crest
Slope Class:	Moderately Inclined (10°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown (other)
Rock Outcrop:	Same As Outcrop Photo From Wdm21 (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Disturbance:	None
Fire:	<3 years
Habitat:	Tall sparse shrubland over mid hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	0.2
Acacia orthocarpa	4	6
Amaranthus undulatus	0.1	0.1
Boerhavia gardneri	0.2	0.1
Cassytha capillaris		0.1
Clerodendrum tomentosum var. *tomentosum*	1.5	0.2
Corchorus parviflorus	0.1	0.1
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.1	0.1
Cymbopogon ambiguus	0.3	0.1
Dampiera candicans	0.2	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euploca cunninghamii	0.2	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Hakea lorea subsp. *lorea*	2	0.1
Hibiscus coatesii	0.2	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.5	0.1

Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Solanum phlomoides	0.6	0.1
Tribulus platypterus	1.1	0.1
Tribulus suberosus	0.6	0.1
Triodia chichesterensis (P3)	0.2	0.1
Triodia epactia	0.4	0.1
Triodia wiseana	0.6	9

PHOTOS





Site Name:	WDMX01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 675028.22E 7665585.47N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	< 5 years
Habitat:	Scattered low trees over low open shrubland over low open hummock grassland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675028	7665585	
Corner 2	675075	7665588	
Corner 3	675074	7665535	
Corner 4	675025	7665535	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.7	2
Acacia tumida var. *pilbarensis*	0.9	2
Arivela uncifera	0.3	0.1
Bonamia erecta	0.3	0.1
Corymbia zygophylla	3	1
Eragrostis eriopoda	0.2	0.1
Euploca vestita	0.2	0.1
Goodenia microptera	0.2	0.1
Halgania solanacea	0.3	0.1
Isotropis atropurpurea	0.2	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.4	0.1
Ptilotus fusiformis	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tribulus hirsutus	0.1	0.1

Taxon Name	Avg. Height	Cover Alive
Trigastrotheca molluginea	0.2	0.1
Triodia lanigera	0.2	25
Triodia schinzii	0.4	0.3

PHOTOS



Site Name:	WDMX02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 674137.17E 7665774.69N
Orientation:	180/90
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Quartz, Dolerite, Calcrete (other), 2-10% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	5-10 years
Habitat:	Low scattered trees over tall open shrubland over low shrubland over hummock grassland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674137	7665775	
Corner 2	674191	7665776	
Corner 3	674190	7665725	
Corner 4	674143	7665728	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	3	0.3
Acacia sphaerostachya	1.6	0.1
Acacia stellaticeps	0.7	10
Corymbia zygophylla	2	0.1
Dampiera candicans	0.3	0.1
Grevillea wickhamii	2.5	3
Halgania solanacea	0.2	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.2	0.1
Triodia lanigera	0.5	35

PHOTOS



Site Name:	WDMX03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 675344.13E 7664219.46N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	< 2 years
Habitat:	Tall scattered shrubs over very open hummock grassland over very open herbland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675344	7664219	
Corner 2	675395	7664219	
Corner 3	675394	7664169	
Corner 4	675348	7664169	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.7	0.2
Acacia inaequilatera	0.5	0.2
Bonamia pilbarensis	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	1	0.3
Corchorus parviflorus	0.4	0.2
Dolichocarpa crouchiana	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Euploca cunninghamii	0.1	0.2
Euploca pachyphylla	0.1	0.1
Euploca skeleton	0.3	0.1
Goodenia microptera	0.2	0.1
Indigofera monophylla	0.2	0.2
Ptilotus astrolasius	0.2	0.1
Ptilotus axillaris	0.1	0.2
Streptoglossa decurrens	0.2	0.1

Taxon Name	Avg. Height	Cover Alive
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Tribulus hirsutus	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.1	4
Triodia epactia	0.1	0.1
Triodia lanigera	0.1	0.1

PHOTOS



Site Name:	WDMX04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 674803.3E 7664371.01N
Orientation:	90/180
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	< 2 years
Habitat:	Scattered tall shrubs over very open hummock grassland over very open herbland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674803	7664371	
Corner 2	674852	7664370	
Corner 3	674852	7664319	
Corner 4	674804	7664321	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	1
Arivela uncifera	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.1	0.1
Corchorus parviflorus	0.1	0.1
Dampiera candicans	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Eragrostis eriopoda	0.3	0.1
Euploca cunninghamii	0.1	0.1
Euploca pachyphylla	0.1	0.1
Euploca skeleton	0.2	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	0.2	0.1
Hakea lorea subsp. *lorea*	1.5	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.3	0.1
Senna notabilis	0.2	0.1
Streptoglossa decurrens	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.1	3
Triodia lanigera	0.1	6

PHOTOS



Site Name:	WOC01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 695604.9044E 7664171.065N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	silt (other)
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	>5yrs
Habitat:	Acacia colei low sparse shrubland over Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695605	7664171	
Corner 2	695654	7664166	
Corner 3	695655	7664120	
Corner 4	695603	7664119	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.7	5
Bonamia pilbarensis	0.3	0.1
Eriachne pulchella subsp. *dominii*	0.5	0.1
Fimbristylis simulans	0.1	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.7	0.1
Indigofera monophylla	0.4	0.3
Triodia lanigera	0.4	30
Triodia wiseana	0.5	0.5

PHOTOS









Site Name:	WOC02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 695266.7227E 7664173.96N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5yrs
Habitat:	Corymbia hamersleyana low isolated clumps of trees over Acacia ancistrocarpa and Acacia ?tumida (CGMWOP2) tall shrubland over Triodia wiseana low sparse hummock grassnaldn with 'Plectrachne pungens' (CGMWOP9) low open tussock grassland??

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695267	7664174	
Corner 2	695315	7664172	
Corner 3	695316	7664124	
Corner 4	695264	7664125	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia tumida* var. *pilbarensis*, *Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	4
Acacia sphaerostachya	1	0.1
Acacia tumida var. *pilbarensis*	4	30
Afrohybanthus aurantiacus	0.2	0.1
Bonamia erecta	0.3	0.1

Bonamia pilbarensis	0.3	0.3
Chrysopogon fallax	1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1
Corymbia hamersleyana	4	1
Dampiera candicans	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.3	0.1
Neurachne muelleri	0.1	0.1
Petalostylis labicheoides	1.5	0.1
Ptilotus sp.	0.1	0.1
Senna notabilis	0.2	0.1
Seringia nephrosperma	0.5	0.1
Solanum diversiflorum	0.1	0.1
Triodia epactia	0.3	20
Triodia lanigera	0.3	5

PHOTOS









Site Name:	WOC03
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 694265.1489E 7664180.899N
Orientation:	along river
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Soil Type:	Sand
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Grazing, (other) - Rubbish
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	694265	7664181	
Corner 2	694257	7664085	
Corner 3	694285	7664190	
Corner 4	694281	7664083	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.2
Acacia tumida var. *pilbarensis*	4	7
Afrohybanthus aurantiacus	0.3	0.5
Arivela viscosa	0.2	0.1
Bonamia erecta	0.3	1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	0.2	0.1
Cassytha capillaris		0.1
Cathetus exilis	0.3	0.1
Chrysopogon fallax	0.5	4
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.2
Corymbia hamersleyana	5	2
Dampiera candicans	0.6	0.3
Eragrostis cumingii	0.1	0.2

Eriachne mucronata	0.5	0.2
Eriachne tenuiculmis	0.7	1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Goodenia stobbsiana	0.4	0.2
Gossypium australe	1.8	0.2
Grevillea wickhamii subsp. *hispidula*	2.2	3
Isotropis atropurpurea	0.1	0.1
Paspalidium rarum	0.2	0.1
Petalostylis labicheoides	1	0.2
Pluchea dentex	0.4	0.1
Polymeria mollis	0.2	0.1
Ptilotus fusiformis	0.3	0.1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.5	0.1
Solanum diversiflorum	0.4	0.1
Tephrosia rosea var. *clementii*	1.2	0.3
Themeda triandra	0.5	0.2
Triodia epactia	0.6	20
Triumfetta chaetocarpa	0.2	0.2

PHOTOS







Site Name:	WOC04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 693403.0539E 7664305.959N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNE
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Disturbance:	recent fire (other) - Adjacent road
Fire:	<5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	693403	7664306	
Corner 2	693454	7664306	
Corner 3	693454	7664258	
Corner 4	693405	7664260	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.7	1.5
Acacia ancistrocarpa	0.7	0.5
Arivela uncifera	0.1	0.1
Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.3	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Dampiera candicans	0.5	0.1
Fimbristylis simulans	0.1	0.1
Indigofera monophylla	0.2	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.3	0.1
Tephrosia clementii	0.2	0.1
Triodia lanigera	0.4	30

PHOTOS





Site Name:	WOC05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 691787.8227E 7664098.569N
Orientation:	90, 180
Landform Type:	Open Depression
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	<5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	691788	7664099	
Corner 2	691841	7664099	
Corner 3	691838	7664050	
Corner 4	691790	7664049	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	0.5
Acacia tumida var. *pilbarensis*	4	25
Afrohybanthus aurantiacus	0.2	0.2
Bonamia erecta	0.3	0.1
Cathetus exilis	0.3	0.1
Chrysopogon fallax	0.4	5
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.2
Corymbia hamersleyana	4	0.5
Cucumis variabilis		0.1
Dampiera candicans	0.3	0.3
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	1.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.2
Indigofera monophylla	0.5	0.2

Isotropis atropurpurea	0.4	0.1
Paraneurachne muelleri	0.6	0.1
Petalostylis labicheoides	1.7	0.4
Ptilotus astrolasius	0.3	0.1
Seringia nephrosperma	1.1	0.3
Triodia epactia	0.5	20

PHOTOS









Site Name:	WOC06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 689133.4047E 7664079.576N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	(other) - Adjacent road
Fire:	<5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	689133	7664080	
Corner 2	689184	7664082	
Corner 3	689185	7664031	
Corner 4	689135	7664032	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1
Acacia stellaticeps	0.4	3
Fimbristylis simulans	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.5
Ptilotus calostachyus	0.5	0.1
Triodia lanigera	0.4	20

PHOTOS









Site Name:	WOC07
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 687881.9E 7664215.33N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing, (other) - Adjacent road
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	687882	7664215	
Corner 2	687932	7664215	
Corner 3	687933	7664166	
Corner 4	687882	7664167	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ancistrocarpa*, *Acacia stellaticeps*, *Hakea lorea*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	3	4
Acacia stellaticeps	1	15
Bonamia erecta	0.2	0.2
Cassytha capillaris		
Corymbia hamersleyana		
Grevillea wickhamii subsp. *hispidula*	1.2	0.1
Hakea lorea	1.6	0.5
Indigofera monophylla	0.2	0.1
Isotropis atropurpurea	0.2	0.1
Senna notabilis	0.1	0.1

Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)		
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.7	30

PHOTOS









Site Name:	WOC08
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 687581.6238E 7664206.565N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	687582	7664207	
Corner 2	687631	7664209	
Corner 3	687632	7664160	
Corner 4	687583	7664159	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Eriachne obtusa*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	4	6
Acacia tumida var. *pilbarensis*	3	2
Afrohybanthus aurantiacus	0.2	0.1
Arivela viscosa	0.1	0.1
Boerhavia coccinea	0.2	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.2

Cajanus cinereus	0.3	0.1
Cathetus exilis	0.2	0.1
Chrysopogon fallax	0.4	0.2
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Corymbia hamersleyana	4	1
Dampiera candicans	0.5	0.1
Eriachne obtusa	0.4	5
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	4.5	1
Indigofera monophylla	0.7	0.3
Paspalidium rarum	0.1	0.1
Polymeria mollis		0.2
Portulaca oleracea	0.1	0.1
Ptilotus calostachyus	0.7	0.1
Senna notabilis	0.1	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	1.3	0.2
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.4	25

PHOTOS



Site Name:	WOC09
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 686728.4049E 7664235.944N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing - cows
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	686728	7664236	
Corner 2	686779	7664236	
Corner 3	686780	7664187	
Corner 4	686730	7664187	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia orthocarpa	1.5	0.5
Afrohybanthus aurantiacus	0.4	0.1
Arivela uncifera	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1
Corymbia hamersleyana		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Ptilotus astrolasius	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.3	8
Triodia wiseana	0.4	7

PHOTOS





Site Name:	WOC10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 686556.8592E 7664244.748N
Orientation:	90, 180
Landform Type:	Open Depression, Drainage line (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing - cattle
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	686557	7664245	
Corner 2	686607	7664244	
Corner 3	686606	7664195	
Corner 4	686556	7664195	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.3
Acacia ancistrocarpa	1.6	0.2
Acacia bivenosa	0.6	0.1
Afrohybanthus aurantiacus	0.3	0.1
Bonamia alatisemina	0.2	0.1
Bonamia erecta	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Cathetus exilis	0.1	0.1
Chrysopogon fallax	0.7	0.3
Corchorus lasiocarpus subsp. *lasiocarpus*	0.6	0.3
Corymbia hamersleyana	8	3
Cucumis variabilis		0.2
Eriachne helmsii	0.4	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca mutica (P3)	0.2	0.1
Goodenia forrestii	0.2	0.1
Gossypium australe	0.2	0.1

Hakea lorea	0.6	0.1
Indigofera monophylla	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Senna notabilis	0.1	0.1
Solanum phlomoides	0.1	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	29
Triodia wiseana	0.5	1

PHOTOS







Site Name:	WOC11
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 685215.1795E 7663957.008N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685215	7663957	
Corner 2	685239	7663959	
Corner 3	685301	7663885	
Corner 4	685281	7663870	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.6	0.1
Acacia ancistrocarpa		
Acacia inaequilatera	2.5	0.5
Bonamia pilbarensis	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Ptilotus calostachyus	0.4	0.1
Trigastrotheca molluginea		
Triodia brizoides	0.3	40

PHOTOS



Site Name:	WOC12
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 685238.85E 7663733.29N
Orientation:	90, 180
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Soil Type:	Sandy Clay Loam
Soil Colour:	light brown (other)
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685239	7663733	
Corner 2	685291	7663731	
Corner 3	685288	7663684	
Corner 4	685237	7663689	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	0.5
Acacia inaequilatera	3	7
Aristida contorta	0.1	0.1
Arivela viscosa	0.3	0.2
Corchorus lasiocarpus subsp. *lasiocarpus*	0.2	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Gossypium australe	0.2	0.1
Indigofera colutea	0.1	0.1

Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Senna notabilis	0.1	0.1
Triodia brizoides	0.3	5
Triodia epactia	0.4	15
Triodia wiseana	0.3	20

PHOTOS









Site Name:	WOC13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 685000.1193E 7663753.908N
Orientation:	90, 180
Landform Type:	Mid Slope
Slope Class:	Moderately Inclined (10°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Orange
Soil Condition:	Dry - Sandier patches within quad contain more weeds
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Grazing - cattle, Weeds
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685000	7663754	
Corner 2	685050	7663753	
Corner 3	685049	7663703	
Corner 4	684998	7663702	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Acacia orthocarpa*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon lepidum	0.4	0.1
Acacia inaequilatera	3	1
Acacia orthocarpa	3	3
Acacia trachycarpa	1.8	0.1
**Aerva javanica*	0.4	0.1
Arivela viscosa	0.4	0.2
Boerhavia coccinea	0.1	0.2
Bulbostylis barbata	0.1	0.1

Cathetus exilis	0.1	0.1
**Cenchrus ciliaris*	0.4	4
Corchorus laniflorus	0.1	0.1
Cucumis variabilis		0.1
Cynodon convergens	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eragrostis crateriformis	0.2	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Indigofera colutea	0.1	0.1
Pluchea ferdinandi-muelleri	1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Senna notabilis	0.1	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)	1.5	0.2
Tribulus occidentalis	0.2	0.1
Triodia epactia	0.5	35

PHOTOS









Site Name:	WOC14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 684834.3421E 7663451.484N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sand
Soil Colour:	light brown (other)
Soil Condition:	Dry
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Grazing - Cattle, Weeds - Cenchrus cilliaris and Aerva javanaica
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684834	7663451	
Corner 2	684884	7663449	
Corner 3	684884	7663398	
Corner 4	684835	7663400	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus camaldulensis* subsp. *refulgens*, *Flueggea virosa* subsp. *melanthesoides*
Mid Stratum 1:	*Acacia ampliceps*, *Acacia trachycarpa*, *Atalaya hemiglauca*, *Melaleuca glomerata*
Mid Stratum 2:	*Acacia coriacea* subsp. *pendens*, *Melaleuca linophylla*
Lower Stratum 1:	**Cenchrus ciliaris*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ampliceps	2.5	1
Acacia coriacea subsp. *pendens*	1.5	1
Acacia trachycarpa	3	2
**Aerva javanica*	0.4	0.1
Afrohybanthus aurantiacus	0.2	0.1
Ammannia multiflora	0.1	0.1
Arivela viscosa	0.2	0.1
Asteraceae sp.	0.1	0.1
Atalaya hemiglauca	3.5	5
Bergia pedicellaris	0.1	0.1
Calandrinia tepperiana	0.1	0.1

**Calotropis procera*	1.2	0.1
Cathetus exilis	0.1	0.1
**Cenchrus ciliaris*	0.7	35
Corchorus lasiocarpus subsp. *lasiocarpus*	0.1	0.1
Crotalaria cunninghamii	0.5	0.1
Cucumis variabilis		0.1
Cyperus difformis	0.2	0.1
Cyperus ixiocarpus	0.2	0.1
Cyperus leptocarpus	0.1	0.1
Cyperus squarrosus	0.1	0.1
Cyperus vaginatus	0.5	0.1
Eragrostis cumingii	0.1	0.1
Eragrostis tenellula	0.1	0.1
Eriachne benthamii	0.7	0.1
Eriachne obtusa	0.5	0.1
Eucalyptus camaldulensis subsp. *refulgens*	15	5
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca cunninghamii	0.2	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Fimbristylis microcarya	0.2	0.1
Flueggea virosa subsp. *melanthesoides*	4.5	0.5
Goodeniaceae sp.	0.1	0.1
Ipomoea muelleri		0.1
Ipomoea polymorpha	0.1	0.1
Marsilea mutica	0.1	0.1
Melaleuca glomerata	3	7
Melaleuca linophylla	2	4
**Opuntia* sp.	0.4	0.1
Portulaca oleracea	0.1	0.1
Pterocaulon serrulatum var. *velutinum*	0.1	0.1
Rhynchosia minima	0.1	0.1
Scleromitrion galioides		0.1
Synaptantha tillaeacea	0.1	0.1
Triodia epactia	0.3	3
Triumfetta chaetocarpa	0.2	0.1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	0.1	0.1
Wahlenbergia tumidifructa	0.2	0.1

PHOTOS









Site Name:	WOC15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 672469.781E 7652297.538N
Orientation:	90, 180
Landform Type:	Crest
Slope Class:	Very Steep (37°)
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672470	7652298	
Corner 2	672458	7652258	
Corner 3	672504	7652260	
Corner 4	673133	7652664	4th corner left blank in data sheet, but this WP is not accounted for in subsequent data sheets- possibly incorrect

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.1	0.1
Arivela viscosa	0.2	0.1
Boerhavia gardneri	0.1	0.1
Corchorus parviflorus	0.3	0.1
Cymbopogon sp.	0.8	0.1
Eriachne mucronata	0.1	0.2
Eucalyptus leucophloia subsp. *leucophloia*	1	0.1
Euphorbia careyi	0.1	0.1
Gomphrena cunninghamii	0.2	0.1
Grevillea wickhamii	1	0.1
Indigofera monophylla	0.4	0.1
Jasminum didymum subsp. *lineare*		0.1
Senna glutinosa subsp. *glutinosa*	0.3	0.1
Solanum phlomoides	0.2	0.1
Terminalia circumalata	3	0.9

Tribulus platypterus	0.4	0.1
Triodia wiseana	0.3	10
Triumfetta propinqua	0.2	0.1

PHOTOS







Site Name:	WOC16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 673127.0385E 7652857.633N
Orientation:	90, 180
Landform Type:	Mid Slope
Slope Class:	Steep (23°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Dolerite, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Dolerite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673127	7652858	
Corner 2	673176	7652858	
Corner 3	673176	7652809	
Corner 4	673126	7652810	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.5
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.2	0.2
Cullen leucochaites	0.7	0.2
Eriachne mucronata	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca cunninghamii	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Grevillea wickhamii	0.7	0.1
Hakea lorea subsp. *lorea*	2	0.5

Indigofera rugosa	0.3	0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus calostachyus	0.2	0.1
Ptilotus sp.	0.1	0.1
Senna symonii	0.4	0.1
Solanum phlomoides	0.1	0.1
Tephrosia densa	0.4	0.1
Tribulus suberosus	0.4	0.2
Triodia epactia	0.2	7
Triodia wiseana	0.3	3

PHOTOS









Site Name:	WOC17
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 673223.87E 7652037.71N
Orientation:	?90, 180?
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673224	7652038	
Corner 2	673232	7652018	
Corner 3	673413	7652097	
Corner 4	673403	7652123	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 2:	*Acacia tumida* var. *pilbarensis*, *Corchorus parviflorus*, *Indigofera monophylla*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Eulalia aurea*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.5	0.2
Acacia tumida var. *pilbarensis*	0.5	5
Afrohybanthus aurantiacus	0.2	0.1
Arivela viscosa	0.6	0.2
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	1	1
Corchorus parviflorus	0.3	5
Corymbia hamersleyana	4	0.5

Dampiera candicans	0.5	1
Eulalia aurea	0.7	0.5
Euphorbia careyi	0.1	0.1
Euphorbia trigonosperma	0.3	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Evolvulus alsinoides	0.1	0.1
Fimbristylis simulans	0.2	0.1
Gossypium australe	0.5	0.5
Grevillea wickhamii subsp. *hispidula*	0.6	0.1
Hibiscus leptocladus	0.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.4	7
Paraneurachne muelleri	0.1	0.1
Petalostylis labicheoides	1.5	0.5
Polymeria mollis	0.1	0.1
Ptilotus astrolasius	0.3	0.2
Ptilotus calostachyus	0.5	0.1
Ptilotus incanus	0.2	0.1
Senna glutinosa subsp. *glutinosa*	0.4	0.1
Solanum phlomoides	0.4	1
Stemodia grossa	0.3	0.3
Tribulus platypterus	0.2	0.1
Triodia epactia	0.3	6
Triumfetta maconochieana	0.1	0.1

PHOTOS



Site Name:	WOC18
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 676870.131E 7655547.118N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Loam
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676870	7655547	
Corner 2	676919	7655547	
Corner 3	676920	7655497	
Corner 4	676871	7655498	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia bivenosa*, *Grevillea wickhamii*
Lower Stratum 1:	*Eriachne tenuiculmis*, *Triodia angusta*, *Triodia brizoides*, *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.7	0.5
Afrohybanthus aurantiacus	0.2	0.1
Cassytha capillaris		0.1
Corymbia hamersleyana	5	2
Eriachne mucronata	0.2	0.1
Eriachne tenuiculmis	0.3	5
Euploca chrysocarpa	0.2	0.2
Grevillea wickhamii	1.5	0.5
Hakea lorea subsp. *lorea*	1.8	0.1
Scaevola browniana subsp. *browniana*	0.2	0.1

Stemodia grossa	0.2	0.1
Triodia angusta	0.7	15
Triodia brizoides	0.7	10
Triodia chichesterensis (P3)	0.3	5

PHOTOS









Site Name:	WOC19
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677463.08E 7655404.76N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677463	7655405	
Corner 2	677513	7655405	
Corner 3	677513	7655356	
Corner 4	677465	7655361	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Senna symonii*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1	0.1
Acacia orthocarpa	1.5	0.1
Bonamia erecta	0.2	0.2
**Cenchrus ciliaris*	0.4	1
Corymbia hamersleyana	4	0.5
Eragrostis cumingii	0.2	0.1
Eriachne mucronata	0.2	0.2
Grevillea pyramidalis subsp. *leucadendron*		
Hakea lorea subsp. *lorea*	1.6	0.1
Pluchea ferdinandi-muelleri	0.4	0.1

Rhynchosia minima		0.1
Senna symonii	1.6	0.5
Solanum diversiflorum	0.1	0.1
Triodia angusta	0.3	10
Triodia epactia	0.4	30

PHOTOS







Site Name:	WOC20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677709.7297E 7655243.65N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Pale brown (other)
Soil Condition:	Dry
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<5yrs
Comments:	Recently burnt

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677710	7655244	
Corner 2	677759	7655242	
Corner 3	677759	7655191	
Corner 4	677710	7655192	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Bonamia erecta	0.1	0.1
Codonocarpus cotinifolius	1	1
Pluchea tetranthera	0.1	0.1
Salsola australis	0.1	0.2
Senna notabilis	0.1	0.1
Triodia angusta	0.2	2
Triodia chichesterensis (P3)	0.2	8

PHOTOS





Site Name:	WOC21
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677665.9256E 7655562.347N
Orientation:	90, 180
Landform Type:	Hillock
Slope Class:	Moderately Inclined (10°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<5yrs
Comments:	Recently burnt

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677666	7655562	
Corner 2	677716	7655561	
Corner 3	677719	7655511	
Corner 4	677664	7655501	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.5	0.3
Acacia inaequilatera	2	1
Bonamia erecta	0.2	0.1
Eriachne mucronata	0.2	0.1
Goodenia stobbsiana	0.2	0.5
Grevillea wickhamii subsp. *hispidula*	1.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.2
Ptilotus calostachyus	0.8	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Sida arenicola	0.3	0.1
Triodia wiseana	0.3	10

PHOTOS





Site Name:	WOC22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 676973.7643E 7656203.485N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Moist - Recent rains= moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal - Cattle
Fire:	<2
Comments:	Recently burnt

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676974	7656203	
Corner 2	677025	7656201	
Corner 3	677026	7656152	
Corner 4	676974	7656152	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia cowleana	1	5
Acacia inaequilatera	1.2	0.1
Acacia orthocarpa	1	0.1
Afrohybanthus aurantiacus	0.1	0.1
Arivela viscosa	0.3	0.1
Bonamia erecta	0.3	3
Bulbostylis barbata	0.1	0.1
Chrysopogon fallax	0.8	0.1
Corchorus laniflorus	0.4	0.1
Corymbia hamersleyana	4	1
Dampiera candicans	0.3	0.1
Euphorbia ?trigonosperma	0.1	0.1
Euploca tenuifolia	0.1	0.1

Goodenia forrestii	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.5	
Indigofera monophylla	0.3	0.1
Petalostylis labicheoides	1.3	0.1
Pluchea ferdinandi-muelleri	0.3	0.1
Pluchea tetranthera	0.1	0.1
Polymeria mollis	0.2	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.3	0.1
Senna artemisioides subsp. *oligophylla*	0.3	0.1
Senna notabilis	0.1	0.1
Solanum phlomoides	0.4	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Triodia epactia	0.3	15

PHOTOS









Site Name:	WOC23
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677267.4725E 7656524.747N
Orientation:	0, 90
Landform Type:	Crest
Slope Class:	Very Steep (37°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	Ironstone, >50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5rs
Comments:	recently burnt

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677267	7656525	
Corner 2	677367	7656513	
Corner 3	677370	7656538	
Corner 4	677269	7656539	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia cowleana*, *Grevillea wickhamii*
Mid Stratum 2:	*Tribulus suberosus*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Eriachne mucronata*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia cowleana	1.2	3
Acacia inaequilatera	0.4	0.1
Afrohybanthus aurantiacus	0.2	0.1
Clerodendrum tomentosum	2.5	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Dampiera candicans	0.3	0.1

Eriachne mucronata	0.2	4
Eriachne pulchella subsp. *dominii*	0.1	0.1
Goodenia stobbsiana	0.3	0.2
Grevillea wickhamii	1.5	0.5
Indigofera monophylla	0.4	0.2
Ptilotus calostachyus	0.4	0.1
Ptilotus exaltatus	0.3	0.1
Senna glutinosa subsp. *glutinosa*	0.5	0.1
Solanum phlomoides	0.6	0.1
Tribulus suberosus	0.5	0.5
Trigastrotheca molluginea	0.2	0.1
Triodia epactia	0.3	12

PHOTOS









Site Name:	WOC24
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677891.078E 7656236.775N
Orientation:	132, 222
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - P - Poor
Disturbance:	Weeds
Fire:	<2yrs
Comments:	Recent burn

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677891	7656237	
Corner 2	677947	7656185	
Corner 3	677930	7656173	
Corner 4	677875	7656218	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Chrysopogon fallax*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.5	2
Afrohybanthus aurantiacus	0.3	0.1
**Cenchrus ciliaris*	0.3	10
**Cenchrus setiger*	0.3	5
Chrysopogon fallax	0.4	1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Corchorus ?tridens	0.1	0.1
Corymbia hamersleyana	4	2
Goodenia forrestii	0.2	0.1
Gossypium australe	0.1	0.1

Indigofera monophylla	0.3	0.3
Petalostylis labicheoides	0.7	0.2
Pluchea tetranthera	0.2	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Senna artemisioides subsp. *oligophylla*	0.2	0.1
Senna notabilis	0.1	0.1
Seringia nephrosperma	0.2	0.1
Sporobolus australasicus	0.1	0.5
Tephrosia supina	0.2	0.1
Triodia epactia	0.3	0.2

PHOTOS



Site Name:	WOC25
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 678168.33E 7656819.84N
Orientation:	90, 180
Landform Type:	Undulating Plain
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Comments:	Vegetation thicker in drainage line, but same assemblage than surrounding vegetation

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678168	7656820	
Corner 2	678219	7656820	
Corner 3	678220	7656771	
Corner 4	678168	7656771	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Indigofera monophylla*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	8
Acacia ancistrocarpa	2.5	12
Acacia inaequilatera	2	0.1
Afrohybanthus aurantiacus	0.2	0.1
Bonamia erecta	0.3	0.2
Cassytha capillaris		0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1
Corymbia hamersleyana		
Dampiera candicans	0.2	0.1
Goodenia stobbsiana	0.2	0.1

Grevillea wickhamii subsp. *hispidula*	2.5	1
Indigofera monophylla	0.6	0.5
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.4	0.1
Triodia epactia	0.5	15
Triodia lanigera	0.5	20

PHOTOS







Site Name:	WOC26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 677599.7251E 7659398.342N
Orientation:	90, 180
Landform Type:	Upper Slope
Slope Class:	Precipitous (60°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Ironstone, >50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677600	7659398	
Corner 2	677591	7659347	
Corner 3	677629	7659393	
Corner 4	677795	7659275	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera		
Arivela viscosa		
Bonamia erecta		
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Cymbopogon sp.	0.7	0.1
Eriachne mucronata	0.1	0.1
Eriachne pulchella subsp. *dominii*		
Gossypium australe	0.3	0.1
Hakea lorea subsp. *lorea*		
Ptilotus auriculifolius		
Tribulus suberosus	0.4	0.1
Triodia epactia	0.2	5
Triodia wiseana	0.3	20
Triumfetta propinqua		

PHOTOS





Site Name:	WOC27
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 678007.0686E 7659079.488N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - P - Poor
Disturbance:	Weeds, Animal - Cattle
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678007	7659079	
Corner 2	678108	7659084	
Corner 3	678108	7659059	
Corner 4	678108	7659059	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Chrysopogon fallax*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.2
Acacia inaequilatera	2	2.5
**Aerva javanica*	0.3	0.1
Afrohybanthus aurantiacus	0.3	0.1
Bonamia erecta	0.3	0.1
Cajanus cinereus	1.5	0.1
**Cenchrus ciliaris*	0.5	50
**Cenchrus setiger*	0.5	30
Chrysopogon fallax	0.7	0.5
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1

Corymbia hamersleyana	8	3
Goodenia forrestii	0.2	0.1
Gossypium australe	0.2	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.5	0.2
Indigofera monophylla	0.5	0.1
Isotropis atropurpurea	1.5	0.1
Pluchea ferdinandi-muelleri	1	0.1
Polymeria mollis		0.5
Pterocaulon sphacelatum	0.2	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Tephrosia rosea var. *clementii*	1.5	0.1
Tephrosia supina	0.1	0.1
Themeda triandra	0.7	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	1

PHOTOS





Site Name: WOD01

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 22/05/2024

GPS Location: GDA94 Zone 50 695660.8752E 7665598.21N

Orientation: 160, 250

Landform Type: Flat

Slope Class: Level (0°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Brown

Rock Outcrop: No bedrock exposed

CF Abundance: 2-10%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Colluvium

Vegetation Condition: Northern Vegetation Condition - G - Good

Disturbance: Grazing, Weeds, Animal - Cattle

Fire: >5yrs

Habitat: Grevillea wickhamii, Acacia pyrifolia subsp. pyrifolia and Petalostylis labechiodes tall open shrubland over Indigofera monophylla low isolated clumps of shrubs over Triodia epactia mid hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695661	7665598	
Corner 2	695674	7665551	
Corner 3	695624	7665542	
Corner 4	695609	7665593	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia pyrifolia* var. *pyrifolia*, *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*

Mid Stratum 1: *Indigofera monophylla*

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.1
Acacia pyrifolia var. *pyrifolia*	2	4
Acacia trachycarpa	3	1
**Aerva javanica*	0.1	0.1

Afrohybanthus aurantiacus	0.3	0.1
Arivela viscosa	0.1	0.1
Atalaya hemiglauca	3.5	0.1
Boerhavia burbidgeana	0.1	0.1
Boerhavia coccinea	0.1	0.1
**Cenchrus ciliaris*	0.4	1
**Cenchrus setiger*	0.3	0.2
Corchorus parviflorus	0.4	0.1
Corchorus tridens	0.1	0.1
Cucumis melo		0.1
Eriachne obtusa	0.4	0.2
Eriachne tenuiculmis	0.5	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia biconvexa	0.1	0.1
Euploca tenuifolia	0.2	0.1
Goodenia muelleriana	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	6
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.6	2
Notoleptopus decaisnei	0.1	0.1
Paspalidium clementii	0.1	0.1
Pentalepis trichodesmoides subsp. *trichodesmoides*	0.5	0.1
Petalostylis labicheoides	2	1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus axillaris	0.1	0.1
Rhynchosia minima		0.1
Scaevola amblyanthera var. *centralis*	0.2	0.1
Sida clementii	0.4	0.1
Solanum diversiflorum	0.1	0.1
Solanum phlomoides	0.5	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	1.5	0.1
Tribulus hirsutus	0.1	0.1
Tribulus occidentalis	0.1	0.1
**Tribulus terrestris*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	30

PHOTOS



Site Name: WOD02

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 22/05/2024

GPS Location: GDA94 Zone 50 695963.2452E 7665937.903N

Orientation: 10, 280

Landform Type: Undulating Plain

Slope Class: Very Gently Inclined (1°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Chert (other)

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: <5/>5 yrs

Habitat: Acacia acradenia and Acacia ancistrocarpa tall isolated clumps of shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695963	7665938	
Corner 2	695911	7665941	
Corner 3	695913	7665991	
Corner 4	695966	7665986	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia acradenia*, *Acacia ancistrocarpa*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1
Acacia ancistrocarpa	2	0.2
Acacia inaequilatera	1.5	0.1
Bonamia pilbarensis	0.1	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Indigofera monophylla	0.3	0.1

Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.4	0.1
Tephrosia clementii	0.1	0.1
Triodia lanigera	0.3	35

PHOTOS



Site Name:	WOD03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 696221.3543E 7666645.092N
Orientation:	195, 105
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Corymbia hammersleyana low isolated trees over Acacia acradenia and Acacia inaequalatera tall open shrubland over Triodia epactia and Triodia wiseana mid hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696221	7666645	
Corner 2	696207	7666596	
Corner 3	696258	7666589	
Corner 4	696269	7666640	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	10
Acacia ancistrocarpa	2.5	0.1
Acacia bivenosa	2	0.1
Acacia inaequilatera	3.5	0.2
Afrohybanthus aurantiacus	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1

Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4	0.3
Cucumis melo		0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia microptera	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.1
Indigofera monophylla	0.4	0.1
Petalostylis labicheoides	1.5	0.1
Ptilotus calostachyus	0.3	0.1
Scaevola amblyanthera var. *centralis*	0.1	0.1
Senna symonii	0.6	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia chichesterensis (P3)	0.4	0.1
Triodia epactia	0.4	0.2
Triodia wiseana	0.4	30

PHOTOS



Site Name: WOD04

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA94 Zone 50 696681.7134E 7665997.139N

Orientation: 40, 310

Landform Type: Mid Slope

Slope Class: Steep (23°)

Aspect: SE

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: Shale, 10-20% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Shale

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5yrs

Habitat: Acacia acradenia and Acacia inaequilatera tall isolated clumps of shrubs over Triodia wiseana mid hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696682	7665997	
Corner 2	696646	7666033	
Corner 3	696679	7666069	
Corner 4	696712	7666035	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia acradenia*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1.5
Acacia ancistrocarpa	2	0.1
Acacia bivenosa	0.5	0.1
Acacia inaequilatera	2.5	0.4
Afrohybanthus aurantiacus	0.3	0.1
Amaranthus undulatus	0.5	0.2
Arivela viscosa	0.3	0.1

Boerhavia gardneri	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Clerodendrum floribundum	1.2	0.1
Corchorus parviflorus	0.5	0.1
Cucumis melo		0.1
Cymbopogon ambiguus	0.3	0.1
Eriachne mucronata	0.3	0.1
Euphorbia careyi	0.3	0.1
Gomphrena cunninghamii	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium australe	0.8	0.1
Hakea lorea subsp. *lorea*	2	0.1
Indigofera monophylla	0.3	0.1
Indigofera trita	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	1.8	0.1
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	2	0.1
Solanum phlomoides	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.2	0.1
Tribulus suberosus	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia wiseana	0.4	40
Triumfetta maconochieana	0.4	0.1

PHOTOS



Site Name:	WOD05
Site Type:	QUADRAT
Dimensions:	15m x 166.67m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 696647.6889E 7665897.44N
Orientation:	35, 305
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Shale, Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Corymbia hamersleyana tall low isolated trees over Acacia tumida var. pilbarensis and petalostylis labechoides tall shrubland over Cajanus pubescens low isolated clumps of shrubs over Triodia epactia and Triodia wiseana mid open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696648	7665897	
Corner 2	696636	7665904	
Corner 3	696758	7666022	
Corner 4	696747	7666030	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides*
Mid Stratum 2:	*Corchorus parviflorus*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.2
Acacia tumida var. *pilbarensis*	2	30
Afrohybanthus aurantiacus	0.4	0.1
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.2	0.1

Cajanus cinereus	1	0.2
Clerodendrum floribundum	3.5	0.1
Corchorus parviflorus	0.6	0.2
Corymbia hamersleyana	4.5	0.2
Cucumis melo		0.1
Cymbopogon ambiguus	0.4	0.1
Dampiera candicans	0.3	0.1
Eriachne mucronata	0.4	0.1
Euphorbia biconvexa	0.3	0.1
Fimbristylis simulans	0.1	0.1
Gossypium australe	0.6	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.3
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.4	0.1
Isotropis atropurpurea	0.6	0.1
Melhania oblongifolia	0.4	0.1
Notoleptopus decaisnei	0.2	0.1
Paraneurachne muelleri	0.3	0.2
Petalostylis labicheoides	2	2
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.8	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	1.5	0.1
Solanum phlomoides	0.3	0.1
Themeda triandra	0.7	0.1
Triodia epactia	0.4	10
Triodia lanigera	0.4	0.1
Triodia wiseana	0.4	0.2
Triumfetta chaetocarpa	0.2	0.1

PHOTOS



Site Name:	WOD06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 697700.3421E 7666380.534N
Orientation:	200, 290
Landform Type:	Low Rise
Slope Class:	Moderately Inclined (10°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Calcrete, Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Acacia acradenia mid isolated clumps of shrubs over Triodia wiseana and Triodia chichesterensis mid open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697700	7666381	
Corner 2	697685	7666333	
Corner 3	697639	7666352	
Corner 4	697654	7666399	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.4	0.1
Acacia acradenia	1.5	0.1
Acacia inaequilatera	2.5	0.3
Arivela uncifera	0.3	0.1
Arivela viscosa	0.1	0.1
Bonamia pilbarensis	0.1	0.1

Corchorus parviflorus	0.5	0.1
Dodonaea coriacea	0.5	0.1
Eriachne mucronata	0.4	0.1
Euphorbia tannensis subsp. *eremophila*	0.8	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Indigofera monophylla	0.4	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Salsola australis	0.2	0.1
Tephrosia clementii	0.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia chichesterensis (P3)	0.3	7
Triodia wiseana	0.3	23

PHOTOS



Site Name: WOD07

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA94 Zone 50 697285.6924E 7666476.179N

Orientation: 120, 210

Landform Type: Ridge

Slope Class: Very Steep (37°)

Aspect: NE

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: 10-20% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm

CF Types: Chert (other)

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5yrs

Habitat: Acacia inaequilatera and Acacia acradenia tall isolated clumps of shrubs over Triodia brizoides low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697286	7666476	
Corner 2	697258	7666435	
Corner 3	697297	7666404	
Corner 4	697322	7666448	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia acradenia*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.5
Acacia inaequilatera	2	0.2
Acacia tumida var. *pilbarensis*	2	0.1
Arivela viscosa	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.1

Cullen leucochaites	0.6	0.1
Dampiera candicans	0.7	0.1
Eriachne mucronata	0.3	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.8	0.1
Euploca skeleton	0.4	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	1.5	0.1
Hibiscus coatesii	1.2	0.1
Indigofera monophylla	0.4	0.1
Paraneurachne muelleri	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.4	0.1
Senna glutinosa subsp. *glutinosa*	0.3	0.1
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	1.5	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.8	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.3	30
Triodia lanigera	0.3	0.1
Triumfetta propinqua	0.6	0.1

PHOTOS



Site Name:	WOD08
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 696513.4E 7665580.9N
Orientation:	245,155
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Corymbia hammersleyana low isolated clumps of trees over Grevillea wickhamii and Petalostylis labechoides tall sparse shrubland over Acacia bivenosa mid isolated clumps of shrubs over Triodia angusta and Triodia chichesterensis low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696513	7665581	
Corner 2	696468	7665561	
Corner 3	696491	7665515	
Corner 4	696538	7665531	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*
Mid Stratum 2:	*Acacia bivenosa*
Lower Stratum 1:	*Triodia angusta*, *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	0.1
Acacia bivenosa	1.5	0.3
Acacia inaequilatera	2	0.1
Bonamia pilbarensis	0.1	0.1

Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	4	2
Eriachne mucronata	0.3	0.1
Euploca chrysocarpa	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	3
Hakea lorea subsp. *lorea*	2	0.1
Petalostylis labicheoides	2	1.5
Scaevola amblyanthera var. *centralis*	0.3	0.1
Senna glutinosa subsp. *glutinosa*	0.6	0.1
Solanum phlomoides	0.3	0.1
Triodia angusta	0.4	20
Triodia chichesterensis (P3)	0.3	10

PHOTOS



Site Name:	WOD09
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 695799.6444E 7666259.643N
Orientation:	240, 150
Landform Type:	Drainage Line
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Light Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing, Weeds
Fire:	>5yrs
Habitat:	Corymbia hammersleyana low isolated clumps of trees over Acacia inaequilatera, Grevillea wickhamii and Acacia acradenia tall isolated clumps of shrubs over Indigofera monophylla and Ptilotus astrolasius low isolated clumps of shrubs over Triodia epactia mid isolated hummock grassland with Eragrostis eriopoda and Chrysopogon fallax low isolated clumps of tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695800	7666260	
Corner 2	695712	7666214	
Corner 3	695725	7666192	
Corner 4	695815	7666240	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Indigofera monophylla*, *Ptilotus astrolasius*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Chrysopogon fallax*, *Eragrostis eriopoda*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive

Abutilon sp.	0.3	0.1
Acacia acradenia	2	0.6
Acacia bivenosa	1.2	0.1
Acacia inaequilatera	2.5	0.5
Acacia tumida var. *pilbarensis*	2	0.2
Afrohybanthus aurantiacus	0.1	0.1
Arivela viscosa	0.1	0.1
Boerhavia coccinea	0.2	0.1
Bonamia erecta	0.3	0.1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	0.1	0.1
**Cenchrus ciliaris*	0.4	0.1
**Cenchrus setiger*	0.3	0.1
Chrysopogon fallax	0.4	2
Corchorus parviflorus	0.6	0.1
Corchorus tridens	0.1	0.1
Corymbia hamersleyana	5	3
Crotalaria medicaginea var. *neglecta*	0.3	0.1
Cucumis melo		0.1
Cynodon convergens	0.1	0.1
Dampiera candicans	0.6	0.1
Eragrostis cumingii	0.1	0.1
Eragrostis eriopoda	0.5	0.2
Euphorbia clementii (P3)		
Euphorbia trigonosperma	0.3	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Goodenia forrestii	0.2	0.1
Goodenia microptera	0.1	0.1
Goodenia muelleriana	0.1	0.1
Gossypium australe	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.3
Hakea lorea subsp. *lorea*	1.5	0.1
Indigofera colutea	0.1	0.1
Indigofera monophylla	0.6	0.2
Indigofera rugosa		
Notoleptopus decaisnei	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
Paraneurachne muelleri	0.3	0.1
Paspalidium clementii	0.1	0.1
Perotis rara	0.1	0.1
Pluchea tetranthera	0.3	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polymeria mollis	0.2	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.4	0.2
Ptilotus auriculifolius	0.1	0.1
Ptilotus axillaris	0.1	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Senna notabilis	0.1	0.1

Sida clementii	0.4	0.1
Solanum diversiflorum	0.1	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa decurrens	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Themeda triandra	0.5	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	30
Triumfetta chaetocarpa	0.1	0.1

PHOTOS



Site Name:	WOD10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 696765.2383E 7666641.065N
Orientation:	140, 230
Landform Type:	Hillock
Slope Class:	Moderately Inclined (10°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia inaequilatera and Acacia acradenia tall isolated clumps of shrubs over Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696765	7666641	
Corner 2	696799	7666602	
Corner 3	696759	7666568	
Corner 4	696728	7666609	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	0.1	0.1
Acacia acradenia	2	0.2
Acacia ancistrocarpa	1.3	0.1
Acacia inaequilatera	2.5	0.3
Amaranthus undulatus	0.2	0.1
Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.1	0.1

Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.6	0.1
Cucumis variabilis		0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia muelleriana	0.1	0.1
Indigofera monophylla	0.5	0.1
Panicum australiense var. *australiense*	0.1	0.1
Paspalidium clementii	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.1
Senna glutinosa subsp. *pruinosa*	2	0.1
Solanum phlomoides	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia chichesterensis (P3)	0.3	0.1
Triodia wiseana	0.4	33

PHOTOS



Site Name:	WOD11
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 695912.17E 7666486.09N
Orientation:	0, 270
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Calcrete, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz, Calcrete
Disturbance:	(other) - Track through quadrat
Fire:	>5yrs
Habitat:	Acacia inaequilatera, Acacia acradenia and Petalostylis labechiodes tall isolated clumps of shrubland over Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695912	7666486	
Corner 2	695912	7666536	
Corner 3	695863	7666535	
Corner 4	695861	7666485	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1.5
Acacia inaequilatera	2.5	0.8
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	3	0.1
Eriachne mucronata	0.3	0.1

Indigofera monophylla	0.4	0.1
Paraneurachne muelleri	0.2	0.1
Petalostylis labicheoides	2	1.5
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus clementii	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia epactia	0.4	0.1
Triodia wiseana	0.4	30

PHOTOS



Site Name:	WOD12
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 697171.147E 7666230.274N
Orientation:	0, 90
Landform Type:	Low Rise
Slope Class:	Moderately Inclined (10°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Triodia wiseana and Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697171	7666230	
Corner 2	697180	7666277	
Corner 3	697229	7666271	
Corner 4	697220	7666220	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.1
Acacia inaequilatera	2.5	0.3
Arivela uncifera	0.2	0.1
Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.6	0.1
Eriachne pulchella	0.1	0.1

Goodenia stobbsiana	0.4	0.1
Indigofera monophylla	0.4	0.1
Ptilotus astrolasius	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.2	0.1
Triodia lanigera	0.3	3
Triodia wiseana	0.4	27

PHOTOS



Site Name:	WOD13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 697762.5818E 7666136.504N
Orientation:	210, 300
Landform Type:	Ridge
Slope Class:	Moderately Inclined (10°)
Soil Type:	Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	metamorphic (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

Habitat: Corymbia hammersleyana low isolated trees over Acacia inaequilatera and Grevillea wickhamii tall isolated clumps of shrubs over Acacia acradenia mid isolated clumps of shrubs over Triodia lanigera and Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697763	7666137	
Corner 2	697732	7666095	
Corner 3	697689	7666120	
Corner 4	697717	7666161	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	2
Acacia ancistrocarpa	0.8	0.1
Acacia inaequilatera	2.5	2
Arivela viscosa	0.2	0.1
Boerhavia gardneri	0.3	0.1

Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4.5	0.3
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.8
Indigofera monophylla	0.2	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polygala glaucifolia	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.5	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tephrosia virens	0.6	0.1
Tribulus suberosus	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	0.5
Triodia lanigera	0.4	26

PHOTOS



Site Name:	WOD14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/06/2024
GPS Location:	GDA94 Zone 50 697625.3145E 7665998.397N
Orientation:	215, 125
Landform Type:	Ridge
Slope Class:	Moderately Inclined (10°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	metamorphic (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Eucalyptus leucophloia low isolated clumps of trees over Acacia inaequilatera a tall isolated clumps of shrubs over Acacia acradenia and Acacia ancistrocarpa mid isolated clumps of shrubs over Triodia lanigera and Triodia brizoides low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697625	7665998	
Corner 2	697664	7665966	
Corner 3	697631	7665930	
Corner 4	697593	7665961	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia brizoides*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	2
Acacia ancistrocarpa	1.5	2
Acacia inaequilatera	2.5	0.5
Boerhavia gardneri	0.3	0.1

Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	3	0.3
Dampiera candicans	0.5	0.1
Eriachne pulchella	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	5	3
Fimbristylis dichotoma	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.3	0.1
Paspalidium clementii	0.1	0.1
Ptilotus calostachyus	0.8	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.5	0.1
Triodia brizoides	0.3	15
Triodia lanigera	0.3	20

PHOTOS



Site Name:	WOD15
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 702796.1273E 7654598.163N
Orientation:	205, 115
Landform Type:	Flat
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Habitat:	Corymbia hammersleyana low isolated clumps of trees over Acacia tumida subsp. pilbarense, Acacia bivenosa and Grevillea wickhamii tall spoarse shrubland over Acacia stellaticeps and Acacia spondolaphylla low open shrubland over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	702796	7654598	
Corner 2	702757	7654508	
Corner 3	702778	7654496	
Corner 4	702819	7654587	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia bivenosa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia spondylophylla*, *Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	2	0.2
Acacia pyrifolia var. *pyrifolia*	3	0.2
Acacia spondylophylla	0.7	0.3
Acacia stellaticeps	0.7	12

Acacia tumida var. *pilbarensis*	2.5	4
Arivela viscosa	0.1	0.1
Bonamia alatisemina		0.1
Bulbostylis barbata	0.1	0.1
Corymbia hamersleyana	5	3
Dampiera candicans	0.6	0.1
Gossypium robinsonii	2.5	0.1
Grevillea wickhamii subsp. *hispidula*	2	3
Indigofera monophylla	0.4	0.1
Petalostylis labicheoides	2	0.1
Scaevola browniana subsp. *browniana*	0.4	0.1
Senna glutinosa subsp. *glutinosa*	0.4	0.1
Solanum phlomoides	0.2	0.1
Triodia lanigera	0.4	30
Waltheria virgata	0.4	0.1

PHOTOS



Site Name:	WOD16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 702546.4899E 7654641.992N
Orientation:	0, 270
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia acradenia, Grevillea wickhamii and Hakea lorea subsp. lorea tall isolated clumps of shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	702546	7654642	
Corner 2	702545	7654692	
Corner 3	702494	7654689	
Corner 4	702496	7654641	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.2	0.5
Bulbostylis barbata	0.1	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	4.5	0.2
Hakea lorea subsp. *lorea*	2.5	0.2
Triodia lanigera	0.4	35

PHOTOS



Site Name: WOD17

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 25/05/2024

GPS Location: GDA94 Zone 50 702372.6875E 7654535.94N

Orientation: 325, 55

Landform Type: Crest, upper slope (other)

Slope Class: Very Steep (37°)

Aspect: ENE

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: Conglomerate (other), 20-50% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm

CF Types: Sandstone, Conglomerate (other)

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5yrs

Habitat: Acacia tumida subsp. pilbarense, Grevillea wickhamii and Acacia inaequilatera tall isolated clumps of shrubs over Acacia ptychophylla low isolated clumps of shrubs over Triodia wiseana, Triodia brizoides and Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	702373	7654536	
Corner 2	702349	7654578	
Corner 3	702389	7654605	
Corner 4	702414	7654563	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia inaequilatera*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*

Mid Stratum 2: *Acacia ptychophylla*

Lower Stratum 1: *Triodia brizoides*, *Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.3
Acacia ptychophylla	0.6	1
Acacia tumida var. *pilbarensis*	3	4
Bonamia pilbarensis	0.1	0.1

Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.1
Dampiera candicans	0.1	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Goodenia cusackiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	4	0.3
Senna glutinosa subsp. *glutinosa*	1.5	0.1
Solanum horridum	0.2	0.1
Triodia brizoides	0.4	3
Triodia epactia	0.4	7
Triodia wiseana	0.4	20

PHOTOS



Site Name: WOD18

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 25/05/2024

GPS Location: GDA94 Zone 50 701903.8505E 7654861.187N

Orientation: 155, 265

Landform Type: Undulating Plain

Slope Class: Gently Inclined (3°)

Soil Type: Clay Loam

Soil Colour: Pale brown (other)

Soil Condition: Dry

Rock Outcrop: Calcrete, <2% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Chert (other), Calcrete

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >10yrs

Habitat: Corymbia hammersleyana and Eucalyptus xerothermica low open woodland over Acacia inaequilatera, Acacia bivenosa and Acacia acradenia tall isolated clumps of shrubs over Triodia angusta and Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701904	7654861	
Corner 2	701928	7654817	
Corner 3	701883	7654796	
Corner 4	701857	7654840	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*, *Eucalyptus xerothermica*

Mid Stratum 1: *Acacia acradenia*, *Acacia bivenosa*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia angusta*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1
Acacia bivenosa	2	1
Acacia inaequilatera	2.5	2
Bonamia pilbarensis	0.2	0.1
Chrysopogon fallax	0.2	0.1
Codonocarpus cotinifolius	3	0.1

Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	5	5
Eriachne mucronata	0.4	0.1
Eucalyptus xerothermica	3	1.5
Goodenia cusackiana	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Hakea lorea subsp. *lorea*	0.6	0.1
Indigofera monophylla	0.4	0.1
Jasminum didymum subsp. *lineare*	1.5	0.1
Petalostylis labicheoides	2	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Solanum phlomoides	0.3	0.1
Triodia angusta	0.4	30
Triodia wiseana	0.4	3

PHOTOS



Site Name:	WOD19
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 702019.4107E 7654994.206N
Orientation:	70, 340
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia tumida subsp. pilbarense, Acacia pyrifolia subsp. pyrifolia and Grevillea wickhamii tall open shrubland over Waltheria virgata and Indigofera monophylla low isolated clumps of shrubs over Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	702019	7654994	
Corner 2	702005	7655042	
Corner 3	702054	7655057	
Corner 4	702068	7655010	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Indigofera monophylla*, *Waltheria virgata*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.3
Acacia pyrifolia var. *pyrifolia*	2	1.5
Acacia tumida var. *pilbarensis*	2.5	2
Afrohybanthus aurantiacus	0.1	0.1

Cajanus cinereus	0.1	0.1
Corymbia hamersleyana	2.5	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Euphorbia biconvexa	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Goodenia muelleriana	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	8
Indigofera monophylla	0.6	0.2
Nellica maderaspatensis	0.2	0.1
Petalostylis labicheoides	2	0.5
Polymeria mollis	0.1	0.1
Ptilotus calostachyus	0.8	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	0.3	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	0.8	0.1
Trigastrotheca molluginea	0.3	0.1
Triodia epactia	0.4	40
Waltheria virgata	0.6	0.5

PHOTOS



Site Name:	WOD20
Site Type:	QUADRAT
Dimensions:	20m x 125m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 701775.4567E 7654900.858N
Orientation:	315, 225
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Corymbia hammerlseyana low isolated clumps of trees over Acacia tumida subsp. pilbarense, Acacia bivenosa and Grevillea wickhamii tall open shrubland over Acacia acradenia and Petalostylis labechoides mid sparse shrubland over Acacia stellaticeps low sparse shrubland over Triodia epactia low open hummock grassland with Eriachne tenuiculmis low isolated patches of tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701775	7654901	
Corner 2	701762	7654889	
Corner 3	701686	7654988	
Corner 4	701673	7654973	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia bivenosa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*, *Acacia stellaticeps*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Eriachne tenuiculmis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	5
Acacia bivenosa	2	8

Acacia pyrifolia var. *pyrifolia*	2	0.2
Acacia stellaticeps	0.6	8
Acacia tumida var. *pilbarensis*	3	8
Afrohybanthus aurantiacus	0.3	0.1
Bulbostylis barbata	0.1	0.1
Cassytha capillaris		0.1
Cathetus exilis	0.2	0.1
Chrysopogon fallax	0.4	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	8	2
Cymbopogon ambiguus	0.4	0.1
Eragrostis cumingii	0.1	0.1
Eriachne mucronata	0.2	0.1
Eriachne tenuiculmis	0.4	2
Fimbristylis microcarya	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium robinsonii	3	0.1
Grevillea wickhamii subsp. *hispidula*	3	8
Indigofera monophylla	0.3	0.1
Paspalidium rarum	0.1	0.1
Petalostylis labicheoides	2	1
Senna glutinosa subsp. *glutinosa*	2	0.1
Senna notabilis	0.1	0.1
Triodia epactia	0.4	20

PHOTOS



Site Name:	WOD21
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 701710.9801E 7655079.939N
Orientation:	320, 50
Landform Type:	Drainage Line
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sand
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Eucalyptus victrix mid open woodland over Acacia tumida subsp. pilbarense, Acacia pyrifolia subsp. pyrifolia and Petalostylis labechiodes tall sparse shrubland over Triodia epactia isolated clumps of hummock grasses with Eriachne tenuiculmis, Chrysopogon fallax and Eriachne benthamii sparse tussock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701711	7655080	
Corner 2	701644	7655159	
Corner 3	701660	7655178	
Corner 4	701729	7655097	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Chrysopogon fallax*, *Eriachne benthamii*, *Eriachne tenuiculmis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Acacia bivenosa	2	0.1
Acacia pyrifolia var. *pyrifolia*	2.5	2
Acacia tumida var. *pilbarensis*	4	4

Afrohybanthus aurantiacus	0.1	0.1
Arivela viscosa	0.1	0.1
Bergia pedicellaris	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Cathetus exilis		
Chrysopogon fallax	0.4	2
Corchorus laniflorus	0.5	0.1
Corchorus parviflorus	0.3	0.1
Cyperus iria	0.1	0.1
Cyperus leptocarpus	0.1	0.1
Cyperus pulchellus	0.1	0.1
Cyperus squarrosus	0.1	0.1
Eragrostis cumingii	0.1	0.1
Eriachne benthamii	0.5	2
Eriachne tenuiculmis	0.4	0.5
Eucalyptus victrix	11	8
Fimbristylis microcarya	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.3
Nellica maderaspatensis	0.2	0.1
Paspalidium rarum	0.1	0.1
Petalostylis labicheoides	2	1
Pluchea dentex	0.3	0.1
Polymeria mollis	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Santalum lanceolatum	2	0.1
Tephrosia rosea var. *clementii*	0.5	0.1
Themeda triandra	0.6	0.1
Triodia epactia	0.4	2
Waltheria virgata	0.5	0.1

PHOTOS



Site Name:	WOD22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 700213.5385E 7655661.342N
Orientation:	120, 210
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Metamorphic (other), 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Eucalytpus leucophloia ssp. leucophloia low isolated trees over Acacia inaequilatera, Acacia tumida var. pilbarensis tall isolated clumps of shrubs over Triodia wiseana, Triodia brizoides, Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700214	7655661	
Corner 2	700191	7655618	
Corner 3	700234	7655594	
Corner 4	700255	7655637	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia wiseana*
Lower Stratum 2:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	1

Acacia adoxa var. *adoxa*	0.2	0.1
Acacia ancistrocarpa	1	0.1
Acacia bivenosa	2	0.2
Acacia inaequilatera	2.5	1
Acacia ptychophylla	0.3	1
Acacia synchronicia	0.6	0.1
Acacia tumida var. *pilbarensis*	2.5	0.3
Amaranthus undulatus	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Crotalaria novae-hollandiae	0.1	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	8	1.5
Fimbristylis dichotoma	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.7	0.1
Paspalidium clementii	0.1	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.2
Senna glutinosa subsp. *pruinosa*	0.8	0.1
Senna symonii	0.8	0.1
Solanum phlomoides	0.3	0.1
Tephrosia clementii	0.1	0.1
Tephrosia rosea var. *clementii*	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.5	0.1
Triodia brizoides	0.4	0.1
Triodia lanigera	0.3	0.3
Triodia wiseana	0.4	15
Triumfetta maconochieana	0.1	0.1

PHOTOS



Site Name: WOD23

Site Type: QUADRAT

Dimensions: 25m x 100m

Survey Date: 26/05/2024

GPS Location: GDA94 Zone 50 700798.11E 7655369.51N

Orientation: 90, 180

Landform Type: Lower Slope

Slope Class: Gently Inclined (3°)

Soil Type: Clay Loam

Soil Colour: Pale brown (other)

Soil Condition: Dry

Rock Outcrop: Chert (other), <2% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Chert (other), Quartz, Calcrete

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5yrs

Habitat: Corymbia hamersleyana and Eucalyptus xerothermica low isolated clumps of trees over Acacia inaequilatera tall isolated clumps of shrubs over Acacia acradenia mid isolated clumps of shrubs over Triodia angusta mid hummock grassland with Eriachne mucronata low isolated clumps of tussock grasses over Goodenia stobbsiana low isolated herbs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700798	7655370	
Corner 2	700899	7655371	
Corner 3	700897	7655345	
Corner 4	700800	7655346	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*, *Eucalyptus xerothermica*

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia acradenia*

Lower Stratum 1: *Triodia angusta*

Lower Stratum 2: *Eriachne mucronata*, *Goodenia stobbsiana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.3
Acacia ancistrocarpa	1.5	0.1
Acacia bivenosa	1.2	0.1

Acacia inaequilatera	2.5	0.8
Acacia pyrifolia var. *pyrifolia*	0.5	0.1
Acacia stellaticeps	0.3	0.1
Bonamia pilbarensis	0.2	0.1
Clerodendrum floribundum var. *angustifolium*	1.1	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	5.5	3
Dampiera candicans	0.5	0.1
Eriachne mucronata	0.4	1
Eucalyptus xerothermica	5	1.3
Goodenia stobbsiana	0.4	0.3
Grevillea wickhamii subsp. *hispidula*	1.5	0.1
Indigofera monophylla	0.5	0.1
Jasminum didymum subsp. *lineare*		0.1
Petalostylis labicheoides	1.5	0.1
Ptilotus calostachyus	0.6	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Triodia angusta	0.4	35
Triodia wiseana	0.4	0.1

PHOTOS



Site Name: WOD24

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 26/05/2024

GPS Location: GDA94 Zone 50 701257.0738E 7654701.125N

Orientation: 50, 140

Landform Type: Crest, ridge (other)

Aspect: SW

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: 20-50% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm

CF Types: Metamorphic (other)

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5yrs

Habitat: Eucalyptus leucophloia low isolated clumps of trees over Acacia acradenia tall isolated clumps of shrubs over Triodia wiseana and Triodia brizoides low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701257	7654701	
Corner 2	701298	7654739	
Corner 3	701329	7654702	
Corner 4	701294	7654667	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Eucalyptus leucophloia* subsp. *leucophloia*

Mid Stratum 1: *Acacia acradenia*

Lower Stratum 1: *Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1.5
Acacia inaequilatera	2.5	0.1
Acacia ptychophylla	0.4	0.1
Acacia synchronicia	1.8	0.1
Acacia tumida var. *pilbarensis*	2.5	0.1
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.2	0.1

Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.3	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	5	2
Euphorbia careyi	0.1	0.1
Goodenia cusackiana	0.1	0.1
Hibiscus coatesii	0.1	0.1
Indigofera monophylla	0.4	0.1
Polycarpaea holtzei	0.1	0.1
Polygala glaucifolia	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Senna symonii	0.2	0.1
Triodia brizoides	0.4	30
Triodia wiseana	0.4	5

PHOTOS



Site Name:	WOD25
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 701227.6864E 7655227.495N
Orientation:	315, 45
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Corymbia hammerlseyana low isolated clumps of trees over Acacia inaequilatera and Acacia acradenia tall sparse shrubland over Acacia stellaticeps and Senna glutinosa subsp. glutinosa mid isolated clumps of shrubs over Triodia wiseana and Triodia lanigera mid open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701228	7655227	
Corner 2	701195	7655266	
Corner 3	701231	7655301	
Corner 4	701260	7655261	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Mid Stratum 2:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	5
Acacia ancistrocarpa	3	0.2
Acacia inaequilatera	3	3
Acacia pyrifolia var. *pyrifolia*	3	0.1

Acacia stellaticeps	1.5	2.5
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	5	1
Eriachne pulchella	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Hakea lorea subsp. *lorea*	2	0.1
Indigofera monophylla	0.5	0.1
Ptilotus calostachyus	0.5	0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.5
Senna notabilis	0.1	0.1
Solanum phlomoides	0.5	0.1
Tephrosia clementii	0.1	0.1
Trigastrotheca molluginea	0.2	0.1
Triodia lanigera	0.5	22
Triodia wiseana	0.5	10

PHOTOS



Site Name:	WOD26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 701505.8E 7655642.13N
Orientation:	10, 100
Landform Type:	Crest
Slope Class:	Steep (23°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Conglomerate /Metamorphic (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Metamorphic / conglomerate (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Eucalyptus leucophloia subsp. leucophloia low isolated clumps of trees over Acacia ptychophylla low isolated clumps of shrubs over Triodia brizoides, Triodia basitricha (P3) and Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701506	7655642	
Corner 2	701514	7655691	
Corner 3	701565	7655680	
Corner 4	701557	7655630	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 2:	*Acacia ptychophylla*
Lower Stratum 1:	*Triodia basitricha*, *Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.5	0.1
Acacia inaequilatera	2.5	0.1
Acacia ptychophylla	4	0.4
Bulbostylis barbata	0.1	0.1
Cyperus hesperius	0.2	0.1

Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4	2
Goodenia cusackiana	0.2	0.1
Indigofera monophylla	0.4	0.1
Polygala glaucifolia	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.1
Senna symonii	0.6	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Tribulus suberosus	1.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia basitricha (P3)	0.3	10
Triodia brizoides	0.4	15
Triodia wiseana	0.4	10
Triumfetta maconochieana	0.1	0.1

PHOTOS



Site Name:	WOD27
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 700094.7151E 7656403.294N
Orientation:	270, 0
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Habitat:	Acacia ancistrocarpa and Acacia acradenia tall sparse shrubland over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700095	7656403	
Corner 2	700048	7656405	
Corner 3	700049	7656455	
Corner 4	700098	7656451	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	5
Acacia ancistrocarpa	2.5	3
Acacia ptychophylla	0.5	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Indigofera monophylla	0.4	0.1

Triodia lanigera	0.5	30

PHOTOS



Site Name:	WOD28
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 670278.2525E 7670906.44N
Orientation:	180, 270
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	approx. 2yrs
Habitat:	Corymbia hammersleyana and Corymbia zygophylla low open woodland over Acacia inaequilatera and Acacia serichophylla tall isolated clumps of shrubs over Indigofera monophylla low isolated shurbs over Triodia schinzii and Triodia lanigera low open hummock grassland with Bonamia erecta isolated herbs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670278	7670906	
Corner 2	670278	7670857	
Corner 3	670231	7670857	
Corner 4	670231	7670907	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Corymbia zygophylla*
Mid Stratum 1:	*Acacia inaequilatera*, *Acacia sericophylla*
Lower Stratum 1:	*Triodia lanigera*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.5	0.1
Acacia inaequilatera	2.5	0.4
Acacia sericophylla	2.5	1
Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.3
Clerodendrum tomentosum var. *tomentosum*	1.2	0.1

Corymbia hamersleyana	5	3
Corymbia zygophylla	5	2
Euploca mutica (P3)	0.2	0.1
Goodenia microptera	0.2	0.1
Grevillea wickhamii subsp. *macrodonta*	2	0.1
Hakea lorea subsp. *lorea*	2	0.1
Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)	0.3	0.1
Indigofera monophylla	0.4	0.2
Isotropis atropurpurea	0.3	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus fusiformis	0.3	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	0.5
Triodia schinzii	0.4	30

PHOTOS



Site Name:	WOD29
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 669809.2511E 7672138.571N
Orientation:	235, 325
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	approx. 2yrs
Habitat:	Corymbia hammersleyana and Corymbia zygophylla low isolated clumps of trees over Acacia inaequilatera and Acacia sericophylla tall isolated clumps of shrubs over Triodia schinzii low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669809	7672139	
Corner 2	669768	7672111	
Corner 3	669745	7672154	
Corner 4	669786	7672181	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Corymbia zygophylla*
Mid Stratum 1:	*Acacia inaequilatera*, *Acacia sericophylla*
Lower Stratum 1:	*Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	0.1
Acacia inaequilatera	2.5	0.2
Acacia sericophylla	2.5	0.2
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.1
Codonocarpus cotinifolius	1.3	0.1

Corymbia hamersleyana	4.5	0.6
Corymbia zygophylla	5	1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Senna symonii	1.5	0.1
Tinospora smilacina		0.1
Trigastrotheca molluginea	0.2	0.1
Triodia schinzii	0.4	30

PHOTOS



Site Name: WOD30

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 670484.6E 7672446.08N

Orientation: 120, 210

Landform Type: Open Depression

Slope Class: Level (0°)

Soil Type: Sandy Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Colluvium

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: <5yrs

Habitat: Pluchea ferdnani-muelarii and Acacia stellaticeps low isolated clumps of shrubs over Triodia epactia and Triodia schinzii low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670485	7672446	
Corner 2	670458	7672407	
Corner 3	670499	7672380	
Corner 4	670526	7672422	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2: *Pluchea ferdinandi-muelleri*

Lower Stratum 1: *Triodia epactia*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	0.6	0.2
Arivela uncifera	0.4	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	0.1
Cassytha capillaris		0.1
Chrysopogon fallax	0.3	0.1
Codonocarpus cotinifolius	0.6	0.1
Corchorus parviflorus	0.4	0.1
Eriachne obtusa	0.2	0.1

Euploca mutica (P3)	0.3	0.1
Euploca pachyphylla	0.2	0.1
Goodenia microptera	0.3	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.3	0.1
Pluchea ferdinandi-muelleri	0.5	1.5
Pluchea tetranthera	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	22
Triodia lanigera	0.3	0.1
Triodia schinzii	0.4	1

PHOTOS



Site Name:	WOD31
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 671575.79E 7671571.1N
Orientation:	255, 165
Landform Type:	Open Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	fire age both >5 and <5yrs
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Pluchea ferinandii-muellerii and Acacia stellaticeps low isolated clumps of shrubs over Triodia epcatia and Triodia schinzii low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671576	7671571	
Corner 2	671527	7671559	
Corner 3	671541	7671512	
Corner 4	671586	7671523	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia stellaticeps*, *Pluchea ferdinandi-muelleri*
Lower Stratum 1:	*Triodia epactia*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	0.3
Acacia stellaticeps	0.6	1.5
Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Chrysopogon fallax	0.4	0.1
Corchorus parviflorus	0.5	0.1

Euploca mutica (P3)	0.2	0.1
Goodenia microptera	0.3	0.1
Grevillea wickhamii subsp. *macrodonta*	0.4	0.1
Pluchea ferdinandi-muelleri	0.6	1
Ptilotus calostachyus	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.8	0.1
Sporobolus actinocladus	0.2	0.1
Stemodia grossa	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trianthema triquetrum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	20
Triodia schinzii	0.4	3

PHOTOS



Site Name:	WOD32
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 670882.34E 7673490.16N
Orientation:	210, 300
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670882	7673490	
Corner 2	670839	7673511	
Corner 3	670812	7673470	
Corner 4	670858	7673445	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ancistrocarpa*, *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *macrodonta*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.6
Acacia inaequilatera	2.5	1
Bonamia erecta	0.3	0.1
Grevillea wickhamii subsp. *macrodonta*	2.5	0.6
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.6	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Triodia lanigera	0.4	35

Triodia schinzii	0.4	0.1

PHOTOS



Site Name: WOD33

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 671741.63E 7672449.82N

Orientation: 10, 100

Landform Type: Open Depression

Slope Class: Level (0°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Colluvium

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Disturbance: None

Fire: >5

Habitat: Acacia inaequilatera tall isolated shrubs over Acacia stellaticeps, Pluchea ferdinand-muelleri low isolated shrubs, over Triodia epactia, Triodia schinzii low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671742	7672450	
Corner 2	671754	7672497	
Corner 3	671802	7672488	
Corner 4	671793	7672439	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia inaequilatera*

Mid Stratum 1: *Pluchea ferdinandi-muelleri*

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia epactia*

Lower Stratum 2: *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.2
Acacia stellaticeps	0.7	0.5

Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Chrysopogon fallax	0.4	0.1
Codonocarpus cotinifolius	0.5	0.2
Corchorus parviflorus	0.3	0.1
Eriachne obtusa	0.2	0.1
Euploca mutica (P3)	0.2	0.1
Euploca pachyphylla	0.2	0.1
Goodenia microptera	0.2	0.1
Isotropis atropurpurea	0.2	0.1
Pluchea ferdinandi-muelleri	0.6	1
Pluchea tetranthera	0.5	0.2
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.4	0.1
Ptilotus fusiformis	0.3	0.1
Solanum phlomoides	0.2	0.1
Sporobolus actinocladus	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	12
Triodia schinzii	0.4	12

PHOTOS





Site Name: WOD34

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 28/05/2024

GPS Location: GDA94 Zone 50 671828.91E 7673169.04N

Orientation: 105, 15

Landform Type: Undulating Plain

Slope Class: Very Gently Inclined (1°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: Calcrete, 2-10% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Quartz, Calcrete

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Disturbance: None

Fire: <5

Habitat: Corymbia hamersleyana low isolated trees over Acacia orthocarpa, Acacia bivenosa tall isolated shrubs over Triodia chichesterensis, Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671829	7673169	
Corner 2	671846	7673216	
Corner 3	671893	7673202	
Corner 4	671878	7673155	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia ancistrocarpa*, *Acacia bivenosa*, *Acacia orthocarpa*, *Grevillea wickhamii* subsp. *macrodonta*, *Petalostylis labicheoides*

Lower Stratum 1: *Triodia chichesterensis*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.1
Acacia bivenosa	2	0.1
Acacia inaequilatera	0.5	0.1
Acacia orthocarpa	2	0.5

Afrohybanthus aurantiacus	0.3	0.1
Arivela uncifera	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	4	1
Eragrostis eriopoda	0.3	0.1
Eriachne mucronata	0.4	0.1
Euploca mutica (P3)	0.2	0.1
Euploca pachyphylla	0.1	0.1
Euploca tenuifolia	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.2	0.1
Grevillea wickhamii subsp. *macrodonta*	2	0.1
Hakea lorea subsp. *lorea*	2	0.1
Indigofera monophylla	0.3	0.1
Petalostylis labicheoides	2	0.1
Polymeria mollis	0.1	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus clementii	0.1	0.1
Senna glutinosa subsp. *glutinosa*	0.5	0.1
Senna symonii	0.6	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.3	30
Triodia epactia	0.3	5

PHOTOS



Site Name:	WOD35
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 671726.96E 7673221.14N
Orientation:	270, 0
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Chert (other), 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	None
Fire:	>5
Habitat:	Acacia tumida var. pilbarensis, Acacia ancistrocarpa, Acacia inaequilatera tall open shrubland over Triodia epactia, Triodia brizoides, Triodia lanigera low hummock grassland
Comments:	Aspect variable

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671727	7673221	
Corner 2	671678	7673224	
Corner 3	671682	7673273	
Corner 4	671732	7673272	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia inaequilatera*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	4	3
Acacia inaequilatera	3	1.5
Acacia tumida var. *pilbarensis*	4	9
Bonamia erecta	0.3	0.1
Corymbia hamersleyana	5	0.8

Goodenia stobbsiana	0.4	0.1
Indigofera monophylla	0.5	0.1
Petalostylis labicheoides	2	0.2
Senna symonii	0.8	0.1
Triodia brizoides	0.3	1
Triodia epactia	0.4	33
Triodia lanigera	0.4	1

PHOTOS



Site Name:	WOD36
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 672902.44E 7670125.47N
Orientation:	160, 250
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<5

Habitat: Corymbia zygophylla low isolated clumps of trees over Acacia ancistrocarpa, Acacia tumida var. pilbarensis, Acacia ?sericophylla? tall isolated clumps of shrubs over Triodia lanigera, Triodia schinzii low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672902	7670125	
Corner 2	672915	7670079	
Corner 3	672869	7670062	
Corner 4	672853	7670108	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	1
Acacia sericophylla	2.5	1
Acacia tumida var. *pilbarensis*	2	1
Bonamia erecta	0.3	0.1
Corchorus parviflorus	0.3	0.1
Corymbia zygophylla	4	3
Dampiera candicans	0.3	0.1
Euploca skeleton	0.3	0.1
Euploca vestita	0.3	0.1
Goodenia microptera	0.3	0.1

Goodenia stobbsiana	0.4	0.1
Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)	0.4	0.1
Isotropis atropurpurea	0.2	0.1
Leptosema anomalum	0.2	0.1
Paraneurachne muelleri	0.4	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Sida arenicola	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	27
Triodia schinzii	0.4	3

PHOTOS



Site Name:	WOD37
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 672037.22E 7671725.75N
Orientation:	310, 220
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	<5
Habitat:	Corymbia hamersleyana, Corymbia zygophylla low isolated clumps of trees over Acacia ancistrocarpa, Acacia sericophylla, Acacia inaequilatera tall isolated shrubs, over Triodia schinzii low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672037	7671726	
Corner 2	672006	7671689	
Corner 3	671972	7671723	
Corner 4	672007	7671761	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Corymbia zygophylla*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia inaequilatera*, *Acacia sericophylla*
Lower Stratum 1:	*Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	1
Acacia inaequilatera	2	0.1
Acacia sericophylla	2	0.1
Bonamia alatisemina		0.1

Bonamia erecta	0.3	0.1
Corymbia hamersleyana	4	0.6
Corymbia zygophylla	4	2.5
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca mutica (P3)	0.2	0.1
Euploca pachyphylla	0.2	0.1
Isotropis atropurpurea	0.2	0.1
Paspalidium clementii	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Senna glutinosa x	0.7	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum diversiflorum	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tinospora smilacina		0.1
Triodia lanigera	0.3	0.1
Triodia schinzii	0.3	35

PHOTOS



Site Name:	WOD38
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 673472.3266E 7668601.42N
Orientation:	150, 60
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Corymbia zygophylla low isolated trees over Acacia tumida var. pilbarensis, Acacia ancistrocarpa tall open shrubland over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673472	7668601	
Corner 2	673498	7668557	
Corner 3	673541	7668583	
Corner 4	673518	7668626	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia zygophylla*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	7
Acacia tumida var. *pilbarensis*	3	5
Bonamia erecta	0.4	0.1
Corymbia zygophylla	4	1.5

Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	40

PHOTOS



Site Name:	WOD39
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 676636.0574E 7663481.115N
Orientation:	0, 270
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Acacia synchronicia tall isolated shrubs over Triodia lanigera, Triodia epactia, Triodia angusta low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676636	7663481	
Corner 2	676635	7663532	
Corner 3	676585	7663534	
Corner 4	676585	7663485	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia synchronicia*

Lower Stratum 1: *Triodia angusta*, *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia synchronicia	2.5	0.6
Bulbostylis barbata	0.1	0.1
Maireana georgei	0.2	0.1
Senna glutinosa subsp. *glutinosa*	1.8	0.1
Sporobolus australasicus	0.2	0.1
Triodia angusta	0.5	1

Triodia epactia	0.5	0.1
Triodia lanigera	0.5	35

PHOTOS



Site Name:	WOD40
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 671224.2146E 7660853.38N
Orientation:	45, 315
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz, Shale
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Physical (other) - push-up area
Fire:	<5
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671224	7660853	
Corner 2	671194	7660891	
Corner 3	671229	7660924	
Corner 4	671260	7660889	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	2.5
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.4	0.1
Eriachne pulchella	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.6	0.1

Euploca pachyphylla	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Gossypium australe	0.5	0.1
Indigofera monophylla	0.2	0.1
Pluchea tetranthera	0.3	0.1
Ptilotus calostachyus	0.4	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Senna glutinosa subsp. *pruinosa*	0.8	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum diversiflorum	0.3	0.1
Tephrosia clementii	0.1	0.1
Tribulus platypterus	0.5	0.1
Triodia epactia	0.3	31

PHOTOS



Site Name:	WOD41
Site Type:	QUADRAT
Dimensions:	250m x 10m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 670681.66E 7659947.11N
Orientation:	40, 310
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Chert (other), Quartz, Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670682	7659947	
Corner 2	670689	7659956	
Corner 3	670486	7660100	
Corner 4	670492	7660106	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *macrodonta*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Acacia tumida var. *pilbarensis*	2.5	10
Afrohybanthus aurantiacus	0.4	0.1
Aristida holathera var. *holathera*	0.3	0.1
Bonamia alatisemina		0.1
Codonocarpus cotinifolius	0.8	0.1
Corchorus parviflorus	0.3	0.1

Corymbia hamersleyana	4	0.1
Dampiera candicans	0.5	0.1
Euphorbia clementii (P3)	0.3	0.1
Euploca pachyphylla	0.2	0.1
Euploca skeleton	0.3	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *macrodonta*	2.5	10
Hibiscus leptocladus	0.6	0.1
Indigofera monophylla	0.3	0.1
Melaleuca lasiandra	1.5	0.2
Panicum australiense var. *australiense*	0.1	0.1
Polymeria mollis	0.2	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.6	0.1
Tephrosia clementii	0.2	0.1
Tephrosia virens	0.8	0.1
Triodia epactia	0.4	25
Triodia lanigera	0.4	0.1

PHOTOS



Site Name:	WOD41A
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 669957.52E 7652478.74N
Landform Type:	Crest
Slope Class:	Steep (23°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Metamorphic (other), 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Metamorphic (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5, <5
Habitat:	Eucalyptus leucophloia ssp. leucophloia low isolated clumps of trees over Grevillea wickhamii ssp. hispidula, Acacia acradenia tall sparse shrubland over Triodia brizoides, Triodia epactia, Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669958	7652479	
Corner 2	669915	7652455	
Corner 3	669939	7652412	
Corner 4	669983	7652435	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	4
Arivela viscosa	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.5	0.1
Cymbopogon ambiguus	0.4	0.1

Cyperus hesperius	0.3	0.1
Dampiera candicans	0.3	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	6	3
Euphorbia careyi	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	2	5
Hibiscus coatesii	0.1	0.1
Indigofera monophylla	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.6	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Triodia brizoides	0.4	20
Triodia epactia	0.4	3
Triodia wiseana	0.4	10
Triumfetta propinqua	0.5	0.1

PHOTOS



Site Name:	WOD42
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 670194.1201E 7652338.552N
Orientation:	325, 55
Landform Type:	Mid Slope
Slope Class:	Steep (23°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5
Habitat:	Hakea lorea ssp. lorea, Acacia acradenia, Grevillea wickhamii ssp. hispidula tall isolated shrubs over Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670194	7652339	
Corner 2	670165	7652378	
Corner 3	670206	7652405	
Corner 4	669658	7653106	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Arivela viscosa	0.3	0.1
Boerhavia gardneri	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.4	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.1

Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	0.6	0.1
Grevillea wickhamii subsp. *hispidula*	2	0.1
Hakea lorea subsp. *lorea*	2	0.1
Hibiscus coatesii	0.2	0.1
Indigofera monophylla	0.3	0.1
Paspalidium clementii	0.1	0.1
Ptilotus auriculifolius	0.3	0.1
Ptilotus calostachyus	0.3	0.1
Solanum phlomoides	0.3	0.1
Triodia wiseana	0.4	31
Triumfetta propinqua	0.1	0.1

PHOTOS



Site Name:	WOD43
Site Type:	QUADRAT
Dimensions:	16.67m x 150m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 669658.1551E 7653106.3N
Orientation:	355, 85
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Granite, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz, Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5yrs
Habitat:	Corymbia hammerlsyena low isolated clumps of trees over Grevillea wickhamii and Acacia tumida subsp. pilbarense tall sparse shrubland over Corchorus parviflorus low isolated shrubs over Triodia epactia and Triodia brizoides low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669658	7653106	
Corner 2	669675	7653106	
Corner 3	669660	7653256	
Corner 4	669645	7653257	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	0.1
Acacia tumida var. *pilbarensis*	2.5	3
Afrohybanthus aurantiacus	0.1	0.1
Aristida holathera var. *holathera*	0.2	0.1
Arivela uncifera	0.4	0.1

Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Bulbostylis turbinata	0.1	0.1
Corchorus parviflorus	0.4	0.2
Corymbia hamersleyana	2.5	2
Crotalaria medicaginea var. *neglecta*	0.4	0.1
Crotalaria novae-hollandiae subsp. *novae-hollandiae*	0.4	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.1
Cyperus hesperius	0.3	0.1
Cyperus leptocarpus	0.1	0.1
Cyperus squarrosus	0.1	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1
Eragrostis cumingii	0.1	0.1
Eriachne aristidea	0.2	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Euphorbia careyi	0.1	0.1
Euphorbia clementii (P3)	0.2	0.1
Euphorbia tannensis subsp. *eremophila*	0.6	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca skeleton	0.5	0.1
Euploca tenuifolia	0.1	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia lamprosperma	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	3
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.2	0.1
Mitrasacme connata	0.2	0.1
Paspalidium clementii	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Senna notabilis	0.1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.4	0.1
Solanum horridum	0.1	0.1
Solanum phlomoides	0.4	0.1
Streptoglossa decurrens	0.2	0.1
Swainsona formosa	0.1	0.1

Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia virens	0.8	0.1
Tinospora smilacina		0.1
Trachymene oleracea subsp. *oleracea*	0.3	0.1
Tribulus platypterus	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	10
Triodia epactia	0.4	22
Triodia wiseana	0.4	0.1
Triumfetta maconochieana	0.2	0.1

PHOTOS



Site Name:	WOE01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 677948.6545E 7663388.293N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNW
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677949	7663388	
Corner 2	677997	7663389	
Corner 3	677948	7663340	
Corner 4	677997	7663338	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia sphaerostachya	1.8	0.1
Acacia stellaticeps	1.3	18
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.2
Cassytha capillaris		0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	3	0.1
Corymbia zygophylla		
Eragrostis eriopoda	0.3	0.1
Hakea lorea subsp. *lorea*	2.5	0.2
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.3	0.1
Pluchea ferdinandi-muelleri	1.2	0.1
Pluchea tetranthera	0.8	0.1
Ptilotus astrolasius	0.3	0.1
Sida ?clementii		
Streptoglossa macrocephala	0.3	0.1

Tinospora smilacina		
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.6	14

PHOTOS



Site Name:	WOE02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 678183.8814E 7663380.33N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNW
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678184	7663380	
Corner 2	678233	7663381	
Corner 3	678233	7663330	
Corner 4	678182	7663332	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia orthocarpa*, *Acacia stellaticeps*, *Acacia trachycarpa*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	3	0.5
Acacia stellaticeps	1.1	0.8
Acacia trachycarpa	2.8	0.2
Acacia trachycarpa x tumida var. pilbarensis	0.7	0.1
Acacia tumida var. *pilbarensis*	1.8	0.1
Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.2	0.1
Bonamia alatisemina	0.1	0.1

Bonamia erecta	0.2	0.1
Cassytha capillaris		0.1
Chrysopogon fallax	0.3	0.1
Codonocarpus cotinifolius	1.2	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	4	2
Dampiera candicans	0.7	0.1
Eragrostis eriopoda	0.3	0.1
Eriachne obtusa	0.2	0.1
Grevillea wickhamii		
Hakea lorea subsp. *lorea*	1.6	0.1
Hibiscus sturtii var. *campylochlamys*	0.7	0.1
Indigofera monophylla	0.6	0.1
Isotropis atropurpurea	0.3	0.1
Petalostylis labicheoides	1.5	0.1
Pluchea ferdinandi-muelleri	0.8	0.1
Pluchea tetranthera	0.3	0.1
Polymeria mollis	0.2	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Stemodia grossa	0.2	0.1
Streptoglossa macrocephala	0.6	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.6	0.1
Triodia epactia	0.3	15
Triodia lanigera	0.6	30
Triodia schinzii	0.2	0.1
Triodia wiseana	0.3	0.1

PHOTOS



Site Name:	WOE03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 678281.5355E 7663360.785N
Orientation:	90, 180
Landform Type:	Other, embankment (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNW
Soil Type:	Sand
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Habitat:	Acacia trachycarpa and Acacia tumida tall isolated clumps of shrubs over Petalostylis labichoides and Melaleuca glomerata mid isolated shrubs over Triodia epactia low open hummock grassland with Aristida holathera low isolated tussock grasses.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678282	7663361	
Corner 2	678330	7663360	
Corner 3	678331	7663311	
Corner 4	678279	7663313	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia trachycarpa*, *Acacia tumida* var. *pilbarensis*
Mid Stratum 1:	*Melaleuca glomerata*
Lower Stratum 1:	*Aristida holathera* var. *holathera*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2.5	0.1
Acacia orthocarpa	3	0.1
Acacia pyrifolia var. *pyrifolia*	2	0.1
Acacia trachycarpa	3.5	1.5
Acacia tumida var. *pilbarensis*	4.5	0.2

Afrohybanthus aurantiacus	0.3	0.1
Aristida holathera var. *holathera*	0.3	0.2
Arivela uncifera	0.3	0.1
Arivela viscosa	0.2	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.3	0.1
**Cenchrus setiger*		0.1
Corchorus aff. incanus (Potentially undescribed)	0.6	0.1
Corchorus parviflorus	0.7	0.1
Corynotheca pungens	0.4	0.1
Dentella asperata	0.1	0.1
Eragrostis eriopoda	0.3	0.1
Eulalia aurea	0.2	0.1
Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Euphorbia trigonosperma	0.2	0.1
Goodenia lamprosperma	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.1
Hakea lorea subsp. *lorea*	1.7	0.1
Indigofera monophylla	0.3	0.1
Isotropis atropurpurea	0.2	0.1
Melaleuca glomerata	2	0.3
Panicum australiense var. *australiense*	0.1	0.1
Petalostylis labicheoides	1.6	0.2
Pluchea ferdinandi-muelleri	0.4	0.1
Polymeria mollis	0.1	0.1
Ptilotus fusiformis	0.4	0.1
Senna notabilis	0.1	0.1
Sorghum plumosum	0.6	0.1
Stemodia grossa	0.4	0.1
Trianthema pilosum	0.1	0.1
Tribulus macrocarpus	0.1	0.1
Triodia epactia	0.4	20
Triumfetta propinqua	1.6	0.1
Waltheria indica	0.4	0.1

PHOTOS



Site Name:	WOE04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 678401.9018E 7663337.561N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sand
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678402	7663338	
Corner 2	678447	7663335	
Corner 3	678447	7663286	
Corner 4	678399	7663285	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Melaleuca argentea*
Mid Stratum 2:	*Melaleuca linophylla*
Lower Stratum 1:	*Eriachne benthamii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia coriacea subsp. *pendens*	0.8	0.1
Acacia pyrifolia var. *pyrifolia*	1	0.1
Acacia tumida var. *pilbarensis*	5	0.8
Afrohybanthus aurantiacus	0.2	0.1
Arivela viscosa	0.1	0.1
Bulbostylis barbata	0.1	0.1
Calandrinia tepperiana	0.1	0.1
**Cenchrus ciliaris*	0.2	0.1

Cyperus blakeanus	0.6	0.1
Cyperus ixiocarpus	0.5	0.1
Cyperus vaginatus	0.7	0.1
Digitaria brownii	0.3	0.1
Drosera finlaysoniana	0.1	0.1
Eragrostis cumingii	0.1	0.1
Eragrostis speciosa	0.3	0.1
Eragrostis tenellula	0.1	0.1
Eriachne benthamii	0.8	1
Eulalia aurea	0.5	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Fuirena ciliaris	0.1	0.1
Goodenia lamprosperma	0.1	0.1
Ipomoea muelleri		0.1
Melaleuca argentea	6	5
Melaleuca linophylla	2	0.8
Microstachys chamaelea	0.1	0.1
Mitrasacme connata	0.1	0.1
Nellica maderaspatensis	0.8	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Ptilotus fusiformis	0.2	0.1
Scleromitrion galioides	0.1	0.1
Sorghum plumosum	1.2	0.1
Stemodia viscosa	0.2	0.1
Striga curviflora	0.1	0.1
Trichodesma zeylanicum	0.1	0.1
Vigna lanceolata var. *lanceolata*		0.1
Wahlenbergia tumidifructa	0.4	0.1

PHOTOS



Site Name:	WOE05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 677736.93E 7664161.1N
Orientation:	270, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>10yrs
Habitat:	Acacia stellaticeps low sparse shrubland over Triodia epactia low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677737	7664161	
Corner 2	677686	7664160	
Corner 3	677738	7664111	
Corner 4	677688	7664111	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia sclerosperma subsp. *sclerosperma*	1.8	0.1
Acacia sphaerostachya	0.8	0.1
Acacia stellaticeps	0.8	5
**Aerva javanica*	0.3	0.1
Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1
**Cenchrus ciliaris*	0.3	0.1

**Cenchrus setiger*	0.3	0.1
Chrysopogon fallax	0.2	0.1
Corchorus aff. incanus (Potentially undescribed)	0.4	0.1
Corchorus parviflorus	0.5	0.1
Eragrostis eriopoda	0.3	0.1
Euploca mutica (P3)	0.3	0.1
Euploca pachyphylla	0.2	0.1
Goodenia forrestii	0.1	0.1
Goodenia lamprosperma	0.2	0.1
Goodenia microptera	0.2	0.1
Indigofera monophylla	0.4	0.1
Pluchea ferdinandi-muelleri	0.4	0.1
Polymeria mollis	0.1	0.1
Ptilotus axillaris	0.1	0.1
Sida sp.	0.3	0.1
Solanum phlomoides	0.1	0.1
Stemodia grossa	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	7
Triumfetta propinqua	0.5	0.1

PHOTOS



Site Name:	WOE06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 679740.1121E 7663470.087N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	679740	7663470	
Corner 2	679791	7663468	
Corner 3	679789	7663417	
Corner 4	679741	7663417	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia acradenia*

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.2	2
Acacia ancistrocarpa	1.8	0.2
Acacia inaequilatera	2.8	0.2
Bonamia erecta	0.2	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Triodia epactia	0.3	0.5
Triodia lanigera	0.3	37

PHOTOS



Site Name:	WOE07
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 679453.7275E 7662413.786N
Orientation:	0, 90
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Dolerite, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	(other) - Possible mechanical disturbance/ earth moving- adjacent to pump station
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	679454	7662414	
Corner 2	679551	7662414	
Corner 3	679553	7662387	
Corner 4	679456	7662386	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Acacia ancistrocarpa*, *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	1.5
Acacia ancistrocarpa	1.8	1.5
Acacia tumida var. *pilbarensis*	2	0.8
Codonocarpus cotinifolius	0.7	0.1
Grevillea wickhamii	1.5	0.1
Petalostylis labicheoides	1.2	0.1
Triodia epactia	0.3	7

Triodia lanigera	0.3	8

PHOTOS



Site Name:	WOE08
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 678696.5406E 7663501.125N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	WSW
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Comments:	Triodia angusta and Acacia tumida only present on southern edge of quadrat and represent drainage veg type

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678697	7663501	
Corner 2	678747	7663507	
Corner 3	678746	7663455	
Corner 4	678696	7663456	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	5
Acacia inaequilatera	2	0.2
Acacia tumida var. *pilbarensis*	3	0.1
Cassytha capillaris		0.1
Corymbia hamersleyana	1.7	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	1.8	0.1

Hakea lorea subsp. *lorea*	1.6	0.1
Petalostylis labicheoides	1.5	0.1
Senna symonii	1.4	0.1
Triodia angusta	0.3	1
Triodia epactia	0.3	8
Triodia lanigera	0.3	35

PHOTOS



Site Name:	WOE09
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 680971.2401E 7663185.691N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	ENE
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	680971	7663186	
Corner 2	681020	7663188	
Corner 3	681017	7663138	
Corner 4	680967	7663138	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1	0.1
Acacia bivenosa	1.2	0.1
Acacia stellaticeps	0.5	1.5
Bonamia erecta	0.2	0.1
Chrysopogon fallax	0.2	0.1
Eriachne pulchella	0.1	0.1
Petalostylis labicheoides	1	0.1
Pluchea ferdinandi-muelleri	0.8	0.1
Pluchea ferdinandi-muelleri x tetranthera	0.4	0.1
Pluchea tetranthera	0.3	0.1

Portulaca cyclophylla	0.1	0.1
Sporobolus australasicus	0.2	0.1
Trianthema triquetrum	0.1	0.1
Triodia epactia	0.3	9
Triodia lanigera	0.3	2

PHOTOS



Site Name:	WOE10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 681205.77E 7663142.26N
Orientation:	270, 0
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SSE
Soil Type:	Sandy Clay
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681206	7663142	
Corner 2	681159	7663140	
Corner 3	681162	7663192	
Corner 4	681213	7663191	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.7	0.2
Acacia stellaticeps	0.5	2
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	0.4	0.1
Eriachne pulchella	0.1	0.1
Hakea lorea subsp. *lorea*	2.5	0.1
Ptilotus astrolasius	0.4	0.1

Ptilotus calostachyus	0.6	0.1
Triodia lanigera	0.4	12
Triodia wiseana	0.4	12

PHOTOS



Site Name:	WOE11
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 681349.1271E 7663160.395N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681349	7663160	
Corner 2	681405	7663165	
Corner 3	681399	7663115	
Corner 4	681347	7663116	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*, *Pluchea ferdinandi-muelleri*
Lower Stratum 1:	*Triodia lanigera*, *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	0.5	2.5
Bulbostylis barbata	0.1	0.1
Calandrinia stagnensis	0.1	0.1
Cassytha capillaris		0.1
Pluchea ferdinandi-muelleri	0.9	1
Pluchea ferdinandi-muelleri x tetranthera	0.3	0.1
Sporobolus australasicus	0.1	0.1
Trianthema triquetrum	0.1	0.1
Triodia epactia	0.3	0.1
Triodia lanigera	0.4	11
Triodia longiceps	0.4	9
Triodia secunda	0.2	0.2

PHOTOS



Site Name:	WOE12
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 681257.5515E 7663695.432N
Orientation:	270, 0
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNE
Soil Type:	Sandy Clay Loam
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Calcrete (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681258	7663695	
Corner 2	681256	7663744	
Corner 3	681205	7663744	
Corner 4	681203	7663694	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia lanigera*, *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	1	0.2
Bonamia erecta	0.2	0.1
Corchorus parviflorus	0.6	0.1
Cynodon convergens	0.1	0.1
Eriachne pulchella	0.1	0.1
Euploca tenuifolia	0.1	0.1
Paraneurachne muelleri	0.2	0.1
Portulaca cyclophylla	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.5	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1

Sporobolus australasicus	0.1	0.1
Stemodia grossa	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Trianthema triquetrum	0.1	0.1
Triodia epactia	0.3	0.5
Triodia lanigera	0.3	2
Triodia longiceps	0.4	10
Triodia secunda	0.3	0.1

PHOTOS



Site Name:	WOE13
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 681578.359E 7663240.255N
Orientation:	0, 270
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Weeds
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681578	7663240	
Corner 2	681573	7663344	
Corner 3	681551	7663339	
Corner 4	681560	7663245	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia trachycarpa*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 1:	*Acacia ampliceps*, *Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Chrysopogon fallax*, *Sorghum plumosum*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon lepidum	0.4	0.1
Acacia ampliceps	2	1
Acacia stellaticeps	1.1	2
Acacia trachycarpa	2.8	15
Adriana tomentosa var. *tomentosa*	0.1	0.1
Afrohybanthus aurantiacus	0.2	0.2

Arivela viscosa	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1
Cajanus cinereus	1.1	0.2
Carissa lanceolata	1	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.3	0.1
Chrysopogon fallax	0.5	3
Corchorus aff. incanus (Potentially undescribed)	0.5	0.1
Corymbia hamersleyana	2.5	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Dactyloctenium radulans	0.1	0.1
Dampiera candicans	0.3	0.1
Eragrostis cumingii	0.1	0.1
Eriachne obtusa	0.6	0.1
Eulalia aurea	0.8	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euphorbia trigonosperma	0.1	0.1
Euphorbia vaccaria var. *vaccaria*	0.2	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
**Flaveria trinervia*	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Goodenia microptera	0.2	0.1
Goodenia muelleriana	0.2	0.1
Gossypium australe	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	3.5	4
Heliotropium crispatum	0.1	0.1
Indigofera monophylla	0.6	0.1
Nellica maderaspatensis	0.5	0.1
Panicum australiense var. *australiense*	0.1	0.1
Panicum decompositum	0.4	0.1
Paraneurachne muelleri	0.2	0.1
Paspalidium rarum	0.1	0.1
Petalostylis labicheoides	1.3	0.1
Pluchea ferdinandi-muelleri	0.7	0.1
Pluchea rubelliflora	0.2	0.1
Polymeria mollis	0.1	0.1
Rhynchosia minima		0.1
Senna notabilis	0.2	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	0.1	0.1
Sorghum plumosum	0.6	0.5
Sporobolus actinocladus	0.1	0.1
Sporobolus australasicus	0.1	0.1
Stemodia grossa	0.1	0.1
Streptoglossa decurrens	0.2	0.1
Striga curviflora	0.1	0.1

Synaptantha tillaeacea	0.1	0.1
Tinospora smilacina		0.1
Triodia epactia	0.6	20
Triodia longiceps	0.3	0.1
Triodia secunda	0.1	0.1
Triumfetta chaetocarpa	0.2	0.1

PHOTOS



Site Name:	WOE14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 681750.8884E 7663142.689N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Clayey Sand
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681751	7663143	
Corner 2	681801	7663142	
Corner 3	681801	7663092	
Corner 4	681749	7663092	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia secunda*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Bulbostylis barbata	0.1	0.1
Calandrinia stagnensis	0.1	0.1
Senna notabilis	0.1	0.1
Sporobolus actinocladus	0.1	0.1
Sporobolus australasicus	0.1	0.1
Trianthema triquetrum	0.1	0.1
Triodia secunda	0.3	26

PHOTOS



Site Name:	WOE15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 682529.3894E 7663099.33N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Clayey Sand
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	682529	7663099	
Corner 2	682579	7663097	
Corner 3	682578	7663047	
Corner 4	682528	7663046	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia zygophylla*
Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.4	0.7
Acacia ancistrocarpa	1.5	1.5
Acacia inaequilatera	1.5	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1
Corymbia zygophylla	2.5	0.5
Grevillea wickhamii	2.8	0.1
Indigofera monophylla	0.2	0.1

Panicum australiense var. *australiense*	0.1	0.1
Ptilotus fusiformis	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Triodia lanigera	0.3	33

PHOTOS



Site Name:	WOE16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 683466.7466E 7663234.101N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	ESE
Soil Type:	Sandy Clay
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	683467	7663234	
Corner 2	683514	7663232	
Corner 3	683515	7663188	
Corner 4	683465	7663190	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ancistrocarpa*, *Acacia ancistrocarpa x orthocarpa*, *Acacia bivenosa*, *Acacia orthocarpa*

Lower Stratum 1: *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.8	0.5
Acacia ancistrocarpa x orthocarpa	2.2	0.2
Acacia bivenosa	1.3	0.5
Acacia inaequilatera	2.5	0.1
Acacia orthocarpa	2.5	0.2
Arivela viscosa	0.1	0.1
Bonamia erecta	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.1	0.1

Cynodon convergens	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Goodenia microptera	0.1	0.1
Gossypium australe	0.4	0.1
Panicum australiense var. *australiense*	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Sclerolaena densiflora	0.3	0.1
Senna glutinosa subsp. *glutinosa*	1.5	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia epactia	0.3	0.3
Triodia longiceps	0.3	18

PHOTOS



Site Name:	WOE17
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 683586.2836E 7663174.087N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	683586	7663174	
Corner 2	683637	7663173	
Corner 3	683636	7663174	
Corner 4	683635	7663123	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	3
Acacia inaequilatera	1.8	0.2
Acacia stellaticeps	0.7	0.1
Aristida holathera var. *holathera*	0.1	0.1
Arivela uncifera	0.1	0.1
Arivela viscosa	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1
Bulbostylis barbata	0.1	0.1
Corchorus sp.	0.1	0.1
Corymbia hamersleyana	4	0.2

Dactyloctenium radulans	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca mutica (P3)	0.1	0.1
Euploca tenuifolia	0.1	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia microptera	0.1	0.1
Gossypium australe	0.1	0.1
Grevillea wickhamii	0.6	0.1
Indigofera monophylla	0.3	0.1
Panicum australiense var. *australiense*	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polygala galeocephala	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Senna notabilis	0.1	0.1
Sporobolus australasicus	0.1	0.1
Stemodia grossa	0.1	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Trianthema pilosum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	2
Triodia lanigera	0.6	10
Triodia schinzii	0.4	16

PHOTOS



Site Name:	WOE18
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 683615.4683E 7663023.837N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clayey Sand
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	(other) - Vehicle track through Triodia in SW corner
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	683615	7663024	
Corner 2	683666	7663023	
Corner 3	683669	7662974	
Corner 4	683618	7662973	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Bulbostylis barbata	0.1	0.1
Calandrinia stagnensis	0.1	0.1
Cynodon convergens	0.1	0.1
Eriachne obtusa	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Portulaca cyclophylla	0.1	0.1
Sclerolaena densiflora	0.2	0.1
Trianthema triquetrum	0.1	0.1
Triodia angusta	0.5	7
Triodia epactia	0.3	0.1

Triodia longiceps	0.5	8

PHOTOS



Site Name:	WOE19
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 684050.278E 7663016.448N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684050	7663016	
Corner 2	684100	7663016	
Corner 3	684097	7662965	
Corner 4	684046	7662967	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.8
Acacia inaequilatera	3	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	2.5	0.1
Senna notabilis	0.1	0.1
Triodia lanigera	0.3	36

PHOTOS



Site Name:	WOE20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 684180.2426E 7662969.489N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Clayey Sand
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	(other) - Vehicle track through Triodia adjacent to quadrat
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684180	7662969	
Corner 2	684231	7662970	
Corner 3	684232	7662919	
Corner 4	684183	7662920	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*, *Triodia angusta*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.5	0.1
Acacia inaequilatera	2.5	0.2
Cassytha capillaris		0.1
Corymbia hamersleyana		
Heliotropium crispatum	0.1	0.1
Senna notabilis	0.1	0.1
Senna symonii	0.8	0.1
Sporobolus australasicus	0.1	0.1

Triodia angusta	0.3	21
Triodia wiseana	0.4	7

PHOTOS



Site Name:	WOE21
Site Type:	QUADRAT
Dimensions:	16.67m x 150m
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 677305.5954E 7660896.617N
Orientation:	225, 315
Landform Type:	Ridge
Slope Class:	Moderately Inclined (10°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Dolerite, 20-50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Dolerite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677306	7660897	
Corner 2	677182	7660819	
Corner 3	677174	7660833	
Corner 4	677297	7660910	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Corchorus parviflorus*, *Gossypium australe*
Mid Stratum 2:	*Tribulus suberosus*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.1	0.1
Acacia orthocarpa	1	0.1
Arivela viscosa	0.4	0.1
Bonamia pilbarensis		0.1
Corchorus parviflorus	0.6	0.1
Cymbopogon ambiguus	0.3	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella	0.1	0.1

Euphorbia careyi	0.2	0.1
Euploca pachyphylla	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Gossypium australe	1.2	0.5
Grevillea wickhamii	1.1	0.1
Hibiscus coatesii	0.3	0.1
Indigofera monophylla	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Senna symonii	0.3	0.1
Solanum phlomoides	0.2	0.1
Tephrosia virens	1	0.1
Tribulus suberosus	0.8	0.8
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	22
Triodia wiseana	0.3	10
Triumfetta maconochieana	0.2	0.1

PHOTOS



Site Name:	WOE22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677380.2126E 7660031.059N
Orientation:	90, 180
Landform Type:	Lower Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Clay
Soil Colour:	pink (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677380	7660031	
Corner 2	677428	7660031	
Corner 3	677428	7659982	
Corner 4	677378	7659983	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia bivenosa*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia angusta*, *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.1
Acacia bivenosa	2.2	0.5
Acacia inaequilatera	2	0.5
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis		0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	1.7	0.1
Eriachne obtusa	0.2	0.1
Euploca pachyphylla	0.2	0.1

Goodenia stobbsiana	0.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Petalostylis labicheoides	1.2	0.1
Pluchea ferdinandi-muelleri	0.3	0.1
Ptilotus exaltatus	0.1	0.1
Salsola australis	0.6	0.1
Senna symonii	1.6	0.1
Triodia angusta	0.3	5
Triodia chichesterensis (P3)	0.2	10
Triodia wiseana	0.5	0.5

PHOTOS



Site Name:	WOE23
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677513.3313E 7660133.264N
Orientation:	40, 130
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sand
Soil Colour:	light brown (other)
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677513	7660133	
Corner 2	677725	7660235	
Corner 3	677734	7660232	
Corner 4	677521	7660127	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia acradenia*, *Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*, *Hibiscus sturtii* var. *campylochlamys*, *Indigofera monophylla*, *Petalostylis labicheoides*

Lower Stratum 1: *Triodia angusta*, *Triodia epactia*

Lower Stratum 2: *Chrysopogon fallax*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.8	0.5
Acacia bivenosa	1.9	0.1
Acacia orthocarpa	4	2
Acacia stellaticeps	0.9	0.1
Acacia tumida var. *pilbarensis*	1.8	4
Afrohybanthus aurantiacus	0.2	0.1

Aristida holathera var. *holathera*	0.3	0.1
Arivela uncifera	0.2	0.1
Arivela viscosa	0.4	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	0.1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	1.7	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.2	0.1
Chrysopogon fallax	0.2	0.3
Corchorus parviflorus	0.8	0.1
Corymbia hamersleyana	4.5	0.5
Dampiera candicans	0.6	0.1
Eriachne pulchella	0.1	0.1
Euphorbia trigonosperma	0.2	0.1
Fimbristylis simulans	0.1	0.1
Goodenia forrestii	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Gossypium australe	0.3	0.1
Grevillea wickhamii	2.5	0.1
Haloragis gossei	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.7	0.2
Indigofera monophylla	0.8	1.5
Nellica maderaspatensis	0.3	0.1
Notoleptopus decaisnei	0.2	0.1
Paraneurachne muelleri	0.4	0.1
Paspalidium rarum	0.2	0.1
Petalostylis labicheoides	2	0.5
Pluchea tetranthera	0.4	0.1
Polymeria mollis		0.1
Ptilotus astrolasius	0.6	0.1
Ptilotus calostachyus	0.8	0.1
Rhynchosia minima		0.1
Senna glutinosa subsp. *glutinosa*	1.3	0.1
Senna notabilis	0.1	0.1
Senna symonii	1	0.1
Solanum phlomoides	0.6	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa decurrens	0.5	0.1
Swainsona formosa	0.3	0.1
Themeda triandra	0.2	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.3	1
Triodia chichesterensis (P3)	0.2	0.1
Triodia epactia	0.3	32
Triodia wiseana	0.3	0.1

PHOTOS



Site Name:	WOE24
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 678120.86E 7657375.98N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678121	7657376	
Corner 2	678172	7657373	
Corner 3	678173	7657326	
Corner 4	678124	7657329	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia inaequilatera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.3	0.1
Acacia bivenosa	0.5	0.1
Acacia inaequilatera	2.2	1.5
Acacia pyrifolia var. *pyrifolia*	1.4	0.1
Acacia tumida var. *pilbarensis*	0.3	0.1
Afrohybanthus aurantiacus	0.4	0.1
Bonamia erecta	0.3	0.1
Bonamia pilbarensis		0.1
Cajanus cinereus	0.6	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.6	0.1

Enneapogon caerulescens	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca pachyphylla	0.1	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.1	0.1
Indigofera monophylla	0.2	0.1
Paraneurachne muelleri	0.2	0.1
Petalostylis labicheoides	0.7	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus clementii	0.3	0.1
Scaevola browniana subsp. *browniana*	0.2	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.2	0.1
Solanum phlomoides	0.4	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia epactia	0.2	0.1
Triodia wiseana	0.2	4

PHOTOS



Site Name:	WOE25
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 678228.4718E 7657137.969N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678228	7657138	
Corner 2	678279	7657136	
Corner 3	678278	7657088	
Corner 4	678227	7657088	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Bonamia erecta*, *Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)
Lower Stratum 1:	*Triodia lanigera*
Lower Stratum 2:	*Eriachne obtusa*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia sphaerostachya	0.3	0.1
Acacia stellaticeps	0.3	0.1
Acacia tumida var. *pilbarensis*	0.7	0.1
Afrohybanthus aurantiacus	0.3	0.1
Arivela uncifera	0.2	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.5
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.2	0.1
Corymbia hamersleyana	4	0.1
Eragrostis eriopoda	0.2	0.1

Eriachne obtusa	0.3	0.2
Euploca pachyphylla	0.2	0.1
Goodenia forrestii	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Gossypium australe	0.5	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.2	0.1
Grevillea wickhamii	0.8	0.1
Indigofera monophylla	0.3	0.1
Paraneurachne muelleri	0.3	0.1
Pluchea tetranthera	0.3	0.1
Ptilotus astrolasius	0.3	0.1
Senna artemisioides subsp. *oligophylla*	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.5
Trianthema pilosum	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	0.8
Triodia lanigera	0.2	0.2

PHOTOS



Site Name:	WOE26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677305.43E 7657001.78N
Orientation:	90, 180
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	NNW
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	As Pictured (other), 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, As pictured (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677305	7657002	
Corner 2	677358	7656998	
Corner 3	677358	7656949	
Corner 4	677307	7656950	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia orthocarpa*
Mid Stratum 2:	*Goodenia stobbsiana*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	1.3	0.2
Afrohybanthus aurantiacus	0.2	0.1
Bulbostylis barbata	0.1	0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Corchorus parviflorus	0.3	0.1
Dampiera candicans	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1

Eriachne pulchella	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia stobbsiana	0.3	0.3
Grevillea wickhamii	0.7	0.1
Paspalidium rarum	0.1	0.1
Petalostylis labicheoides	1.3	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Ptilotus calostachyus	0.6	0.1
Scaevola browniana subsp. *browniana*	0.2	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.6	0.1
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.3	0.1
Sporobolus australasicus	0.1	0.1
Tribulus platypterus	1.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.2	3

PHOTOS





Site Name:	WOE27
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 676898.24E 7658171.98N
Orientation:	90, 180
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	ENE
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist - Recent rain= soil condition. Not representative of veg type
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676898	7658172	
Corner 2	676946	7658170	
Corner 3	676945	7658122	
Corner 4	676896	7658124	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	3.5	1
Acacia tumida var. *pilbarensis*	2.5	2
Afrohybanthus aurantiacus	0.2	0.1
Aristida holathera var. *holathera*	0.2	0.1
Arivela viscosa	0.4	0.1
Bonamia pilbarensis		0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.5	0.1
Dampiera candicans	0.4	0.1
Dolichocarpa crouchiana	0.1	0.1

Eragrostis cumingii	0.1	0.1
Eragrostis dielsii	0.1	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella	0.1	0.1
Euphorbia careyi	0.1	0.1
Euploca tenuifolia	0.1	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Gossypium australe	0.8	0.1
Grevillea wickhamii	3.5	0.1
Indigofera colutea	0.1	0.1
Indigofera monophylla	0.4	0.1
Mitrasacme connata	0.1	0.1
Nicotiana benthamiana	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.3	0.1
Portulaca oleracea	0.1	0.1
Ptilotus calostachyus	0.8	0.1
Solanum phlomoides	0.2	0.1
Stemodia grossa	0.2	0.1
Tephrosia virens	0.8	0.1
Tribulus platypterus	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	16
Triumfetta propinqua	0.2	0.1

PHOTOS



Site Name:	WOE28
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677570.0078E 7657846.194N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	ESE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677570	7657846	
Corner 2	677621	7657846	
Corner 3	677620	7657796	
Corner 4	677573	7657795	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.2	1
Acacia tumida var. *pilbarensis*	4	0.5
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Eriachne pulchella	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Indigofera monophylla	0.4	0.1
Ptilotus astrolasius	0.1	0.1
Ptilotus calostachyus	0.6	0.1

Sida sp. Articulation below (A.A. Mitchell PRP 1605)	0.5	0.1
Tephrosia clementii	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	1.5
Triodia lanigera	0.6	26
Triodia wiseana	0.5	0.2

PHOTOS



Site Name:	WOE29
Site Type:	QUADRAT
Dimensions:	31m x 80m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 678279.8189E 7657803.756N
Orientation:	250, 340
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	ENE
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VP - Very Poor
Disturbance:	Grazing, Weeds, (other) - Rubbish
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678280	7657804	
Corner 2	678204	7657780	
Corner 3	678202	7657807	
Corner 4	678279	7657831	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Corchorus parviflorus*
Mid Stratum 2:	*Indigofera monophylla*, *Ptilotus astrolasius*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Bonamia erecta*, *Chrysopogon fallax*, *Goodenia forrestii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon otocarpum	0.3	0.1
Acacia ancistrocarpa	0.7	0.1
Acacia bivenosa	0.7	0.1
Acacia pyrifolia var. *pyrifolia*	1.3	2

Acacia tumida var. *pilbarensis*	1.4	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.1	0.1
Aristida holathera var. *holathera*	0.2	0.1
Arivela viscosa	0.3	0.1
Boerhavia coccinea	0.2	0.1
Bonamia erecta	0.3	3
Bonamia pilbarensis		0.1
Cajanus cinereus	0.8	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.3	0.1
Chrysopogon fallax	0.3	2
Codonocarpus cotinifolius	1	0.1
Corchorus parviflorus	0.8	1
Corymbia hamersleyana	5	0.2
Cynodon convergens	0.1	0.1
Enneapogon caerulescens	0.2	0.1
Eragrostis eriopoda	0.2	0.1
Eriachne pulchella	0.1	0.1
Eriachne tenuiculmis	0.3	0.1
Euphorbia careyi	0.1	0.1
Euphorbia clementii (P3)	0.3	0.1
Euphorbia trigonosperma	0.2	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Goodenia forrestii	0.1	0.2
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Gossypium australe	1.2	0.1
Grevillea wickhamii	0.9	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.5	3
Isotropis atropurpurea	0.3	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri	0.2	0.1
Pluchea tetranthera	0.3	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.5
Ptilotus auriculifolius	0.1	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus clementii	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.4	0.1
Senna notabilis	0.2	0.1
Sida clementii	0.8	0.1
Solanum phlomoides	0.3	0.1
Sporobolus australasicus	0.2	0.1
Tephrosia clementii	0.1	0.1
Tephrosia rosea var. *clementii*	0.3	0.1

Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	0.5
Triodia lanigera	0.3	0.1
Triodia wiseana	0.3	0.1

PHOTOS



Site Name:	WOE30
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677562.0456E 7658735.619N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	ENE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677562	7658736	
Corner 2	677614	7658736	
Corner 3	677614	7658691	
Corner 4	677565	7658689	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia orthocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.5
Acacia orthocarpa	3.5	1
Corchorus parviflorus	0.5	0.1
Eriachne pulchella	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Indigofera monophylla	0.2	0.1
Ptilotus astrolasius	0.2	0.1
Triodia epactia	0.3	0.1
Triodia lanigera	0.3	25

PHOTOS



Site Name:	WOE31
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 678042.1666E 7658703.974N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Moist - Recently rained
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678042	7658704	
Corner 2	678090	7658705	
Corner 3	678088	7658658	
Corner 4	678038	7658659	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*
Mid Stratum 2:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*, *Triodia wiseana*
Lower Stratum 2:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.2	0.2
Acacia ancistrocarpa	1.8	0.1
Acacia bivenosa	2.5	0.1
Acacia inaequilatera	1.4	0.2
Acacia tumida var. *pilbarensis*	2.5	0.1
Afrohybanthus aurantiacus	0.2	0.1
Bonamia pilbarensis		0.1

Corchorus parviflorus	1.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	3.5	0.1
Petalostylis labicheoides	1.2	0.1
Tephrosia clementii	0.2	0.1
Triodia chichesterensis (P3)	0.2	6
Triodia lanigera	0.6	31
Triodia wiseana	0.5	2

PHOTOS



Site Name:	WOJ01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 701831.63E 7660034.59N
Orientation:	90, 180
Landform Type:	Undulating Plain
Slope Class:	Moderately Inclined (10°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Grey- brown (other)
Soil Condition:	Dry
Rock Outcrop:	Dolomite, 20-50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Calcrete, Dolomite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Habitat:	Corymbia hammersleyana low isolated trees over Acacia inaequilatera tall isolated clumps of shrubs over Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701832	7660035	
Corner 2	701881	7660035	
Corner 3	701882	7659985	
Corner 4	701833	7659985	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.6	0.3
Acacia inaequilatera	3.8	0.5
Afrohybanthus aurantiacus	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus laniflorus	0.5	0.1
Corymbia hamersleyana	7	0.5
Eriachne mucronata	0.3	0.1
Goodenia stobbsiana	0.4	0.3
Grevillea wickhamii subsp. *hispidula*	2.1	0.1
Indigofera monophylla		
Isotropis atropurpurea	0.5	0.1
Scaevola amblyanthera var. *centralis*		

Triodia angusta	0.2	12
Triodia wiseana	0.3	17

PHOTOS



Site Name:	WOJ02
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 701721.25E 7659987.54N
Orientation:	15, 205
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolerite, Dolomite, Colluvium, chert (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>10yrs
Habitat:	Corymbia hammersleyana low open woodland over Acacia tumida, Gossypium robinsonii and Santalum lanceolatum tall sparse shrubland over Petalostylis labicheoides mid sparse shrubland over Triodia epactia and Triodia ? angusta low open hummock grassland with Cymbopogon ambiguus mid isolated clumps of tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701721	7659988	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp.	0.1	0.1
Acacia acradenia	1.4	0.2
Acacia bivenosa	1.5	0.2
Acacia ptychophylla	0.5	0.1
Acacia pyrifolia var. *pyrifolia*	2	0.2
Acacia tumida var. *pilbarensis*	3.5	8
Afrohybanthus aurantiacus	0.4	0.1
Boerhavia coccinea	0.1	0.1
Boerhavia gardneri	0.2	0.1
Bonamia erecta	0.3	0.1
Cajanus cinereus	1.8	0.1
**Cenchrus ciliaris*	0.4	0.3
Chrysopogon fallax	0.5	0.6

Corchorus laniflorus	0.5	0.1
Corchorus parviflorus	0.6	0.1
Corchorus tridens	0.1	0.1
Corymbia hamersleyana	7	8
Crotalaria medicaginea var. *neglecta*	0.3	0.1
Cucumis variabilis		0.1
Cullen leucanthum	2.1	0.1
Cymbopogon ambiguus	0.5	0.8
Dichanthium sericeum subsp. *humilius*	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Enneapogon lindleyanus	0.4	0.1
Eragrostis cumingii	0.1	0.1
Eriachne mucronata	0.3	0.2
Euphorbia ?australis	0.1	0.1
Euphorbia biconvexa	0.2	0.1
Euploca cunninghamii	0.1	0.1
Flueggea virosa subsp. *melanthesoides*	1.3	0.1
Goodenia stobbsiana	0.2	0.1
Gossypium robinsonii	2	1.8
Grevillea wickhamii	2	0.2
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	1	0.9
Indigofera rugosa	0.2	0.1
Isotropis atropurpurea	0.4	0.1
Jasminum didymum subsp. *lineare*	0.2	0.1
Nellica maderaspatensis	0.4	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri	0.3	0.2
Paspalidium clementii	0.1	0.1
Perotis rara	0.1	0.1
Petalostylis labicheoides	1.9	8
Polymeria mollis		0.1
Ptilotus astrolasius	0.3	0.1
Rhynchosia minima		0.1
Santalum lanceolatum	2	0.8
Scaevola amblyanthera var. *centralis*	0.2	0.1
Senna artemisioides subsp. oligophylla x symonii	1.3	0.1
Sida clementii	1.3	0.1
Sida fibulifera	0.4	0.1
Solanum phlomoides	0.4	0.1
Sporobolus australasicus	0.1	0.1
Swainsona formosa	0.1	0.1
Tephrosia rosea var. *clementii*	1.3	0.3
Themeda triandra	0.4	0.4
Trichodesma zeylanicum var. *zeylanicum*	0.1	0.1
Triodia angusta	0.4	7
Triodia epactia	0.4	12
Triodia wiseana	0.4	6

PHOTOS



Site Name:	WOJ03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	06/08/2024
GPS Location:	GDA94 Zone 50 701718.6512E 7659181.065N
Orientation:	90, 180
Landform Type:	Crest
Slope Class:	Steep (23°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Chert (other), 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10yrs
Habitat:	Eucalyptus leucophloia low isolated trees over Acacia pruinocarpa tall isolated clumps of shruba over Acacia acradenia mid isolated clumps of shrubs over low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701719	7659181	NW
Corner 2	701718	7659132	SW
Corner 3	701767	7659130	SE
Corner 4	701766	7659180	NE

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia pruinocarpa*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.1	0.8
Acacia inaequilatera	2.5	0.1
Acacia pruinocarpa	2.1	1.5
**Aerva javanica*	0.6	0.1
Amaranthus undulatus	0.4	0.1
Arivela viscosa	0.2	0.1

Boerhavia gardneri	0.2	0.1
Bulbostylis barbata	0.1	0.1
**Cenchrus ciliaris*	0.2	0.1
Clerodendrum tomentosum	0.6	0.1
Corchorus sp.	0.1	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.1
Cyperus hesperius	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne mucronata	0.4	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4	0.3
Euphorbia australis var. *subtomentosa*	0.1	0.1
Evolvulus alsinoides var. *decumbens*	0.1	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Ficus brachypoda	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	0.4	0.2
Hibiscus goldsworthii	0.4	0.1
Indigofera monophylla	0.5	0.1
Paspalidium clementii	0.1	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Portulaca oleracea	0.1	0.1
Pterocaulon serrulatum var. *velutinum*	0.1	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Ptilotus clementii	0.1	0.1
Ptilotus fusiformis	0.1	0.1
Ptilotus incanus	0.1	0.1
Solanum cleistogamum	0.1	0.1
Solanum horridum	0.2	0.1
Triodia brizoides	0.3	14
Triumfetta chaetocarpa	0.1	0.1
Triumfetta propinqua	0.6	0.2

PHOTOS





Site Name:	WOJ04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	07/08/2024
GPS Location:	GDA94 Zone 50 677491.93E 7663618.31N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy Loam
Soil Colour:	Black
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal - Cat prints and Camel scat (see photos)
Fire:	Approx. 5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677492	7663618	NW
Corner 2	677491	7663568	SW
Corner 4	677544	7663619	NE
Corner 3	677542	7663568	SE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*, *Triodia secunda*
Lower Stratum 2:	*Trianthema triquetrum*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
? *Sclerolaena sp.*	0.1	0.1
Acacia bivenosa	0.7	0.1
Acacia sphaerostachya	0.9	0.1
Acacia stellaticeps	0.4	8
Acacia trachycarpa	1	0.1
Afrohybanthus aurantiacus	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.2	0.1

Calandrinia pentavalvis	0.1	0.1
**Cenchrus ciliaris*	0.3	0.1
**Cenchrus setiger*	0.1	0.1
Chrysopogon fallax	0.5	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	1.7	0.1
Dactyloctenium radulans	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.1	0.1
Eragrostis dielsii	0.1	0.1
Eragrostis eriopoda	0.3	0.1
Euphorbia biconvexa	0.1	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca pachyphylla	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia forrestii	0.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.4	0.1
Panicum australiense var. *australiense*	0.1	0.1
Pluchea ferdinandi-muelleri x tetranthera	0.5	0.1
Pluchea tetranthera	0.5	0.1
Polymeria mollis		0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.1	0.1
Salsola australis	0.1	0.1
Senna notabilis	0.1	0.1
Sporobolus australasicus	0.1	0.1
Stemodia grossa	0.1	0.1
Tephrosia rosea var. *clementii*	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trianthema triquetrum	0.1	0.2
Tribulus hirsutus	0.1	0.1
Triodia epactia	0.1	4
Triodia secunda	0.1	3
Triumfetta chaetocarpa	0.5	0.1

PHOTOS



Site Name:	WOJ05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	06/08/2024
GPS Location:	GDA94 Zone 50 701381.7676E 7659546.304N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, Other, Chert (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Quartz, Calcrete, Chert (other)
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Clearing
Fire:	5-10 Years
Comments:	Very old track through quadrat.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701382	7659546	NW
Corner 2	701381	7659494	SW
Corner 3	701435	7659496	SE
Corner 4	701435	7659544	NE

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia angusta*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.6	0.1
Acacia bivenosa	0.6	0.1
Acacia inaequilatera	2	0.1
Bonamia pilbarensis		0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana		
Goodenia stobbsiana	0.2	0.1
Indigofera monophylla	0.5	0.1
Ptilotus auriculifolius	0.1	0.1

Scaevola amblyanthera var. *centralis*	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia angusta	0.3	30
Triodia wiseana	0.3	0.1

PHOTOS



Site Name:	WOJ06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 701240.24E 7659449.14N
Landform Type:	Mid Slope
Slope Class:	Steep (23°)
Aspect:	ESE
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	(other), <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Comments:	Historical clearing nearby for mining.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701240	7659449	NW
Corner 2	701239	7659400	SW
Corner 3	701291	7659402	SE
Corner 4	701292	7659452	NE

DOMINANT TAXA IN VEGETATION STRATA

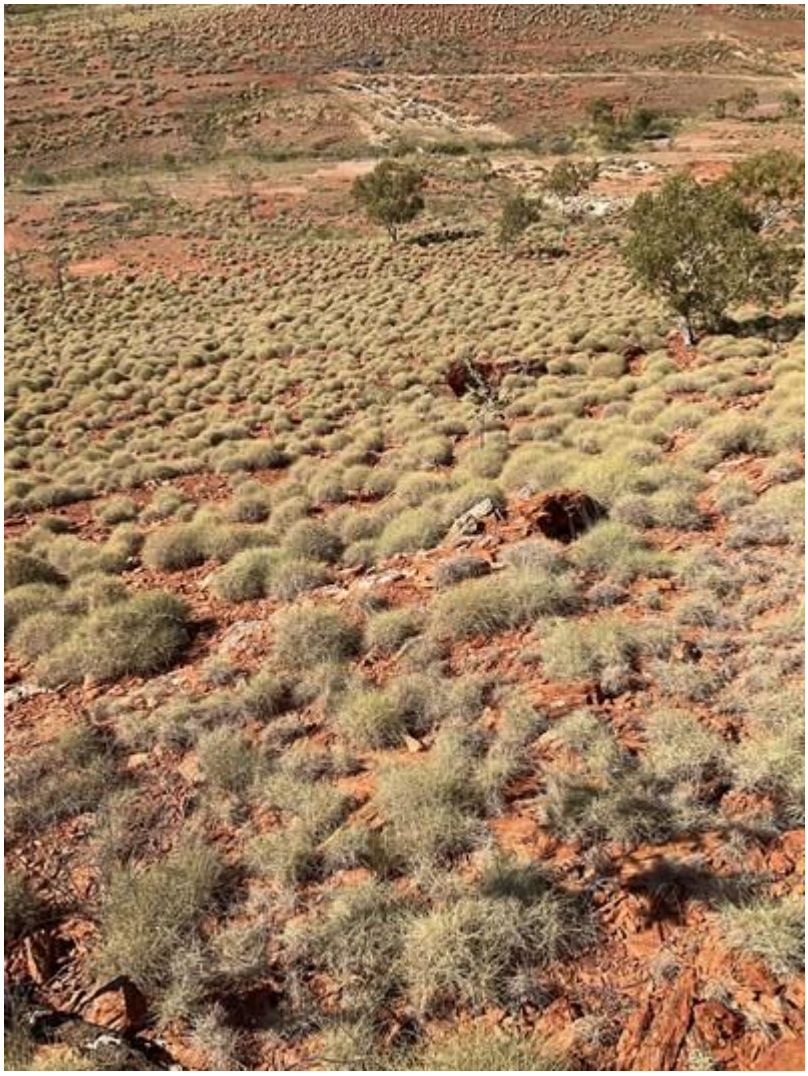
Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.5	0.1
Acacia inaequilatera	1.9	0.1
Acacia ptychophylla	0.4	0.1
Acacia stellaticeps	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus parviflorus	0.7	0.1
Eriachne sp. Dugald River (B.K Simon + 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	2.8	2
Fimbristylis simulans	0.1	0.1

Indigofera monophylla	0.2	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus exaltatus	0.3	0.1
Senna symonii	0.6	0.2
Triodia brizoides	0.3	45
Triodia lanigera	0.2	0.1
Triodia wiseana	0.4	0.1

PHOTOS





Site Name:	WOJ07
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 700697.58E 7659140.5N
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	1-5 Years
Habitat:	Triodia epactia low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700698	7659141	
Corner 2	700742	7659136	
Corner 3	700743	7659089	
Corner 4	700695	7659090	

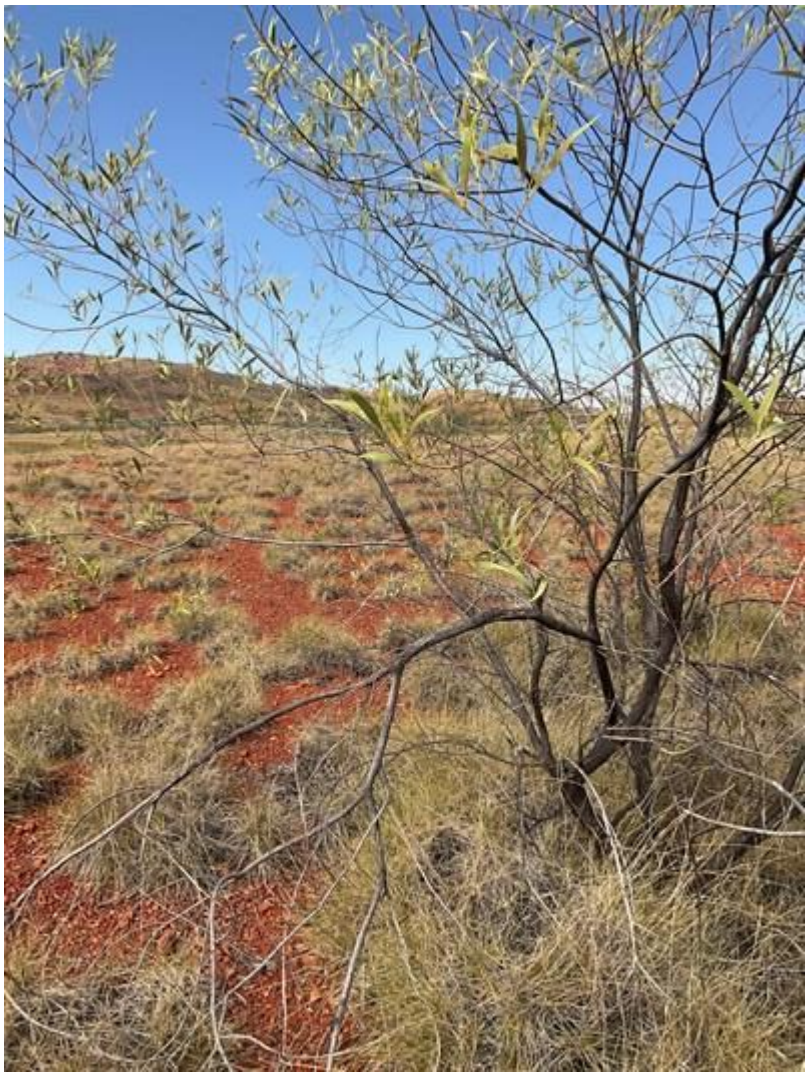
DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.8	0.1
Acacia inaequilatera		
Acacia ptychophylla	0.2	0.1
Acacia tumida var. *pilbarensis*		
Corymbia hamersleyana		
Eriachne pulchella subsp. *dominii*	0.1	0.2
Fimbristylis simulans	0.1	0.2
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii		
Triodia epactia	0	13
Triodia wiseana		

PHOTOS





Site Name:	WOJ08
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 701465.61E 7659255.24N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	Other, Calcrete, Chert (other), <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite, Quartz, Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	5-10 Years

Habitat: Acacia inaequilatera tall isolated shrubs over Acacia acradenia mid-tall isolated clumps of shrubs over Acacia ptychophylla low isolated clumps of shrubs over Triodia epactia, Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701466	7659255	
Corner 2	701510	7659267	
Corner 3	701527	7659220	
Corner 4	701483	7659205	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Acacia ptychophylla*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	1
Acacia inaequilatera	4	0.3
Acacia ptychophylla	0.4	3.8
Bonamia pilbarensis		0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.5	0.1

Eriachne mucronata	0.3	0.1
Fimbristylis simulans	0.1	0.1
Goodenia cusackiana	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Indigofera monophylla		
Ptilotus astrolasius		
Ptilotus calostachyus	0.7	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	8
Triodia wiseana	0.4	8

PHOTOS



Site Name:	WOJ09R
Site Type:	RELEVE
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 701530.37E 7659007.83N
Landform Type:	Upper Slope
Slope Class:	Steep (23°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Other, Chert (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Quartz, Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Weeds
Fire:	10-20 Years
Comments:	Single cenchrus ciliaris found.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701530	7659008	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia pruinocarpa		
Arivela viscosa		
**Cenchrus ciliaris*		
Corchorus parviflorus		
Cymbopogon ambiguus		
Cyperus hesperius		
Eriachne mucronata		
Gomphrena cunninghamii		
Gossypium australe		
Hibiscus goldsworthii		
Triodia brizoides		
Triodia epactia		
Triumfetta propinqua		

PHOTOS



Site Name:	WOJ10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 677586.32E 7663453.29N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	NE
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Quartz, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	5-10 Years
Comments:	Cattle footprints prominent, busy road close by.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677586	7663453	
Corner 2	677634	7663450	
Corner 3	677633	7663404	
Corner 4	677585	7663404	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Trianthema triquetrum	0.1	0.1
Triodia angusta	0.6	5
Triodia epactia	0.3	0.2
Triodia longiceps	0.4	3
Triodia secunda	0.2	18

PHOTOS



Site Name:	WOJ11
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 700381.19E 7658598.17N
Landform Type:	Drainage Line
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, Animal
Fire:	10-20 Years
Comments:	One record of cenchrus ciliaris and some evidence of cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700381	7658598	
Corner 2	700386	7658600	
Corner 3	700547	7658420	
Corner 4	700543	7658413	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Chrysopogon fallax*, *Eriachne tenuiculmis*
Lower Stratum 2:	*Triodia angusta*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	6
Acacia ancistrocarpa	0.8	0.1
Acacia bivenosa	1.6	0.3
Acacia ptychophylla	1.1	0.1
Acacia pyrifolia var. *pyrifolia*	1.9	0.4
Acacia sphaerostachya	0.7	0.1
Acacia stellaticeps	0.5	0.1

Acacia tumida var. *pilbarensis*	3.2	6
Afrohybanthus aurantiacus	0.4	0.1
Aristida holathera var. *holathera*	0.4	0.1
Arivela viscosa	0.1	0.1
Bonamia pilbarensis		0.1
Cajanus cinereus	1.8	0.1
Cassytha capillaris		0.2
**Cenchrus ciliaris*	0.4	0.1
Chrysopogon fallax	0.4	8
Corchorus laniflorus	0.6	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	6.5	6
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.4	0.2
Cyperus vaginatus	0.8	0.1
Eriachne mucronata	0.4	0.4
Eriachne obtusa	0.5	0.1
Eriachne tenuiculmis	0.4	4
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euphorbia trigonosperma	0.2	0.1
Ficus aculeata var. *indecora*	2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii subsp. *hispidula*	3	6
Hakea lorea subsp. *lorea*	1.9	0.1
Haloragis gossei	0.1	0.1
Indigofera monophylla	0.9	2.5
Isotropis atropurpurea	0.5	0.1
Jasminum didymum subsp. *lineare*	1.4	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri	0.4	6
Petalostylis labicheoides	1.9	2
Polymeria mollis		0.1
Santalum lanceolatum	1.4	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.2
Senna glutinosa subsp. *glutinosa*	0.3	0.1
Tephrosia rosea var. *clementii*	1.2	0.5
Themeda triandra	0.4	0.3
Trichodesma zeylanicum	0.1	0.1
Triodia angusta	0.4	8
Triodia epactia	0.3	2.5

PHOTOS



Site Name:	WOJ12
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 700310.27E 7658359.05N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated trees over Acacia acradenia mid-tall isolated clumps of shrubs over Acacia stellaticeps low isolated clumps of shrubs over Triodia epactia, Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700310	7658359	
Corner 2	700351	7658359	
Corner 3	700353	7658309	
Corner 4	700303	7658311	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*
Mid Stratum 2:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	4
Acacia ancistrocarpa	1.9	0.2
Acacia bivenosa	1.3	0.2
Acacia inaequilatera	1.9	0.1
Acacia pyrifolia var. *pyrifolia*	1.5	0.1

Acacia sphaerostachya	1.1	0.1
Acacia stellaticeps	0.8	5
Acacia tumida var. *pilbarensis*	1.7	0.1
Arivela viscosa	0.1	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.5	0.1
Bulbostylis barbata	0.1	0.1
Chrysopogon fallax	0.4	0.5
Corymbia hamersleyana	4.2	0.6
Dampiera candicans	0.5	0.1
Eriachne tenuiculmis	0.3	0.2
Grevillea wickhamii subsp. *hispidula*	1.9	0.3
Hakea lorea subsp. *lorea*	2.2	0.1
Hibiscus sturtii var. *campylochlamys*	0.7	0.1
Indigofera monophylla	0.8	0.1
Petalostylis labicheoides	1.5	0.1
Pluchea ferdinandi-muelleri	0.5	0.1
Pluchea tetranthera	0.3	0.1
Polymeria mollis	0.2	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.5	0.1
Senna notabilis	0.1	0.1
Sida clementii	0.9	0.1
Sporobolus australasicus	0.1	0.1
Tribulopis angustifolia	0.1	0.1
Triodia angusta	0.3	0.3
Triodia epactia	0.5	40
Triodia lanigera	0.4	6

PHOTOS



Site Name:	WOJ13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 700102.95E 7658096.25N
Landform Type:	Other, Minor flow lines amongst floodplain (other)
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 2-6mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal
Fire:	10-20 Years
Comments:	Cattle footprints

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700103	7658096	
Corner 2	700154	7658097	
Corner 3	700154	7658045	
Corner 4	700101	7658045	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia pyrifolia* var. *pyrifolia*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Eriachne obtusa*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.1
Acacia bivenosa	1.5	0.1
Acacia pyrifolia var. *pyrifolia*	1.9	1.3
Arivela uncifera	0.6	0.1
Arivela viscosa	0.1	0.1
Boerhavia coccinea		0.1
Bonamia alatisemina		0.1

Bonamia erecta	0.3	0.2
Bonamia pilbarensis		0.1
Cassytha capillaris		0.1
Corchorus laniflorus	1	0.9
Corchorus parviflorus	1	0.2
Dampiera candicans	0.7	0.1
Eriachne mucronata	0.3	0.3
Eriachne obtusa	0.5	1.2
Goodenia stobbsiana	0.4	0.2
Grevillea wickhamii subsp. *hispidula*	3	1.5
Indigofera monophylla	1	0.4
Melaleuca glomerata		
Pentalepis trichodesmoides subsp. *trichodesmoides*		
Petalostylis labicheoides	1.6	0.2
Polymeria mollis		0.1
Ptilotus astrolasius	0.5	0.4
Ptilotus calostachyus	0.8	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Sida clementii		
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	0.9	0.7
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.3	0.1
Triodia epactia	0.5	27
Triodia wiseana	0.4	0.4

PHOTOS



Site Name:	WOJ15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701513.22E 7658460.16N
Landform Type:	Upper Slope
Slope Class:	Very Steep (37°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	(other), 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Eucalyptus leucophloia ssp. leucophloia low isolated trees over Acacia inaequilatera tall isolated shrubs over Acacia acradenia mid-tall isolated clumps of shrubs over Triodia brizoides low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701513	7658460	
Corner 2	701558	7658459	
Corner 3	701560	7658416	
Corner 4	701508	7658414	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Tribulus suberosus*, *Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.4	4.5
Acacia ancistrocarpa		
Acacia inaequilatera	3	1.5
Arivela viscosa	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1

Corchorus parviflorus	0.4	0.1
Cymbopogon ambiguus	0.3	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	3.4	0.1
Fimbristylis simulans	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Gossypium australe	0.8	0.2
Indigofera monophylla	0.4	0.3
Polygala glaucifolia	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Solanum phlomoides	0.5	0.1
Tribulus suberosus	0.8	0.2
Triodia brizoides	0.3	36
Triodia wiseana	0.3	0.3
Triumfetta propinqua	0.7	0.1

PHOTOS



Site Name:	WOJ16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701469.67E 7658151.32N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	20-60mm, 6-20mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Acacia ptychophylla low isolated shrubs over Triodia epactia low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701470	7658151	
Corner 2	701520	7658149	
Corner 3	701520	7658100	
Corner 4	701470	7658100	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ptychophylla*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.1
Acacia ancistrocarpa	0.6	0.1
Acacia inaequilatera	2	0.1
Acacia ptychophylla	0.5	1.2
Acacia sphaerostachya		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.05	0.1
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	1.6	0.1

Ptilotus calostachyus	0.6	0.1
Senna symonii	1	0.1
Triodia epactia	0.2	12
Triodia wiseana	0.5	0.1

PHOTOS





Site Name:	WOJ17
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701815.69E 7657523.11N
Landform Type:	Lower Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Other, Chert (other), <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	5-10 Years
Habitat:	Acacia inaequilatera tall isolated shrubs over Triodia wiseana, Triodia brizoides low open hummock grassland
Comments:	Adjacent minor drainage - Acacia acradenia, Solanum phlomoides, Indigofera monophylla

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701816	7657523	
Corner 2	701864	7657521	
Corner 3	701864	7657474	
Corner 4	701811	7657476	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	4.6	0.2
Bonamia pilbarensis		
Fimbristylis simulans	0.1	0.1
Hakea lorea subsp. *lorea*	0.3	0.1
Triodia brizoides	0.4	1
Triodia wiseana	0.5	23

PHOTOS



Site Name:	WOJ18
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701760E 7657000.75N
Landform Type:	Undulating Plain
Slope Class:	Moderately Inclined (10°)
Aspect:	NE
Soil Type:	Sandy Clay Loam
Soil Colour:	Grey
Rock Outcrop:	Calcrete, Dolomite, ? Greenstone (other), 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolomite, Calcrete, ? Greenstone, chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated trees over Acacia inaequilatera tall isolated shrubs over Triodiea wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701760	7657001	
Corner 2	701808	7657000	
Corner 3	701807	7656950	
Corner 4	701763	7656952	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.3	0.1
Acacia inaequilatera	4.7	0.3
Acacia ptychophylla	0.4	0.1
Arivela viscosa	0.3	0.1
Bonamia pilbarensis		0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	5	0.1

Eriachne pulchella subsp. *dominii*	0.1	0.1
Goodenia stobbsiana	0.5	0.1
Hakea lorea subsp. *lorea*	2	0.1
Solanum phlomoides	0.5	0.1
Tephrosia rosea var. *clementii*	0.6	0.1
Tribulus hirsutus	0.1	0.1
Triodia angusta	0.2	0.1
Triodia wiseana	4.5	16
Triumfetta maconochieana		

PHOTOS



Site Name: WOJ20

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 26/05/2024

GPS Location: GDA2020 Zone 50 701263.82E 7657403.18N

Landform Type: Upper Slope

Slope Class: Very Steep (37°)

Aspect: ESE

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: (other), 10-20% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm

CF Types: Chert (other)

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Disturbance: None

Fire: 10-20 Years

Habitat: Eucalyptus leucophloia ssp. leucophloia low isolated trees over Acacia inaequilatera, Acacia tumida var. pilbarensis tall isolated shrubs over Triodia brizoides, Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701264	7657403	
Corner 2	701303	7657403	
Corner 3	701305	7657359	
Corner 4	701263	7657361	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Eucalyptus leucophloia* subsp. *leucophloia*

Mid Stratum 1: *Acacia inaequilatera*, *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.4	0.2
Acacia ancistrocarpa	1.6	0.1
Acacia bivenosa	1.6	0.2
Acacia inaequilatera	2.3	0.3
Acacia ptychophylla	0.4	0.1
Acacia tumida var. *pilbarensis*	2.1	0.3
Corchorus parviflorus	0.5	0.1

Cymbopogon ambiguus	0.3	0.1
Eriachne mucronata	0.4	0.5
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	7	0.5
Goodenia cusackiana	0.2	0.1
Hakea lorea subsp. *lorea*	0.4	0.1
Indigofera monophylla	0.5	0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus exaltatus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.6	0.1
Senna symonii	0.9	0.3
Solanum phlomoides	0.5	0.1
Tribulus suberosus	0.8	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	27
Triodia wiseana	0.4	2

PHOTOS



Site Name: WOJ21

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 26/05/2024

GPS Location: GDA2020 Zone 50 701214.15E 7657373.36N

Landform Type: Mid Slope

Slope Class: Steep (23°)

Aspect: W

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: Dolomite, Chert (other), 10-20% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm

CF Types: Chert (other)

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Disturbance: None

Fire: 10-20 Years

Habitat: Eucalyptus leucophloia ssp. leucophloia low isolated trees over Acacia bivenosa tall isolated clumps of shrubs over Triodia wiseana, Triodia brizoides low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701214	7657373	
Corner 2	701260	7657368	
Corner 3	701259	7657321	
Corner 4	701213	7657323	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia bivenosa*

Lower Stratum 1: *Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	0.3
Acacia ancistrocarpa	2.3	0.1
Acacia bivenosa	2.1	4.5
Acacia inaequilatera	2	0.1
Acacia ptychophylla	0.9	0.2
Bonamia pilbarensis		0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.5	0.1
Cymbopogon ambiguus	0.4	0.1

Eriachne mucronata	0.3	0.2
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4	0.2
Gomphrena cunninghamii	0.1	0.1
Goodenia cusackiana	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Hakea lorea subsp. *lorea*	0.5	0.1
Indigofera monophylla	0.4	0.1
Lepidium pholidogynum	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1.9	0.2
Senna symonii	1.1	0.2
Triodia angusta	0.2	0.1
Triodia brizoides	0.5	3
Triodia wiseana	0.5	24

PHOTOS



Site Name:	WOJ22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 700805.96E 7657162.23N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Grey
Rock Outcrop:	Calcrete, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other), Calcrete
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated trees over Triodia angusta low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700806	7657162	
Corner 2	700853	7657164	
Corner 3	700852	7657115	
Corner 4	700806	7657117	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia angusta*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.5	0.2
Corymbia hamersleyana	5	0.3
Eriachne mucronata	0.2	0.1
Euploca chrysocarpa	0.3	0.2
Goodenia stobbsiana	0.3	0.9
Hakea lorea subsp. *lorea*	0.5	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus mollis (P4)	0.5	0.2
Santalum lanceolatum		
Triodia angusta	0.2	9

PHOTOS





Site Name:	WOJ23
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701221.52E 7657933N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Grey
Rock Outcrop:	Dolomite, Shale, ? Greenstone (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Dolomite, Shale, ? Greenstone, chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Comments:	Single record of Aerva javanica just outside of quadrat.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701222	7657933	
Corner 2	701270	7657932	
Corner 3	701264	7657881	
Corner 4	701218	7657883	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia acradenia*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia angusta*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.7
Acacia bivenosa	0.3	0.2
Acacia inaequilatera	4	0.4
**Aerva javanica*		
Arivela viscosa	0.3	0.2
Boerhavia gardneri		0.1
Bonamia pilbarensis		0.1
Corchorus parviflorus	0.8	0.1
Corymbia hamersleyana		
Eriachne mucronata	0.1	0.1

Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca cunninghamii	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Indigofera monophylla	0.8	0.1
Ptilotus auriculifolius	0.1	0.1
Ptilotus calostachyus	0.7	0.1
Solanum phlomoides	0.9	0.1
Swainsona formosa	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.3	2
Triodia wiseana	0.5	21

PHOTOS





Site Name: WOJ24

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA2020 Zone 50 676046.24E 7653566.7N

Landform Type: Undulating Plain

Slope Class: Gently Inclined (3°)

Aspect: W

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: Calcrete, <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Quartz, Ironstone, Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Disturbance: None

Fire: 10-20 Years

Habitat: Corymbia hamersleya low isolated trees over Acacia bivenosa, low isolated shrubs over Triodia chichesterensis, Triodiea wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676046	7653567	
Corner 2	676097	7653565	
Corner 3	676094	7653514	
Corner 4	676044	7653519	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia bivenosa*

Mid Stratum 2: *Acacia spondylophylla*

Lower Stratum 1: *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia bivenosa	2.1	0.2
Acacia spondylophylla	0.7	0.2
Codonocarpus cotinifolius	2	0.2
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	2.8	0.2

Euploca chrysocarpa	0.3	0.1
Goodenia forrestii	0.2	0.1
Goodenia stobbsiana	0.5	0.1
Grevillea wickhamii subsp. *hispidula*	1.9	0.1
Lepidium pedicellosum	0.5	0.1
Ptilotus astrolasius	0.4	0.1
Triodia chichesterensis (P3)	0.2	17
Triodia wiseana	0.5	1

PHOTOS





Site Name: WOJ25

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA2020 Zone 50 676154.77E 7653772.6N

Landform Type: Flat

Slope Class: Very Gently Inclined (1°)

Aspect: NW

Soil Type: Sandy Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 2-10%

CF Sizes: 6-20mm, 2-6mm, 20-60mm, 60-200mm

CF Types: Ironstone, Quartz, Chert (other)

Vegetation Condition: Combined Vegetation Condition - VG - Very Good

Disturbance: Animal

Fire: 10-20 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia orthocarpa low isolated shrubs over Acacia stellaticeps mid-tall isolated clumps of shrubs over Triodia epactia, Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676155	7653773	
Corner 2	676106	7653776	
Corner 3	676106	7653826	
Corner 4	676155	7653821	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia orthocarpa*

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.4	0.1
Acacia orthocarpa	2.5	1.2
Acacia stellaticeps	1	3.5
Bonamia erecta	0.2	0.1

Cassytha capillaris		0.1
Corymbia hamersleyana	5	1.2
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.7	0.1
Paraneurachne muelleri	0.3	0.1
Ptilotus astrolasius	0.5	0.1
Triodia epactia	0.5	16
Triodia lanigera	0.5	13

PHOTOS





Site Name:	WOJ26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 675601.9E 7653665.66N
Landform Type:	Other, Floodplain (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, Animal
Fire:	5-10 Years
Habitat:	Eucalyptus victrix mid-tall open woodland over Corymbia hamersleyana low isolated trees over Acacia orthocarpa tall isolated shrubs over Melaleuca linophylla mid-tall isolated shrubs over Triodia epactia low sparse hummock grassland over *Cenchrus ciliaris low sparse tussock grassland
Comments:	Abundant cenchrus ciliaris and some evidence of cattle.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675602	7653666	
Corner 2	675649	7653712	
Corner 3	675648	7653661	
Corner 4	675602	7653712	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Upper Stratum 2:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia orthocarpa*
Mid Stratum 2:	*Melaleuca linophylla*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Pilbara (W.R. Barker 2025)	0.3	0.1

Acacia bivenosa	2	0.1
Acacia coriacea subsp. *pendens*	2.3	0.1
Acacia orthocarpa	0.4	0.2
Acacia pyrifolia var. *pyrifolia*	1.7	0.1
Afrohybanthus aurantiacus	0.4	0.1
Arivela uncifera	0.4	0.1
Arivela viscosa	0.5	0.1
Boerhavia coccinea		0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.5	0.2
**Cenchrus ciliaris*	0.4	8
Chrysopogon fallax	0.2	0.1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	3.5	0.2
Eragrostis eriopoda	0.3	0.2
Eriachne tenuiculmis		
Eucalyptus victrix	11	6
Euphorbia trigonosperma	0.3	0.1
Goodenia forrestii	0.2	0.1
Goodenia stobbsiana		
Gossypium australe	0.8	0.1
Grevillea wickhamii subsp. *hispidula*	1	0.1
Hakea lorea subsp. *lorea*	0.9	0.1
Hibiscus sturtii var. *campylochlamys*	0.6	0.1
Indigofera monophylla	0.5	0.2
Jasminum didymum subsp. *lineare*		
Melaleuca linophylla	1.9	0.8
Pluchea dentex	0.5	0.1
Pluchea tetranthera	0.6	0.1
Polymeria mollis		
Pterocaulon sphacelatum	0.5	0.2
Ptilotus astrolasius	0.4	0.3
Ptilotus axillaris		0.1
Ptilotus calostachyus	0.6	0.1
Ptilotus exaltatus	0.5	0.1
Rhynchosia minima		0.1
Senna artemisioides subsp. *oligophylla*	0.7	0.1
Sida ?clementii	0.3	0.1
Solanum phlomoides	0.6	0.1
Tephrosia rosea var. *clementii*	0.8	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	9

PHOTOS





Site Name:	WOJ28
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 676297.57E 7652953.86N
Landform Type:	Other, Sandy plain (other)
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Orange
Soil Condition:	Sand on top is orange and brown underneath (some clay content).
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal
Fire:	5-10 Years
Habitat:	Corymbia hamersleyana low isolated trees over Triodia schinzii low open hummock grassland
Comments:	Cattle tracks

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676298	7652954	
Corner 2	676347	7652953	
Corner 3	676343	7652904	
Corner 4	676296	7652906	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Lower Stratum 1:	*Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Aristida holathera var. *holathera*	0.2	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	0.5
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	6	0.6
Cymbopogon ambiguus	0.3	0.1
Dampiera candicans		
Eragrostis eriopoda	0.2	0.1
Eriachne helmsii	0.5	0.1

Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Evolvulus alsinoides var. *villosicalyx*	0.2	0.1
Fimbristylis dichotoma	0.1	0.1
Gossypium australe		
Hakea lorea subsp. *lorea*	0.8	0.1
Hibiscus leptocladus	0.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.4	0.1
Isotropis atropurpurea	0.4	0.1
Kennedia prorepens	0.4	0.2
Pluchea ferdinandi-muelleri	0.5	0.1
Pluchea tetranthera	0.4	0.1
Ptilotus astrolasius	0.4	0.1
Senna notabilis		
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia schinzii	0.3	10

PHOTOS





Site Name:	WOJ29
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 676537.68E 7652779.58N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Grey
Rock Outcrop:	Calcrete, 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium, Calcrete, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Clearing
Fire:	Other
Habitat:	Corymbia hamersleyana low isolated trees over Triodia chichesterensis low isolated clumps of hummock grasses
Comments:	Track close by

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676538	7652780	
Corner 2	676584	7652777	
Corner 3	676581	7652730	
Corner 4	676535	7652733	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Lower Stratum 1:	*Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.5	0.1
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	1.9	0.1
Corchorus parviflorus	0.1	0.1
Corymbia hamersleyana	1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne obtusa		

Euploca chrysocarpa	0.2	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.2	0.1
Haloragis gossei	0.2	0.1
Lepidium pedicellosum	0.4	0.1
Pluchea tetranthera	0.2	0.1
Ptilotus clementii	0.2	0.1
Salsola australis	0.2	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Streptoglossa odora	0.3	0.1
Triodia chichesterensis (P3)	0.2	2

PHOTOS





Site Name:	WOJ30
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 672506.91E 7651989.88N
Landform Type:	Other, Undulating plateau atop mesa. (other)
Slope Class:	Moderately Inclined (10°)
Aspect:	SSW
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	Ironstone, 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	1-5 Years
Habitat:	Eucalyptus leucophloia ssp. leucophloia, Corymbia hamersleyana low isolated trees over Triodia wiseana low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672507	7651990	
Corner 2	672555	7651986	
Corner 3	672557	7651938	
Corner 4	672507	7651941	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia*

Lower Stratum 1: *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.4	0.1
Acacia spondylophylla	0.5	0.2
Afrohybanthus aurantiacus	0.1	0.1
Corchorus parviflorus	0.5	0.2
Corymbia hamersleyana	2.8	0.1
Dampiera candicans	0.4	0.1
Dodonaea coriacea	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.2	0.1

Eucalyptus leucophloia subsp. *leucophloia*	3	0.1
Goodenia cusackiana	0.2	0.3
Goodenia stobbsiana	0.4	0.1
Grevillea wickhamii subsp. *hispidula*	1.8	0.1
Hibiscus coatesii	0.4	0.1
Indigofera monophylla	0.3	0.1
Jasminum didymum subsp. *lineare*	0.9	0.1
Senna glutinosa subsp. *glutinosa*	1.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.4	0.1
Solanum phlomoides	0.6	0.1
Triodia wiseana	0.3	7

PHOTOS





Site Name:	WOJ31
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 675016.09E 7653227.55N
Landform Type:	Other, Undulating stony plain (other)
Slope Class:	Gently Inclined (3°)
Aspect:	WNW
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	1-5 Years
Habitat:	Triodia epactia, Triodia wiseana, Triodia lanigera, Triodia brizoides low isolated clumps of hummock grasses
Comments:	Still recovering from fire and drought affected.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675016	7653228	
Corner 2	675065	7653223	
Corner 3	675062	7653175	
Corner 4	675014	7653176	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia brizoides*, *Triodia epactia*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	0.3
Acacia tumida var. *pilbarensis*	1.2	0.2
Afrohybanthus aurantiacus	0.1	0.1
Bonamia erecta		
Bonamia pilbarensis		0.1
Codonocarpus cotinifolius	0.3	0.1
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	1.3	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1

Eriachne tenuiculmis	0.3	0.1
Euploca pachyphylla	0.1	0.1
Euploca skeleton	0.5	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.3	0.4
Grevillea wickhamii subsp. *hispidula*	1.9	0.2
Isotropis atropurpurea	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.7	0.1
Sida arenicola	0.9	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	1.2	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Trigastrotheca molluginea	0.1	0.2
Triodia brizoides	0.1	0.9
Triodia epactia	0.3	0.8
Triodia lanigera	0.1	0.2
Triodia wiseana	0.3	0.6

PHOTOS





Site Name:	WOJ32
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 675213.97E 7652570.14N
Landform Type:	Other, Undulating stony plain (other)
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Ironstone, Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	1-5 Years
Comments:	No photo supplied - Recovering from fire and drought affected.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675214	7652570	
Corner 2	675260	7652569	
Corner 3	675261	7652516	
Corner 4	675212	7652522	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Lower Stratum 1:	*Goodenia stobbsiana*
Lower Stratum 2:	*Triodia brizoides*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	0.5	0.1
Acacia spondylophylla	0.5	0.2
Acacia tumida var. *pilbarensis*	1.2	0.1
Arivela uncifera	0.4	0.1
Bonamia pilbarensis		0.1
Codonocarpus cotinifolius	1.2	0.2
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euploca skeleton	0.5	0.1

Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.4	0.7
Grevillea wickhamii subsp. *hispidula*	1.5	0.2
Indigofera monophylla	0.3	0.1
Ptilotus calostachyus	1.1	0.2
Solanum phlomoides	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.1	0.2
Triodia epactia	0.3	0.1
Triodia lanigera	0.1	0.3
Triodia wiseana	0.3	0.5

PHOTOS

Site Name:	WOJ33
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 675783.84E 7652567.49N
Landform Type:	Other, Undulating stony plain (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Light Clay
Soil Colour:	White
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Ironstone, Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Clearing
Fire:	10-20 Years
Comments:	Access track close by. More recent fire in patch to east of quadrat.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675784	7652567	
Corner 2	675832	7652569	
Corner 3	675833	7652518	
Corner 4	675783	7652520	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia angusta*, *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	2.8	0.1
Codonocarpus cotinifolius		
Corymbia hamersleyana	1	0.1
Goodenia stobbsiana		
Haloragis gossei	0.1	0.1
Triodia angusta	0.5	8
Triodia chichesterensis (P3)	0.3	16
Triodia wiseana	0.4	0.1

PHOTOS





Site Name:	WOJ34
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 676449.49E 7652510.4N
Landform Type:	Other, Undulating granite plain (other)
Slope Class:	Moderately Inclined (10°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Granite, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676449	7652510	
Corner 2	676500	7652509	
Corner 3	676496	7652465	
Corner 4	676445	7652461	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia maitlandii*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon lepidum	0.1	0.1
Acacia maitlandii	1.9	0.3
Acacia orthocarpa	2.7	0.3
Acacia tumida var. *pilbarensis*	3.2	0.2
Afrohybanthus aurantiacus	0.4	0.1
Amaranthus undulatus	0.4	0.1
Aristida contorta		
Arivela viscosa	0.5	0.1

Bonamia alatisemina		0.1
Bonamia pannosa	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cheilanthes lasiophylla		
Chrysopogon fallax		
Corymbia hamersleyana	1.4	0.1
Dampiera candicans	0.1	0.1
Eriachne aristidea	0.2	0.1
Eriachne ciliata	0.1	0.1
Eriachne mucronata	0.2	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.5	0.1
Euploca tenuifolia	0.2	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Gomphrena leptoclada subsp. *leptoclada*	0.1	0.1
Gonocarpus ephemerus	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.2
Indigofera colutea	0.1	0.1
Indigofera monophylla	0.5	0.1
Panicum australiense var. *australiense*	0.1	0.1
Paraneurachne muelleri	0.3	0.1
Paspalidium clementii	0.1	0.1
Petalostylis labicheoides	0.8	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea longiflora	0.1	0.1
Rhynchosia minima		
Solanum horridum	0.2	0.1
Tephrosia virens	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.2	0.1
Tribulus suberosus	0.5	0.1
Triodia epactia	0.3	6.5
Tripogonella loliiformis	0.1	0.1
Triumfetta propinqua	0.8	0.1

PHOTOS





Site Name: WOJ35

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 29/05/2024

GPS Location: GDA94 Zone 50 677667.27E 7655753.89N

Orientation: 90, 180

Landform Type: Undulating Plain, Minor flow lines (other)

Slope Class: Very Gently Inclined (1°)

Soil Type: Sandy Clay Loam

Soil Colour: Red-Brown

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm

CF Types: Ironstone, Quartz

Vegetation Condition: Northern Vegetation Condition - VG - Very Good

Disturbance: Grazing - Cattle

Fire: Mosaic of >10 & >5

Habitat: Acacia stellaticeps mid open shrubland over Triodia lanigera low open hummock grassland over Paraneurachne muelleri low isolated clumps of tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677667	7655754	
Corner 2	677716	7655755	
Corner 3	677716	7655705	
Corner 4	677667	7655704	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia stellaticeps*

Lower Stratum 1: *Triodia lanigera*

Lower Stratum 2: *Paraneurachne muelleri*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Acacia bivenosa	2.6	0.1
Acacia stellaticeps	1.1	20
Acacia tumida var. *pilbarensis*	1.9	0.1
Afrohybanthus aurantiacus	0.4	0.1
Aristida contorta		
Aristida holathera var. *holathera*	0.3	0.1

Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.4	0.5
Chrysopogon fallax	0.5	0.3
Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana		
Dampiera candicans		
Eragrostis eriopoda	0.3	0.1
Eriachne obtusa	0.4	0.2
Eulalia aurea	0.5	0.1
Euploca pachyphylla	0.2	0.1
Goodenia microptera	0.2	0.1
Isotropis atropurpurea	0.5	0.1
Paraneurachne muelleri	0.4	2
Petalostylis labicheoides	1.7	0.1
Pluchea tetranthera	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus		
Senna symonii	1.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	0.5
Triodia lanigera	0.5	15

PHOTOS





Site Name:	WOJ36
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 678015.61E 7655682.36N
Orientation:	115, 205
Landform Type:	Drainage Line, major (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sand in channel (other)
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Grazing - cattle, Weeds

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678016	7655682	
Corner 2	677992	7655692	
Corner 3	677949	7655602	
Corner 4	677973	7655590	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia coriacea* subsp. *pendens*, *Acacia orthocarpa*, *Acacia pyrifolia* var. *pyrifolia*, *Melaleuca linophylla*
Mid Stratum 2:	*Indigofera monophylla*, *Triumfetta propinqua*
Lower Stratum 1:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Eriachne tenuiculmis*
Lower Stratum 2:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia coriacea subsp. *pendens*	2.8	0.1
Acacia orthocarpa	3.6	0.2
Acacia pyrifolia var. *pyrifolia*	2.8	2.2
Acacia tumida var. *pilbarensis*	1.6	0.2
Adriana tomentosa	0.8	0.1
**Aerva javanica*	0.5	0.2

Afrohybanthus aurantiacus	0.4	0.1
Arivela viscosa	0.5	0.1
Boerhavia burbidgeana	0.1	0.1
Boerhavia coccinea	0.1	0.1
Boerhavia repleta	0.1	0.1
Bonamia alatisemina	0.1	0.1
Cajanus cinereus	1.8	0.1
**Cenchrus ciliaris*	0.5	4.2
**Cenchrus setiger*	0.5	0.6
Chrysopogon fallax	0.5	0.1
Corchorus parviflorus	0.7	0.2
Cymbopogon ambiguus	0.6	0.2
Dysphania rhadinostachya	0.1	0.1
Enneapogon robustissimus	0.8	0.1
Eriachne obtusa		
Eriachne tenuiculmis	0.4	0.8
Eucalyptus victrix	12	7
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Evolvulus alsinoides var. *villosicalyx*	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Goodenia microptera	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.5	0.1
Grevillea wickhamii subsp. *hispidula*	1.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	1	3
Melaleuca linophylla	2.2	0.8
Nellica maderaspatensis	0.6	0.1
Notoleptopus decaisnei	0.1	0.1
Petalostylis labicheoides	1.7	0.1
Pluchea ferdinandi-muelleri	0.5	0.1
Polycarpaea longiflora	0.2	0.1
Polymeria mollis	0.1	0.1
Pterocaulon sphacelatum	0.5	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus auriculifolius	0.4	0.1
Ptilotus calostachyus	0.8	0.1
Ptilotus exaltatus	0.4	0.1
Rhynchosia minima		0.1
Scaevola amblyanthera var. *centralis*	0.2	0.1
Senna notabilis	0.1	0.1
Sida clementii	0.6	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	1.2	0.2
Stemodia grossa		
Tephrosia rosea var. *clementii*	1.3	0.4
Themeda triandra	0.4	0.1
Tribulus hirsutus	0.1	0.1

Tribulus platypterus	0.9	0.1
Trichodesma zeylanicum	0.7	0.1
Triodia epactia	0.4	1
Triodia lanigera	0.5	0.2
Triumfetta propinqua	1.2	0.3
Vigna lanceolata var. *lanceolata*		0.1

PHOTOS





Site Name: WOJ37

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 30/05/2024

GPS Location: GDA2020 Zone 50 677635.52E 7660282.93N

Landform Type: Undulating Plain

Slope Class: Gently Inclined (3°)

Aspect: S

Soil Type: Sandy Clay Loam

Soil Colour: Orange

Rock Outcrop: Granite (other), >50% bedrock exposed

CF Abundance: 10-20%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Quartz, Granite

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Disturbance: None

Fire: 10-20 Years

Habitat: Acacia orthocarpa, Acacia tumida var. pilbarensis tall isolated clumps of shrubs over Triodia epactia, Triodia lanigera low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677636	7660283	
Corner 2	677685	7660283	
Corner 3	677683	7660234	
Corner 4	677633	7660234	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia orthocarpa*, *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia maitlandii		
Acacia orthocarpa	3.3	0.6
Acacia tumida var. *pilbarensis*	3.2	0.8
Afrohybanthus aurantiacus	0.4	0.1
Boerhavia coccinea	0.1	0.1
Bulbostylis barbata	0.1	0.2
Corchorus parviflorus	0.4	0.1
Dampiera candicans		
Eragrostis cumingii	0.1	0.1

Eriachne ciliata	0.2	0.1
Eriachne mucronata	0.2	0.2
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia stobbsiana	0.4	0.1
Paspalidium clementii	0.3	0.1
Petalostylis labicheoides	1.6	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Senna notabilis		
Tephrosia virens	1.1	0.1
Tinospora smilacina		0.1
Trachymene oleracea subsp. *oleracea*	0.2	0.1
Triodia epactia	0.4	8
Triodia lanigera	0.4	0.3
Tripogonella loliiformis	0.1	0.3

PHOTOS





Site Name:	WOK01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 698195.83E 7662300.74N
Orientation:	180, 270
Landform Type:	Drainage Line
Slope Class:	Level (0°)
Aspect:	S
Soil Type:	Sand
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Weeds, Animal - Cattle
Fire:	>20

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698196	7662301	
Corner 2	698147	7662307	
Corner 3	698157	7662256	
Corner 4	698204	7662259	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Atalaya hemiglauca*, *Eucalyptus camaldulensis* subsp. *refulgens*, *Eucalyptus victrix*
Mid Stratum 1:	*Acacia trachycarpa*, *Melaleuca glomerata*, *Petalostylis labicheoides*
Mid Stratum 2:	*Acacia pyrifolia* var. *pyrifolia*, *Indigofera monophylla*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.1
Acacia ancistrocarpa	2	0.1
Acacia pyrifolia var. *pyrifolia*	1.4	0.2
Acacia trachycarpa	4	6

Acacia tumida var. *pilbarensis*	2	0.1
Afrohybanthus aurantiacus	0.3	0.1
Arivela viscosa	0.2	0.1
Atalaya hemiglauca	4	3
Bonamia pilbarensis		0.1
Cajanus cinereus	1.1	0.2
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.5	0.3
**Cenchrus setiger*	0.5	0.3
Chrysopogon fallax	1.2	0.1
Corchorus laniflorus	0.7	0.1
Corchorus parviflorus	0.6	0.1
Cymbopogon ambiguus	1	0.1
Cyperus vaginatus	0.8	0.1
Dichanthium fecundum		
Eragrostis cumingii	0.5	0.1
Eriachne benthamii	0.9	0.2
Eriachne tenuiculmis	0.5	0.2
Eucalyptus camaldulensis subsp. *refulgens*	10	5
Eucalyptus victrix	6	6
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Euploca cunninghamii	0.2	0.1
Gossypium robinsonii	1	0.1
Grevillea wickhamii subsp. *hispidula*	1.5	0.1
Haloragis gossei	0.1	0.1
Indigofera monophylla	1	0.2
Ipomoea muelleri		0.1
Melaleuca glomerata	2.5	1.2
Nellica maderaspatensis	0.1	0.1
Notoleptopus decaisnei	0.1	0.1
Petalostylis labicheoides	2.5	0.2
Polymeria mollis		0.1
Portulaca oleracea	0.1	0.1
Ptilotus fusiformis	0.4	0.1
Rhynchosia minima		0.1
Senna venusta	0.7	0.1
Solanum phlomoides	0.4	0.1
Tephrosia rosea var. *clementii*	0.6	0.1
Themeda triandra	0.7	0.1
Triodia angusta	0.5	0.1
Triodia epactia	0.5	4
Triodia longiceps	0.7	0.1

PHOTOS



Site Name:	WOK02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 698037.38E 7662070.48N
Landform Type:	Mid Slope
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	(other), 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	600-2000mm, 200-600mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Chert? See photo (other), Shale, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698037	7662070	
Corner 2	698044	7662119	
Corner 3	698093	7662113	
Corner 4	698095	7662062	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*, *Acacia inaequilatera*, *Grevillea wickhamii*
Mid Stratum 2:	*Acacia stellaticeps*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.3
Acacia ancistrocarpa	2	8
Acacia inaequilatera	3	0.5
Acacia stellaticeps	1	0.2
Afrohybanthus aurantiacus	0.3	0.1
Cassytha capillaris		0.1
Corymbia hamersleyana	5	0.1
Eriachne pulchella	0.1	0.1

Fimbristylis simulans	0.1	0.1
Grevillea wickhamii	4	0.2
Hakea lorea subsp. *lorea*	1.8	0.2
Petalostylis labicheoides	2	0.3
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.4	0.1
Scaevola amblyanthera var. *centralis*	0.2	0.1
Solanum diversiflorum	0.1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Triodia chichesterensis (P3)	0.2	0.2
Triodia lanigera	0.4	15
Triodia wiseana	0.6	4

PHOTOS



Site Name:	WOK03
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 697960.51E 7662252.49N
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Shale, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	600-2000mm, 200-600mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Ironstone, Shale, Calcrete, ?chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697961	7662252	
Corner 2	698009	7662254	
Corner 3	698010	7662202	
Corner 4	697961	7662195	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Petalostylis labicheoides*
Lower Stratum 1:	*Triodia angusta*, *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	10
Acacia ancistrocarpa	2	0.1
Acacia inaequilatera	3	2
Afrohybanthus aurantiacus	0.5	0.1
Cassytha capillaris		0.1
Corymbia hamersleyana	2	0.5
Eucalyptus leucophloia subsp. *leucophloia*		
Fimbristylis simulans	0.1	0.1

Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	2.5	0.2
Petalostylis labicheoides	1.6	0.2
Ptilotus astrolasius	0.3	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Stemodia viscosa	0.2	0.1
Triodia angusta	0.6	0.4
Triodia chichesterensis (P3)	0.2	35
Triodia wiseana	0.6	2

PHOTOS



Site Name: WOK04

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA2020 Zone 50 697908.39E 7663665.6N

Landform Type: Plain

Slope Class: Very Gently Inclined (1°)

Aspect: E

Soil Type: Sandy Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 20-50%

CF Sizes: 2-6mm

CF Types: Ironstone

Vegetation Condition: Combined Vegetation Condition - VG - Very Good

Disturbance: Animal

Fire: 10-20 Years

Habitat: Corymbia hammersleyana low isolated clumps of trees over Acacia inaequilatera and Hakea lorea subsp. lorea tall sparse shrubland over Acacia stellaticeps mid open shrubland over Triodia epactia low open hummock grassland

Comments: Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697908	7663666	
Corner 2	697863	7663668	
Corner 3	697860	7663717	
Corner 4	697907	7663713	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*, *Hakea lorea* subsp. *lorea*

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.2	0.1
Acacia bivenosa	1.2	0.1

Acacia inaequilatera	3	4
Acacia sphaerostachya	1.5	0.1
Acacia stellaticeps	1.5	18
Arivela viscosa	0.2	0.1
Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corymbia hamersleyana	5	0.4
Fimbristylis simulans	0.1	0.1
Hakea lorea subsp. *lorea*	4	0.4
Portulaca oleracea	0.1	0.1
Senna notabilis	0.1	0.1
Seringia nephrosperma	0.5	0.1
Trianthema pilosum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	27

PHOTOS



Site Name:	WOK05
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 697609.21E 7663180.26N
Landform Type:	Other, Minor Drainage Line (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Ironstone, Shale (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Quartz, Ironstone, Shale
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697609	7663180	
Corner 2	697604	7663188	
Corner 3	697612	7662947	
Corner 4	697601	7662947	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia bivenosa*, *Acacia trachycarpa x tumida var. pilbarensis*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*

Mid Stratum 2: *Acacia ancistrocarpa*, *Cajanus cinereus*

Lower Stratum 1: *Triodia epactia*

Lower Stratum 2: *Eriachne tenuiculmis*, *Petalostylis labicheoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	0.1
Acacia ancistrocarpa	2	0.3
Acacia bivenosa	2.5	10
Acacia stellaticeps	0.4	0.1
Acacia trachycarpa	3	0.2
Acacia trachycarpa x tumida var. pilbarensis	3	0.4

Acacia tumida var. *pilbarensis*	4	10
Afrohybanthus aurantiacus	0.3	0.3
Aristida holathera var. *holathera*	0.5	0.1
Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	1.2	0.5
Cassytha capillaris		0.1
Chrysopogon fallax	1	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	5	2
Cucumis variabilis		0.1
Cynodon convergens	0.2	0.1
Dampiera candicans	0.2	0.1
Eragrostis cumingii	0.1	0.1
Eriachne pulchella	0.1	0.1
Eriachne tenuiculmis	0.3	0.2
Euploca cunninghamii	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia lamprosperma	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	4	2
Haloragis gossei	0.1	0.1
Heteropogon contortus	0.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri		0.1
Paspalidium rarum	0.1	0.1
Petalostylis labicheoides	0.6	0.2
Polymeria mollis	0.1	0.1
Polymeria sp. (Potentially undescribed)		0.1
Rhynchosia minima		0.1
Scaevola amblyanthera var. *centralis*	0.2	0.2
Senna notabilis	0.1	0.1
Seringia nephrosperma	0.6	0.1
Solanum diversiflorum	0.2	0.1
Sporobolus australasicus	0.1	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia angusta	0.6	5
Triodia epactia	0.4	15
Triumfetta chaetocarpa	0.1	0.1

PHOTOS





Site Name:	WOK06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 698965.57E 7664083.46N
Landform Type:	Hillock
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Calcrete, Ironstone (other), 10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Calcrete, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other)
Fire:	5-10 Years
Comments:	tracks and drill pads in vicinity

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698966	7664083	
Corner 2	698998	7664060	
Corner 3	698973	7664026	
Corner 4	698934	7664055	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	8
Acacia bivenosa	1.2	0.1
Acacia inaequilatera	3	0.1
Corymbia hamersleyana	1.2	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.3	0.1

Triodia chichesterensis (P3)	0.2	25
Triodia lanigera	0.4	20
Triodia wiseana	0.4	0.2

PHOTOS



Site Name:	WOK07
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 698894.78E 7664363.83N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sand
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Other, ?Granite (other), 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Colluvium, Basalt (other)
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Animal, Weeds, (other)
Fire:	10-20 Years
Comments:	Cattle heavily grazing - lots of cenchrus chewed. Also dumping of drill samples

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698895	7664364	
Corner 2	698891	7664372	
Corner 3	698710	7664230	
Corner 4	698716	7664224	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus camaldulensis* subsp. *refulgens*
Upper Stratum 2:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia coriacea* subsp. *pendens*, *Ficus aculeata* var. *indecora*
Mid Stratum 2:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia wiseana*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	5
Acacia ampliceps	2.5	1
Acacia bivenosa	2.5	0.2

Acacia colei var. *colei*	4	0.2
Acacia coriacea subsp. *pendens*	3	0.4
Acacia pyrifolia var. *pyrifolia*	0.5	0.2
Acacia trachycarpa	2.5	0.2
Acacia trachycarpa x tumida var. pilbarensis	1.4	0.1
Acacia tumida var. *pilbarensis*	1.7	10
Adriana tomentosa var. *tomentosa*	0.5	0.1
Afrohybanthus aurantiacus	0.2	0.1
Atalaya hemiglauca	5	0.3
Boerhavia burbidgeana	0.1	0.1
Boerhavia coccinea	0.1	0.1
Cajanus cinereus	0.1	0.2
**Cenchrus ciliaris*	0.4	15
**Cenchrus setiger*	0.4	10
Chrysopogon fallax	1.1	0.1
Clerodendrum tomentosum var. *lanceolatum*	0.4	0.1
Corchorus parviflorus	0.3	0.1
Corchorus tridens	0.1	0.1
Corymbia hamersleyana	6	5
Crotalaria cunninghamii	0.7	0.1
Cullen leucanthum	0.2	0.1
Dichanthium fecundum	0.8	0.1
Dolichandrone occidentalis	1.4	0.1
Eriachne tenuiculmis	0.8	0.1
Eucalyptus camaldulensis subsp. *refulgens*	15	8
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Evolvulus alsinoides	0.1	0.1
Ficus aculeata var. *indecora*	2	2
Flueggea virosa subsp. *melanthesoides*	1.1	0.1
Gossypium robinsonii	3	0.1
Haloragis gossei	0.1	0.1
Heteropogon contortus	0.7	0.1
Indigofera monophylla	0.3	0.1
Indigofera rugosa	1	0.1
Jasminum didymum subsp. *lineare*		0.2
**Malvastrum americanum*	0.2	0.1
Nellica maderaspatensis	0.2	0.1
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri	0.3	0.1
Pentalepis trichodesmoides subsp. *trichodesmoides*	1	0.1
Petalostylis labicheoides	1.8	8
Polymeria mollis		0.1
Rhynchosia minima		0.1
Scaevola amblyanthera var. *centralis*	0.2	0.1
Senna notabilis	0.3	0.1
Sida fibulifera	0.1	0.1
Solanum diversiflorum	0.1	0.1

Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	1.1	0.1
Triodia angusta	0.4	4
Triodia wiseana	0.4	0.5
Triumfetta chaetocarpa	0.3	0.1

PHOTOS





Site Name:	WOK08
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 698618.61E 7664872.82N
Landform Type:	Lower Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Ironstone, Calcrete
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698619	7664873	
Corner 2	698619	7664826	
Corner 3	698573	7664830	
Corner 4	698573	7664879	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia bivenosa*, *Hakea lorea* subsp. *lorea*
Lower Stratum 1:	*Triodia angusta*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.8	0.1
Acacia bivenosa	1.8	0.3
Acacia inaequilatera	2.5	2.5
Acacia ptychophylla	0.9	0.1
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.6	0.1
Goodenia stobbsiana	0.1	0.1
Hakea lorea subsp. *lorea*	1.2	0.2

Indigofera monophylla	0.4	0.1
Indigofera rugosa	0.3	0.1
Notoleptopus decaisnei	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Senna glutinosa subsp. *glutinosa*	0.6	0.1
Solanum phlomoides	0.2	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.5	10
Triodia chichesterensis (P3)	0.3	25
Triodia lanigera	0.4	2
Triodia wiseana	0.6	8

PHOTOS



Site Name:	WOK09
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 698379.0789E 7664529.869N
Orientation:	0.90
Landform Type:	Upper Slope
Slope Class:	Steep (23°)
Aspect:	NNE
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	(other) - Adjacent track to quadrat
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698379	7664530	
Corner 2	698381	7664575	
Corner 3	698426	7664567	
Corner 4	698422	7664523	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii*
Mid Stratum 2:	*Acacia ancistrocarpa*, *Acacia ptychophylla*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.2
Acacia ancistrocarpa	1.8	20
Acacia ptychophylla	0.5	0.4
Corymbia hamersleyana	5	1
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.1	0.1
Grevillea wickhamii	2.5	0.2

Indigofera monophylla	0.2	0.1
Triodia epactia	0.4	4
Triodia lanigera	0.3	25

PHOTOS



Site Name:	WOK10
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 698293.73E 7664845.26N
Landform Type:	Mid Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 200-600mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Calcrete on lower slope (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	5-10 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698294	7664845	
Corner 2	698294	7664805	
Corner 3	698331	7664812	
Corner 4	698298	7664803	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Mid Stratum 2:	*Acacia ancistrocarpa*, *Acacia bivenosa*
Lower Stratum 1:	*Triodia brizoides*, *Triodia chichesterensis*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	20
Acacia ancistrocarpa	1.8	4
Acacia bivenosa	1.5	0.2
Acacia inaequilatera	2	1.5
Bonamia pilbarensis	0.1	0.1
Clerodendrum tomentosum var. *lanceolatum*	0.5	0.1
Corymbia hamersleyana	3	0.2

Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	1.7	0.1
Indigofera monophylla	0.4	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1
Tribulus suberosus	0.1	0.1
Triodia brizoides	0.4	10
Triodia chichesterensis (P3)	0.4	15
Triodia lanigera	0.4	13
Triodia wiseana	0.5	3

PHOTOS





Site Name:	WOK11
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 696769.87E 7664316.24N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal
Fire:	10-20 Years
Comments:	Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696770	7664316	
Corner 2	696814	7664313	
Corner 3	696812	7664261	
Corner 4	696762	7664260	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Petalostylis labicheoides*
Lower Stratum 1:	*Grevillea wickhamii*, *Triodia epactia*, *Triodia lanigera*
Lower Stratum 2:	*Bonamia erecta*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	3	12
Acacia tumida var. *pilbarensis*	2	6
Afrohybanthus aurantiacus	0.2	0.1
Androcalva luteiflora	0.1	0.1

Aristida holathera var. *holathera*	0.3	0.1
Bonamia erecta	0.2	0.4
Chrysopogon fallax	0.5	0.1
Corymbia hamersleyana	4	2
Eriachne mucronata	0.3	0.1
Goodenia microptera	0.1	0.1
Grevillea wickhamii	0.4	0.1
Indigofera monophylla	0.4	0.1
Petalostylis labicheoides	1.8	6
Ptilotus calostachyus	0.9	0.1
Seringia nephrosperma	0.6	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia epactia	0.4	2
Triodia lanigera	0.5	43
Triumfetta chaetocarpa	0.1	0.1

PHOTOS



Site Name:	WOK12
Site Type:	QUADRAT
Dimensions:	20m x 125m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 698052.62E 7665576.09N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	NNE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 200-600mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal
Fire:	10-20 Years
Comments:	Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698053	7665576	
Corner 2	698069	7665572	
Corner 3	697968	7665487	
Corner 4	697980	7665473	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*
Mid Stratum 2:	*Acacia bivenosa*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia angusta*, *Triodia epactia*, *Triodia wiseana*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Eriachne tenuiculmis*, *Paraneurachne muelleri*, *Themeda triandra*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	4
Acacia bivenosa	2	0.4
Acacia trachycarpa x tumida var. pilbarensis	2.5	0.1

Acacia tumida var. *pilbarensis*	4	30
**Aerva javanica*	0.1	0.1
Afrohybanthus aurantiacus	0.1	0.1
Aristida contorta	0.2	0.1
Aristida holathera var. *holathera*	0.2	0.1
Arivela viscosa	0.1	0.1
Boerhavia gardneri	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	0.1	0.1
Cassytha capillaris		0.1
**Cenchrus ciliaris*	0.3	0.5
**Cenchrus setiger*	0.3	0.5
Corchorus parviflorus	0.2	0.1
Corchorus tridens	0.1	0.1
Corymbia hamersleyana	7	3
Crotalaria medicaginea var. *neglecta*	0.1	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Dichanthium fecundum	0.8	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya	0.1	0.1
Enneapogon caerulescens	0.3	0.1
Eragrostis tenellula	0.5	0.1
Eriachne tenuiculmis	0.7	2
Euphorbia tannensis subsp. *eremophila*	0.5	0.1
Euphorbia trigonosperma	0.2	0.1
Ficus aculeata var. *indecora*	3	0.1
Gossypium australe	0.5	0.2
Grevillea wickhamii	3	1
Haloragis gossei	0.1	0.1
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	0.4	0.1
Indigofera rugosa	0.5	0.1
Melhania oblongifolia	0.1	0.2
Nellica maderaspatensis	0.1	0.1
Notoleptopus decaisnei	0.2	0.2
Paraneurachne muelleri	0.4	3
Petalostylis labicheoides	1	0.1
Polygala glaucifolia	0.1	0.1
Polymeria mollis		0.1
Pterocaulon sphacelatum		0.1
Rhynchosia minima	0.1	0.1
Scaevola amblyanthera var. *centralis*	0.2	0.1
Senna glutinosa subsp. *glutinosa*	2	0.2
Senna notabilis	0.1	0.1
Solanum diversiflorum	0.3	0.1
Solanum phlomoides	0.5	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	0.2	0.1

Themeda triandra	0.4	0.2
Trichodesma zeylanicum var. *zeylanicum*	0.3	0.1
Triodia angusta	0.4	4
Triodia epactia	2	12
Triodia wiseana	0.2	0.5
Triumfetta chaetocarpa	0.1	0.1

PHOTOS





Site Name:	WOK13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 697648.48E 7665362.63N
Landform Type:	Crest
Slope Class:	Precipitous (60°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Quartz (other), 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 200-600mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697648	7665363	
Corner 2	697658	7665321	
Corner 3	697595	7665344	
Corner 4	697626	7665301	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*, *Acacia ancistrocarpa*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*
Lower Stratum 2:	*Eriachne mucronata*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	2
Acacia ancistrocarpa	0.8	0.2
Acacia inaequilatera	1.5	0.5
Arivela viscosa	0.2	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	0.6	0.1

Dampiera candicans	0.4	0.1
Dodonaea coriacea	0.7	0.1
Eriachne mucronata	0.4	4
Eriachne sp. Dugald River (B.K. Simon+ 3007)	0.2	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4	0.8
Grevillea wickhamii subsp. *hispidula*	2	1.5
Hakea lorea subsp. *lorea*	0.8	0.1
Indigofera monophylla	0.3	0.1
Ptilotus astrolasius	0.1	0.1
Sida sp. Articulation below (A.A. Mitchell PRP 1605)	1.5	0.1
Tribulus suberosus	0.4	0.1
Triodia brizoides	0.3	15
Triodia epactia	0.4	10
Triumfetta propinqua	0.1	0.1

PHOTOS





Site Name:	WOK14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 697337.49E 7664843.66N
Orientation:	90, 180
Landform Type:	Crest
Slope Class:	Precipitous (60°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Chert (other), >50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Ironstone, Chert (other)
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance: disturbance to hill-slope	Mining, Weeds, Animal - Cattle, (other) - Previous mining activity, mechanical
Fire:	>10yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697337	7664844	
Corner 2	697345	7664799	
Corner 3	697370	7664860	
Corner 4	697392	7664818	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Ficus brachypoda*
Mid Stratum 2:	**Aerva javanica*, *Gossypium australe*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Cymbopogon ambiguus*, *Eriachne mucronata*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.6	0.1
Acacia inaequilatera	3	0.1
**Aerva javanica*	0.6	0.3
Amaranthus undulatus	0.2	0.1

Arivela viscosa	0.4	0.5
Boerhavia burbidgeana		0.2
Bulbostylis barbata	0.1	0.1
**Cenchrus ciliaris*	0.6	0.5
**Cenchrus setiger*	0.6	0.5
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.8	0.2
Cyperus hesperius	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Enneapogon caerulescens	0.4	0.1
Eriachne mucronata	0.4	4
Ficus brachypoda	3	1.5
Gomphrena cunninghamii	0.2	0.2
Goodenia microptera	0.2	0.1
Gossypium australe	0.6	1
Grevillea wickhamii	1.2	0.1
Indigofera monophylla	0.4	0.1
Solanum cleistogamum	0.3	0.1
Solanum phlomoides	0.4	0.1
Streptoglossa decurrens	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.1	0.1
Triodia brizoides	0.4	6
Triodia epactia	0.5	4
Triodia wiseana	0.6	2.5
Triumfetta maconochieana	0.5	0.1

PHOTOS





Site Name:	WOK15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 697220.95E 7664751.62N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	WNW
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	(other), <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	600-2000mm, 200-600mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Animal, Weeds
Fire:	> 20 Years
Comments:	Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697221	7664752	
Corner 2	697173	7664757	
Corner 3	697162	7664704	
Corner 4	697168	7664762	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Atalaya hemiglauca*, *Eucalyptus camaldulensis* subsp. *refulgens*, *Melaleuca argentea*
Mid Stratum 1:	*Acacia ampliceps*, *Acacia trachycarpa*, *Melaleuca glomerata*
Mid Stratum 2:	*Acacia bivenosa*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Eriachne benthamii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ampliceps	4.5	0.2
Acacia bivenosa	2	0.2
Acacia pyrifolia var. *pyrifolia*	1.5	0.1
Acacia trachycarpa	2.5	2.5

Acacia tumida var. *pilbarensis*	1.5	0.1
**Aerva javanica*	0.2	0.1
Afrohybanthus aurantiacus	0.1	0.1
Atalaya hemiglauca	4.5	0.5
Boerhavia coccinea	0.1	0.1
Cajanus cinereus	0.7	0.1
**Calotropis procera*	1.5	0.1
**Cenchrus ciliaris*	0.3	5
**Cenchrus setiger*	0.3	5
Corchorus laniflorus	1.4	0.1
Corchorus parviflorus	0.9	0.1
Corchorus tridens	0.1	0.1
Cymbopogon ambiguus	0.7	0.1
Cynodon convergens	0.2	0.1
Cyperus vaginatus	1.2	0.1
Enneapogon caerulescens	0.2	0.1
Eriachne benthamii	1.2	0.3
Eriachne tenuiculmis	0.3	0.1
Eucalyptus camaldulensis subsp. *refulgens*	10	8
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia trigonosperma	0.1	0.1
Evolvulus alsinoides var. *decumbens*	0.1	0.1
Ficus aculeata var. *indecora*	1.5	0.1
Goodenia lamprosperma	0.2	0.1
Grevillea wickhamii	0.8	0.1
Indigofera monophylla	1.4	0.1
Melaleuca argentea	6	4
Melaleuca glomerata	3.5	15
Nellica maderaspatensis	0.2	0.1
Notoleptopus decaisnei	0.1	0.1
Polymeria mollis		0.1
Rhynchosia minima		0.1
Senna notabilis	0.5	0.1
Solanum diversiflorum	0.1	0.1
Stemodia viscosa	0.3	0.1
Triodia epactia	0.4	5
Triumfetta chaetocarpa	0.2	0.1
Vigna lanceolata var. *lanceolata*		0.1

PHOTOS





Site Name:	WOK16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 696309.58E 7665062.69N
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other)
Fire:	10-20 Years
Comments:	Track nearby.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696310	7665063	
Corner 2	696310	7665012	
Corner 3	696261	7665013	
Corner 4	696261	7665063	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Acacia ancistrocarpa*, *Acacia inaequilatera*, *Acacia stellaticeps*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	3
Acacia inaequilatera	1.8	0.5
Acacia stellaticeps	1	0.2
Acacia tumida var. *pilbarensis*	4	1.5
Afrohybanthus aurantiacus	0.1	0.1
Androcalva luteiflora	0.1	0.1

Bonamia erecta	0.3	0.2
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	3.5	0.5
Dampiera candicans	0.3	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	2.5	0.2
Hakea lorea subsp. *lorea*		
Indigofera monophylla	0.5	0.1
Paraneurachne muelleri	0.2	0.1
Petalostylis labicheoides	1.8	0.7
Seringia nephrosperma	0.7	0.1
Triodia epactia	0.4	1.5
Triodia lanigera	0.3	37

PHOTOS



Site Name:	WOK17
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 696540.45E 7665160.36N
Landform Type:	Other, Outwash plain (other)
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - P - Poor
Disturbance:	Animal, Weeds
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana and Atalaya hemiglauca low isolated clumps of trees over Acacia trachycarpa, Grevillea wickhamii and Acacia pyrifolia tall sparse shrubland over Triodia epactia low open hummock grassland over sporobolus australasius, *cenchrus ciliaris and *Cenchrus setiger low sparse tussock grassland
Comments:	Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696540	7665160	
Corner 2	696538	7665211	
Corner 3	696587	7665205	
Corner 4	696591	7665159	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Atalaya hemiglauca*, *Corymbia hamersleyana*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia trachycarpa*, *Grevillea wickhamii*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Sporobolus australasicus*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*	0.1	0.1
Acacia ancistrocarpa	1	0.1

Acacia pyrifolia var. *pyrifolia*	2	0.4
Acacia trachycarpa	3	12
Acacia trachycarpa x tumida var. pilbarensis	1.1	0.1
Afrohybanthus aurantiacus	0.3	0.1
Arivela viscosa	0.1	0.1
Atalaya hemiglauca	4	3
Boerhavia burbidgeana	0.1	0.1
Bonamia pilbarensis	0.1	0.1
**Cenchrus ciliaris*	0.3	3
**Cenchrus setiger*	0.3	3
Corchorus laniflorus	1.1	0.1
Corchorus parviflorus	0.8	0.1
Corchorus tridens	0.1	0.1
Corymbia hamersleyana	6	1.5
Cullen leucanthum	0.1	0.1
Cyperus vaginatus	0.6	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euploca cunninghamii	0.1	0.1
Gossypium robinsonii	0.7	0.1
Grevillea wickhamii	3	0.2
Indigofera monophylla	0.5	0.1
Petalostylis labicheoides	1.5	0.1
Pluchea tetranthera	0.2	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Pterocaulon sphacelatum	0.1	0.1
Ptilotus astrolasius	0.1	0.1
Rhynchosia minima	0.1	0.1
Sporobolus australasicus	0.1	1.5
Tephrosia rosea var. *clementii*	1.5	0.1
Triodia epactia	0.8	10
Triumfetta chaetocarpa	0.1	0.1

PHOTOS





Site Name:	WOK18
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 676982.29E 7664447.22N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other)
Fire:	1-5 Years
Habitat:	Acacia ancistrocarpa and Acacia stellaticeps mid sparse shubland over Triodia lanigera and Triodia epactia low open hummock grassland with Goodenia stobbsiana herbs
Comments:	Close to the highway.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676982	7664447	
Corner 2	676985	7664400	
Corner 3	676938	7664399	
Corner 4	676931	7664453	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*
Mid Stratum 2:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.6	5
Acacia stellaticeps	1.3	1.5
Acacia tumida var. *pilbarensis*	1.3	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus parviflorus		

Goodenia stobbsiana	0.4	0.2
Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)	0.4	0.1
Indigofera monophylla	0.3	0.1
Petalostylis labicheoides	0.6	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Stackhousia muricata	0.5	0.1
Triodia epactia	0.5	0.5
Triodia lanigera	0.3	25

PHOTOS



Site Name:	WOK19
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 671113.67E 7652540.15N
Landform Type:	Upper Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Other, Schertz (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	5-10 Years
Habitat:	Triodia wiseana and Trioda chichesterensis low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671114	7652540	
Corner 2	671154	7652542	
Corner 3	671162	7652583	
Corner 4	671119	7652582	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Arivela viscosa	0.3	0.1
Boerhavia gardneri	0.4	0.1
Corchorus parviflorus	0.4	0.15
Cullen leucochaites	1.3	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Indigofera linifolia	0.2	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Ptilotus auriculifolius	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	
Triodia chichesterensis (P3)	0.2	20

Triodia wiseana		

PHOTOS



Site Name:	WOK20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 671279.53E 7652956.11N
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	200-600mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	1-5 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671280	7652956	
Corner 2	671322	7652980	
Corner 3	671346	7652938	
Corner 4	671307	7652912	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Corchorus parviflorus*
Lower Stratum 1:	*Triodia brizoides*, *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.5	0.2
Acacia inaequilatera	2	4
Acacia tumida var. *pilbarensis*	1.5	0.3
Afrohybanthus aurantiacus	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	1.5	0.1
Corchorus parviflorus	0.8	0.2
Corymbia hamersleyana		

Cullen leucochaites	0.6	0.1
Cymbopogon ambiguus	1.2	0.1
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.2	0.1
Gossypium australe	0.8	0.1
Grevillea wickhamii	1.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.5	0.1
Isotropis atropurpurea	0.8	0.1
Pluchea ferdinandi-muelleri	0.3	0.2
Senna venusta	1	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Solanum phlomoides	0.4	0.1
Stackhousia muricata	0.5	0.1
Stemodia viscosa	0.8	0.1
Tephrosia densa	0.3	0.1
Triodia brizoides	0.3	15
Triodia chichesterensis (P3)	0.2	5
Triodia wiseana	0.4	10

PHOTOS



Site Name:	WOK21
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 669558.25E 7652976.01N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Colluvium, Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669558	7652976	
Corner 2	669549	7652958	
Corner 3	669646	7652940	
Corner 4	669654	7652920	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*
Mid Stratum 2:	*Afrohybanthus aurantiacus*, *Indigofera monophylla*
Lower Stratum 1:	*Triodia brizoides*, *Triodia epactia*
Lower Stratum 2:	*Eriachne tenuiculmis*, *Paspalidium tabulatum*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.1	0.1
Acacia tumida var. *pilbarensis*	2.5	12
Afrohybanthus aurantiacus	0.4	0.2
Arivela viscosa	0.5	0.1
Boerhavia gardneri	0.2	0.1
Bulbostylis barbata	0.1	0.1
Cajanus cinereus	0.4	0.1

Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	2	0.4
Crotalaria medicaginea var. *neglecta*	0.2	0.1
Cymbopogon ambiguus	1	0.1
Cyperus hesperius	0.2	0.1
Dampiera candicans	0.5	0.1
Eragrostis cumingii	0.1	0.1
Eriachne pulchella	0.1	0.1
Eriachne tenuiculmis	0.4	0.2
Euphorbia careyi	0.2	0.1
Gomphrena cunninghamii	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Gossypium australe	0.6	0.1
Grevillea wickhamii	3.5	8
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.7	0.2
Ipomoea muelleri		0.1
Nellica maderaspatensis	0.1	0.15
Notoleptopus decaisnei	0.1	0.15
Paspalidium clementii	0.2	0.1
Paspalidium tabulatum	0.1	0.2
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Polycarpaea longiflora	0.1	0.15
Polymeria mollis		0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	1.1	0.1
Ptilotus exaltatus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	2	0.1
Solanum cleistogamum	0.1	0.1
Solanum phlomoides	0.4	0.1
Sporobolus australasicus	0.2	0.1
Swainsona formosa	0.3	0.1
Themeda triandra	0.4	0.1
Tinospora smilacina		0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.5	1.5
Triodia epactia	0.5	20
Triodia wiseana	0.6	0.1
Triumfetta maconochieana	0.1	0.1

PHOTOS





Site Name:	WOK22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 669629.53E 7652791.1N
Landform Type:	Upper Slope
Slope Class:	Precipitous (60°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	600-2000mm, 200-600mm, 60-200mm, 2-6mm, 6-20mm, 20-60mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669630	7652791	
Corner 2	669604	7652807	
Corner 3	669625	7652842	
Corner 4	669659	7652818	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*, *Ficus brachypoda*, *Terminalia circumalata*
Lower Stratum 1:	*Triodia wiseana*
Lower Stratum 2:	*Eriachne mucronata*, *Paspalidium tabulatum*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Arivela viscosa	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.5	0.1
Cyperus hesperius	0.2	0.1
Eriachne mucronata	0.3	0.5
Eucalyptus leucophloia subsp. *leucophloia*	5	1
Euphorbia careyi	0.1	0.1
Ficus brachypoda	3.5	2

Gomphrena cunninghamii	0.1	0.1
Jasminum didymum subsp. *lineare*		0.1
Paspalidium tabulatum	0.3	0.2
Solanum cleistogamum	0.2	0.1
Terminalia circumalata	2.5	4
Triodia wiseana	0.5	15
Triumfetta propinqua	0.2	0.1

PHOTOS





Site Name:	WOK23
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 669797.5E 7655041.64N
Landform Type:	Ridge
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Dolerite, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	60-200mm, 20-60mm, 6-20mm, 2-6mm
CF Types:	Dolerite, Quartz, Calcrete
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669798	7655042	
Corner 2	669751	7655049	
Corner 3	669760	7655094	
Corner 4	669810	7655090	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia brizoides*, *Triodia chichesterensis*, *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.2
Acacia inaequilatera	1.5	4
Bulbostylis barbata	0.1	0.1
Eriachne pulchella	0.1	0.1
Gomphrena cunninghamii	0.1	0.1
Indigofera monophylla	0.4	0.1
Triodia brizoides	0.5	28
Triodia chichesterensis (P3)	0.3	8
Triodia epactia	0.5	0.5

PHOTOS





Site Name:	WOL01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 677763.94E 7663384.22N
Landform Type:	Open Depression
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Sandy Clay
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Animal
Fire:	5-10 Years
Comments:	Cattle

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677764	7663384	
Corner 2	677812	7663384	
Corner 3	677811	7663333	
Corner 4	677762	7663332	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*, *Pluchea ferdinandi-muelleri*
Lower Stratum 1:	*Triodia angusta*, *Triodia lanigera*, *Triodia secunda*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	1.2	0.4
Acacia synchronicia	1.6	0.1
Afrohybanthus aurantiacus	0.3	0.1
Arivela viscosa	0.2	0.1
Bulbostylis turbinata	0.1	0.1
Cassytha capillaris		0.1
**Chloris barbata*		
Chloris pumilio	0.3	0.2
Dactyloctenium radulans	0.1	0.1
**Digitaria ciliaris*	0.3	0.1

Eragrostis cumingii	0.3	0.2
Eriachne obtusa	0.2	0.2
Euphorbia trigonosperma	0.4	0.1
Ipomoea coptica	0.1	0.1
Paspalidium rarum	0.1	0.1
Pluchea ferdinandi-muelleri	0.9	0.8
Pluchea rubelliflora	0.2	0.1
Pluchea tetranthera	0.3	0.1
Sporobolus australasicus	0.1	0.1
Stackhousia muricata	0.3	0.1
Triodia angusta	0.4	25
Triodia epactia	0.3	0.1
Triodia lanigera	0.4	10
Triodia secunda	0.4	5

PHOTOS



Site Name: WOM01

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 22/05/2024

GPS Location: GDA94 Zone 50 697935.9897E 7660812.352N

Orientation: 180, 270

Landform Type: Lower Slope

Slope Class: Gently Inclined (3°)

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: Granite, <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Colluvium

Vegetation Condition: Northern Vegetation Condition - VG - Very Good

Disturbance: Physical (other) - Nearby track + laydown

Fire: <5

Habitat: Acacia inaequilatera tall isolated shrubs over Acacia stellaticeps low sparse shrubland over Triodia lanigera, Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697936	7660812	
Corner 2	697931	7660762	
Corner 3	697879	7660759	
Corner 4	697897	7660807	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.1	0.1
Acacia ancistrocarpa	0.2	0.1
Acacia inaequilatera	1.8	0.6
Acacia ptychophylla	0.6	0.7
Acacia stellaticeps	0.5	8
Fimbristylis simulans	0.1	0.1

Indigofera monophylla	0.2	0.1
Ptilotus calostachyus	0.3	0.1
Tephrosia clementii	0.1	0.1
Triodia lanigera	0.3	20
Triodia wiseana	0.4	1.5

PHOTOS



Site Name:	WOM02
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 698142.8295E 7660725.93N
Orientation:	0, 90
Landform Type:	Crest
Slope Class:	Moderately Inclined (10°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	Shale, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Shale
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	5-10
Habitat:	Acacia inaequilatera tall isolated shrubs over Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698143	7660726	
Corner 2	698148	7660776	
Corner 3	698197	7660766	
Corner 4	698186	7660716	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.6	0.2
Acacia ancistrocarpa	1.4	0.2
Acacia bivenosa	1.4	0.2
Acacia inaequilatera	3	1
Acacia ptychophylla	0.4	0.2
Arivela viscosa	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1

Euploca tenuifolia	0.1	0.1
Fimbristylis simulans	0.1	0.1
Indigofera monophylla	0.2	0.2
Ptilotus auriculifolius	0.1	0.1
Senna glutinosa x leursenii	0.3	0.1
Tephrosia clementii	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia lanigera	0.2	0.2
Triodia wiseana	0.3	25

PHOTOS



Site Name: WOM03

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 22/05/2024

GPS Location: GDA94 Zone 50 697726.3368E 7661218.833N

Orientation: 180, 270

Landform Type: Undulating Plain

Slope Class: Very Gently Inclined (1°)

Soil Type: Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: Quartz, <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Quartz, Calcrete (other)

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >10

Habitat: Grevillea wickhamii tall isolated shrubs over Acacia inaequilatera mid-tall isolated shrubs over Triodia chichesterensis, Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697726	7661219	
Corner 2	697719	7661169	
Corner 3	697669	7661180	
Corner 4	697680	7661230	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Grevillea wickhamii*

Mid Stratum 2: *Acacia inaequilatera*

Lower Stratum 1: *Triodia chichesterensis*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.2	0.1
Acacia inaequilatera	1.8	0.3
Acacia ptychophylla	1.1	0.5
Acacia ?trachycarpa x tumida var. pilbarensis	1.4	0.1
Dampiera candicans	1.3	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1

Grevillea wickhamii	2.5	0.2
Indigofera monophylla	1.2	0.1
Trianthema triquetrum	0.1	0.1
Triodia angusta	0.4	0.2
Triodia chichesterensis (P3)	0.4	15
Triodia lanigera	0.5	15
Triodia wiseana	0.5	0.2

PHOTOS



Site Name:	WOM04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 697622E 7660923.41N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Quartz, Dolerite
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	1-5 Years
Habitat:	Corymbia hamersleyana low isolated trees over Acacia tumida var. pilbarensis tall shrubland over Acacia ancistrocarpa, Acacia acradenia mid-tall open shrubland over Triodia lanigera low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697622	7660923	
Corner 2	697625	7660973	
Corner 3	697677	7660970	
Corner 4	697669	7660921	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	2
Acacia ancistrocarpa	1.7	13
Acacia bivenosa	1.5	0.2
Acacia stellaticeps	0.4	0.3
Acacia tumida var. *pilbarensis*	2.5	60
Afrohybanthus aurantiacus	0.2	0.1

Bonamia erecta	0.5	0.6
Codonocarpus cotinifolius	0.7	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1
Corymbia hamersleyana	3	0.9
Cucumis variabilis		0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Grevillea wickhamii	1.4	0.3
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.3	0.2
Petalostylis labicheoides	1	0.2
Polymeria mollis		0.1
Seringia nephrosperma	1	0.1
Sida arenicola	1.2	0.1
Triodia epactia	0.5	0.3
Triodia lanigera	0.4	6

PHOTOS



Site Name:	WOM05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 698863.65E 7660343.54N
Landform Type:	Ridge
Slope Class:	Very Steep (37°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Dolerite, Quartz (other), >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 60-200mm, 20-60mm, 200-600mm
CF Types:	Granite, Quartz, Dolerite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Eucalyptus leucophloia ssp. leucophloia low isolated trees over Gossypium australe low isolated clumps of shrubs over Triodia wiseana, Triodia brizoides low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698864	7660344	
Corner 2	698851	7660298	
Corner 3	698801	7660303	
Corner 4	698811	7660351	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Gossypium australe*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.4	0.1
Acacia ancistrocarpa	1.6	0.2
Acacia bivenosa	0.5	0.1
Acacia inaequilatera	1.5	0.4
Acacia ptychophylla	0.7	0.3
Acacia tumida var. *pilbarensis*	1.1	0.1
Afrohybanthus aurantiacus	0.4	0.1

Amaranthus undulatus	0.2	0.1
Arivela viscosa	0.5	0.3
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Cymbopogon ambiguus	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.3	0.4
Eucalyptus leucophloia subsp. *leucophloia*	3.5	0.4
Gomphrena cunninghamii	0.2	0.2
Goodenia stobbsiana	0.3	0.3
Gossypium australe	0.8	2
Grevillea wickhamii	0.7	0.1
Hakea lorea subsp. *lorea*	2.1	0.1
Indigofera monophylla	0.5	0.1
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.6	0.1
Senna glutinosa subsp. *glutinosa*	1.3	0.2
Solanum diversiflorum	0.2	0.1
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)	1	0.5
Tribulus suberosus	1.2	0.3
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	4
Triodia lanigera	0.2	0.2
Triodia wiseana	0.3	25
Triumfetta propinqua	0.4	0.1

PHOTOS



Site Name:	WOM06
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 698673.59E 7660439.64N
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Shale (other), <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 2-6mm, 20-60mm
CF Types:	Quartz, Calcrete
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated trees over Triodia lanigera, Triodia chichesterensis low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698674	7660440	
Corner 2	698624	7660444	
Corner 3	698627	7660498	
Corner 4	698676	7660496	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.4	0.3
Cassytha capillaris		0.1
Corymbia hamersleyana	2.5	0.2
Eucalyptus leucophloia subsp. *leucophloia*		
Goodenia stobbsiana	0.2	0.1
Stemodia grossa	0.3	0.1
Trianthema triquetrum	0.1	0.1
Triodia chichesterensis (P3)	0.3	1
Triodia lanigera	0.4	40

Triodia wiseana	0.2	0.3

PHOTOS



Site Name: WOM07

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA2020 Zone 50 699160.23E 7660230.13N

Landform Type: Low Rise

Slope Class: Gently Inclined (3°)

Aspect: N

Soil Type: Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: Calcrete (other), <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Quartz, Calcrete, Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 5-10 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia inaequilatera tall isolated shrubs over Acacia bivenosa low isolated shrubs over Triodia chichesterensis hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699160	7660230	
Corner 2	699151	7660182	
Corner 3	699104	7660182	
Corner 4	699108	7660233	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia bivenosa*

Lower Stratum 1: *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.6	0.2
Acacia bivenosa	0.5	0.8
Acacia inaequilatera	3	1
Acacia maitlandii	0.5	0.1
Acacia ptychophylla	0.4	0.3
Acacia ?trachycarpa x tumida var. pilbarensis	0.6	0.1

Codonocarpus cotinifolius	0.8	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	1	0.2
Corymbia hamersleyana	4	0.6
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	3	0.4
Ptilotus astrolasius	0.2	0.1
Ptilotus calostachyus	0.2	0.1
Scaevola amblyanthera var. *centralis*	0.1	0.1
Solanum phlomoides	0.1	0.1
Tephrosia clementii	0.1	0.1
Triodia chichesterensis (P3)	0.3	70
Triodia lanigera	0.2	0.1
Triodia wiseana	0.4	1

PHOTOS



Site Name:	WOM08
Site Type:	QUADRAT
Dimensions:	25m x 100m
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 699212.69E 7660094.62N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Dolerite, Quartz, Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Corymbia hamersleyana low isolated trees over Grevillea wickhamii, Acacia tumida var. pilbarensis, Acacia acradenia tall open shrubland over Petalostylis labicheoides mid-tall isolated clumps of shrubs over Triodia epactia, Triodia wiseana low isolated hummock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699213	7660095	
Corner 2	699232	7660080	
Corner 3	699290	7660160	
Corner 4	699269	7660176	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*
Mid Stratum 2:	*Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	3
Acacia ancistrocarpa	2	0.5
Acacia bivenosa	1.2	0.7
Acacia ?sphaerostachya	0.4	0.1
Acacia stellaticeps	0.4	0.1

Acacia tumida var. *pilbarensis*	3	20
Afrohybanthus aurantiacus	0.3	0.1
Aristida holathera var. *holathera*	0.2	0.1
Bonamia erecta	0.2	0.1
Cajanus cinereus	0.1	0.1
Chrysopogon fallax	0.4	0.1
Codonocarpus cotinifolius	1.1	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	3	1
Cucumis variabilis		0.1
Dampiera candicans	0.5	0.3
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	3	4
Hibiscus sturtii var. *campylochlamys*	1	0.2
Indigofera monophylla	0.4	0.3
Notoleptopus decaisnei	0.1	0.1
Paraneurachne muelleri	0.1	0.1
Petalostylis labicheoides	1.6	2
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.2
Rhynchosia minima		0.1
Sporobolus australasicus	0.1	0.1
Trichodesma zeylanicum	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	0.1
Triodia lanigera	0.4	0.1
Triodia wiseana	0.4	0.2

PHOTOS



Site Name: WOM09

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA2020 Zone 50 699375.44E 7660080.47N

Landform Type: Low Rise

Slope Class: Gently Inclined (3°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Dolerite, Quartz

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 5-10 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia inaequilatera tall isolated shrubs over Acacia tumida var. pilbarensis mid-tall isolated shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699375	7660080	
Corner 2	699370	7660032	
Corner 3	699321	7660040	
Corner 4	699332	7660092	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	0.2
Acacia ancistrocarpa	0.4	0.1
Acacia inaequilatera	3	0.4
Acacia ptychophylla	0.4	0.5
Acacia tumida var. *pilbarensis*	1.8	0.5
Corymbia hamersleyana	2.2	0.2

Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.2
Grevillea wickhamii	0.5	0.1
Ptilotus calostachyus	0.4	0.1
Triodia lanigera	0.4	60
Triodia wiseana	0.4	0.2

PHOTOS



Site Name: WOM10

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 23/05/2024

GPS Location: GDA2020 Zone 50 699738.47E 7659543.58N

Landform Type: Low Rise

Slope Class: Gently Inclined (3°)

Aspect: N

Soil Type: Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: Calcrete (other), <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Calcrete

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 5-10 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia inaequilatera tall isolated shrubs over Triodia chichesterensis, Triodia wiseana low closed hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699738	7659544	
Corner 2	699788	7659546	
Corner 3	699775	7659494	
Corner 4	699725	7659500	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*

Lower Stratum 1: *Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	0.3	0.1
Acacia inaequilatera	4	0.5
Codonocarpus cotinifolius	0.6	0.1
Corymbia hamersleyana	4	0.5
Goodenia stobbsiana	0.3	0.4
Grevillea wickhamii	3.5	0.1
Ptilotus astrolasius	0.2	0.1

Senna symonii	1.3	0.2
Triodia chichesterensis (P3)	0.2	70
Triodia wiseana	0.4	1.5

PHOTOS



Site Name: WOM11

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 24/05/2024

GPS Location: GDA2020 Zone 50 700335.13E 7659383.19N

Landform Type: Low Rise

Slope Class: Very Gently Inclined (1°)

Aspect: N

Soil Type: Sandy Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Dolerite, Quartz, Ironstone

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 10-20 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia inaequilatera tall isolated shrubs over Acacia acradenia low isolated shrubs over Triodia lanigera, Triodia epactia, Trioia wiseana low closed hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700335	7659383	
Corner 2	700338	7659433	
Corner 3	700388	7659428	
Corner 4	700393	7659375	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia acradenia*

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.7	1
Acacia inaequilatera	5.5	1
Acacia tumida var. *pilbarensis*	1.8	0.2
Bonamia pilbarensis	0.1	0.1
Corymbia hamersleyana	0.7	0.1

Fimbristylis simulans	0.1	0.3
Goodenia stobbsiana	0.2	0.3
Grevillea wickhamii	1.5	0.2
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.4	0.1
Solanum phlomoides	0.4	0.1
Tephrosia clementii	0.1	0.1
Triodia epactia	0.2	6
Triodia lanigera	0.3	64
Triodia wiseana	0.4	2.5

PHOTOS



Site Name:	WOM12
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 700047.66E 7659430.25N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Grey
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, Animal
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700048	7659430	
Corner 2	700096	7659420	
Corner 3	700100	7659371	
Corner 4	700047	7659365	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia trachycarpa*, *Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.1
Acacia bivenosa	2.5	1
Acacia ptychophylla	1.1	0.1
Acacia pyrifolia var. *pyrifolia*	4	6
Acacia stellaticeps	0.5	0.1
Acacia trachycarpa	4	15
Acacia trachycarpa x tumida var. pilbarensis	4.5	0.2
Acacia tumida var. *pilbarensis*	2.5	3
Adriana tomentosa var. *tomentosa*	2.2	0.2
Afrohybanthus aurantiacus	0.2	0.1

Aristida holathera var. *holathera*	0.4	0.1
Arivela viscosa	0.6	0.1
Atalaya hemiglauca	1.8	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Cajanus cinereus	1.3	0.5
**Cenchrus ciliaris*	0.2	0.2
Chrysopogon fallax	0.6	0.3
Corchorus laniflorus	0.9	0.2
Corchorus lasiocarpus subsp. *lasiocarpus*	0.6	0.2
Cucumis variabilis		0.1
Cymbopogon ambiguus	0.6	0.2
Cyperus vaginatus	0.5	0.1
Eriachne tenuiculmis	0.6	0.9
Eucalyptus victrix	7	1
Euphorbia australis var. *subtomentosa*	0.2	0.1
Euphorbia trigonosperma	0.3	0.1
Gossypium robinsonii	1.5	0.1
Grevillea wickhamii	3	0.2
Indigofera monophylla	1.6	1
Jasminum didymum subsp. *lineare*		0.1
Melaleuca glomerata	2.2	0.2
Nellica maderaspatensis	0.1	0.1
Paspalidium clementii	0.1	0.1
Petalostylis labicheoides	3.5	0.5
Polymeria mollis	0.3	0.2
Rhynchosia minima		0.1
Senna notabilis	0.1	0.1
Solanum diversiflorum	0.1	0.1
Tephrosia rosea var. *clementii*	0.9	0.6
Themeda triandra	0.6	0.1
Triodia epactia	0.6	1
Triumfetta sp. seedling	0.1	0.1

PHOTOS



Site Name:	WOM13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 699943.32E 7659442.13N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Grey
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, Animal
Fire:	10-20 Years
Habitat:	Acacia trachycarpa tall open shrubland over Pentalepis trichodesmoides, Indigofera monophylla mid-tall isolated clumps of shrubs over Triodia epactia low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699943	7659442	
Corner 2	699942	7659391	
Corner 3	699895	7659397	
Corner 4	699893	7659452	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia trachycarpa*
Mid Stratum 2:	*Indigofera monophylla*, *Pentalepis trichodesmoides* subsp. *trichodesmoides*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	3.1	4
Acacia trachycarpa	3.5	15
Acacia tumida var. *pilbarensis*	2	0.1
Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.2	0.1
Boerhavia gardneri	0.1	0.1

Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Bulbostylis barbata	0.1	
**Cenchrus ciliaris*	0.2	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.4	0.1
Dampiera candicans	0.2	0.1
Eragrostis cumingii	0.1	0.1
Eriachne obtusa	0.3	0.1
Euphorbia trigonosperma	0.1	0.1
Euploca tenuifolia	0.1	0.1
Gossypium australe	0.4	0.1
Gossypium robinsonii	1.7	0.1
Grevillea wickhamii	0.1	0.1
Indigofera monophylla	1.3	2
Notoleptopus decaisnei	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
Pentalepis trichodesmoides subsp. *trichodesmoides*	1.3	3
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polymeria mollis	0.1	0.1
Portulaca oleracea	0.1	0.1
Senna artemisioides subsp. *oligophylla*	1.2	0.1
Senna artemisioides subsp. olligophylla x glutinosa subsp. glutinosa	1.5	0.1
Senna notabilis	0.1	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	1.6	0.2
Trianthema pilosum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	50

PHOTOS



Site Name:	WOM14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 699942.36E 7658568.19N
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Dolerite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699942	7658568	
Corner 2	699947	7658615	
Corner 3	699998	7658615	
Corner 4	699995	7658560	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ptychophylla*, *Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ptychophylla	1	3
Acacia stellaticeps	1	3
Acacia tumida var. *pilbarensis*		
Corymbia hamersleyana		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Grevillea wickhamii	2.5	0.1
Ptilotus calostachyus	0.4	0.1
Triodia lanigera	0.4	70
Triodia wiseana	0.4	0.2

PHOTOS



Site Name:	WOM15
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 700409.24E 7654612.09N
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	200-600mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Eucalyptus leucophloia ssp. leucophloia low isolated clumps of trees over Acacia acradenia low isolated clumps of shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700409	7654612	
Corner 2	700454	7654591	
Corner 3	700434	7654542	
Corner 4	700388	7654568	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.8	3
Acacia inaequilatera	2.6	0.2
Bulbostylis barbata	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	4.5	2
Fimbristylis simulans	0.1	0.1
Goodenia muelleriana	0.1	0.1

Indigofera monophylla	0.2	0.1
Ptilotus calostachyus	0.1	0.1
Triodia brizoides	0.4	0.2
Triodia lanigera	0.3	35
Triodia wiseana	0.5	0.2

PHOTOS



Site Name:	WOM16
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 699458.49E 7654747.83N
Landform Type:	Crest
Slope Class:	Steep (23°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	600-2000mm, 2-6mm, 200-600mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699458	7654748	
Corner 2	699452	7654699	
Corner 3	699403	7654701	
Corner 4	699398	7654752	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Grevillea wickhamii*
Mid Stratum 2:	*Acacia ptychophylla*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia adoxa var. *adoxa*	0.3	0.1
Acacia ptychophylla	1	5
Acacia ?trachycarpa x tumida var. pilbarensis	0.7	0.1
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.6	0.1
Cymbopogon ambiguus	0.3	0.1
Dampiera candicans	0.4	0.1
Dodonaea coriacea	0.6	0.2
Eriachne mucronata	0.2	0.5

Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	3.5	0.8
Euphorbia careyi	0.1	0.1
Grevillea wickhamii	4	0.4
Ptilotus calostachyus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	0.4	0.1
Senna glutinosa subsp. *pruinosa*	0.6	0.1
Tribulus suberosus	1.2	0.1
Triodia epactia	0.3	0.5
Triodia wiseana	0.5	22

PHOTOS



Site Name: WOM17

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 25/05/2024

GPS Location: GDA2020 Zone 50 699909.61E 7654902.23N

Landform Type: Undulating Plain

Slope Class: Very Gently Inclined (1°)

Aspect: N

Soil Type: Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 20-60mm, 6-20mm

CF Types: Granite, Dolerite

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 1-5 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia acradenia low open shrubland over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699910	7654902	
Corner 2	699959	7654894	
Corner 3	699959	7654844	
Corner 4	699912	7654843	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia acradenia*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	15
Corchorus lasiocarpus subsp. *lasiocarpus*	0.9	0.1
Corymbia hamersleyana	3.2	0.7
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	0.5	0.1

Indigofera monophylla	0.2	0.1
Triodia lanigera	0.5	20

PHOTOS



Site Name: WOM18

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 25/05/2024

GPS Location: GDA2020 Zone 50 699862.67E 7655077.13N

Landform Type: Undulating Plain

Slope Class: Very Gently Inclined (1°)

Aspect: N

Soil Type: Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 1-5 Years

Habitat: Corymbia hamersleyana low isolated trees over Grevillea wickhamii tall sparse shrubland over Acacia acradenia, Acacia adoxa low isolated clumps of shrubs over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699863	7655077	
Corner 2	699814	7655079	
Corner 3	699820	7655130	
Corner 4	699865	7655127	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Grevillea wickhamii*

Mid Stratum 2: *Acacia acradenia*, *Acacia adoxa* var. *adoxa*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	3
Acacia adoxa var. *adoxa*	0.4	1.5
Afrohybanthus aurantiacus	0.1	0.1
Arivela uncifera	0.3	0.1
Arivela viscosa	0.2	0.1

Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Corymbia hamersleyana	3	0.5
Dampiera candicans	0.2	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania rhadinostachya	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*		
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	2.2	7
Indigofera monophylla	0.2	0.1
Polygala glaucifolia	0.1	0.1
Polymeria sp. (Potentially undescribed)	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Scaevola browniana	0.1	0.1
Senna notabilis	0.1	0.1
Synaptantha tillaeacea	0.1	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	0.3
Triodia lanigera	0.4	20
Triodia wiseana	0.4	0.1
Waltheria virgata		

PHOTOS



Site Name:	WOM19
Site Type:	QUADRAT
Dimensions:	20m x 125m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 699459.9E 7655473.21N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 20-60mm, 6-20mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699460	7655473	
Corner 2	699477	7655597	
Corner 3	699493	7655598	
Corner 4	699475	7655473	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*
Lower Stratum 1:	*Eriachne tenuiculmis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	1.5
Acacia adoxa var. *adoxa*	0.4	0.1
Acacia pyrifolia var. *pyrifolia*	2	3
Acacia tumida var. *pilbarensis*	2.2	1.5
Afrohybanthus aurantiacus	0.1	0.1
Arivela viscosa	0.1	0.1
Bulbostylis barbata	0.1	0.1
Bulbostylis turbinata	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.6	0.1
Cyperus squarrosus	0.1	0.1

Eragrostis cumingii	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eriachne tenuiculmis	0.6	3
Eucalyptus victrix	5	2.5
Euphorbia trigonosperma	0.3	0.1
Fimbristylis dichotoma	0.1	0.1
Goodenia lamprosperma	0.1	0.1
Grevillea wickhamii	2.5	4
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.3	0.1
Petalostylis labicheoides	1.9	0.5
Pluchea dentex	0.3	0.1
Polymeria sp. (Potentially undescribed)	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Scleromitrion galioides	0.1	0.1
Senna notabilis	0.1	0.1
Solanum diversiflorum	0.1	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	0.5	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.6	0.5
Waltheria virgata	0.4	0.1

PHOTOS



Site Name:	WOM20
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 699453.56E 7655771.56N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Corymbia hamersleyana low isolated trees over Grevillea wickhamii, Acacia tumida var. pilbarensis tall open shrubland over Acaca acradenia low isolated shrubs over Triodia lanigera, Triodia wiseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699454	7655772	
Corner 2	699457	7655821	
Corner 3	699504	7655811	
Corner 4	699503	7655759	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia lanigera*
Lower Stratum 2:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	2.5
Acacia adoxa var. *adoxa*	0.4	0.5
Acacia ancistrocarpa	0.6	0.1
Acacia tumida var. *pilbarensis*	2	5

Afrohybanthus aurantiacus	0.2	0.1
Arivela uncifera	0.3	0.1
Boerhavia gardneri	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bulbostylis barbata	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.3	0.1
Corymbia hamersleyana	4.5	0.9
Cyperus blakeanus	0.3	0.1
Dampiera candicans	0.1	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne obtusa	0.3	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eriachne tenuiculmis	0.3	0.1
Euphorbia trigonosperma	0.1	0.1
Euploca tenuifolia	0.1	0.1
Goodenia microptera	0.1	0.1
Goodenia stobbsiana	0.2	0.1
Grevillea wickhamii	2.1	9
Indigofera monophylla	0.4	0.1
Pluchea dentex	0.3	0.1
Polymeria sp. (Potentially undescribed)	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus fusiformis	0.2	0.1
Scaevola browniana	0.2	0.1
Sida ?clementii	0.4	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia rosea var. *clementii*	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trachymene oleracea subsp. *oleracea*	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.3	0.1
Triodia lanigera	0.4	10
Triodia wiseana	0.4	1
Waltheria virgata	1	0.1

PHOTOS



Site Name:	WOM21
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701302.79E 7655924.83N
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	Granite, Mudstone (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 20-60mm, 6-20mm
CF Types:	Sandy aggregate, mudstone, calcrete? See location photo and. Mudstone see photo (other), Calcrete, Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana, Eucalyptus leucophloia ssp. leucophloia low isolated trees over Acacia inaequilatera tall isolated shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701303	7655925	
Corner 2	701349	7655917	
Corner 3	701342	7655866	
Corner 4	701291	7655871	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.2	0.1
Acacia inaequilatera	4.3	0.8
Acacia ptychophylla	0.8	0.4
Acacia stellaticeps	0.8	0.2
Corymbia hamersleyana	4.3	0.2
Dolichocarpa crouchiana	0.1	0.1

Eucalyptus leucophloia subsp. *leucophloia*	4.1	0.2
Goodenia stobbsiana	0.2	0.2
Hakea lorea subsp. *lorea*		
Senna symonii	0.7	0.1
Triodia lanigera	0.4	49
Triodia wiseana	0.5	1

PHOTOS



Site Name:	WOM22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701513.06E 7656175.18N
Landform Type:	Low Rise
Slope Class:	Gently Inclined (3°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Dolerite, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 200-600mm, 6-20mm, 60-200mm, 20-60mm
CF Types:	Granite, Dolerite, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

Habitat: Eucalyptus leucophloia ssp. leucophloia low isolated trees over Acacia synchronicia tall isolated shrubs over Acacia stellaticeps, Acacia ptychophylla, Senna symonii low isolated clumps of shrubs over Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701513	7656175	
Corner 2	701517	7656226	
Corner 3	701567	7656223	
Corner 4	701569	7656168	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia synchronicia*
Mid Stratum 2:	*Acacia ptychophylla*, *Acacia stellaticeps*, *Senna symonii*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	1.5	0.1
Acacia ptychophylla	1	1
Acacia stellaticeps	1.2	0.8
Acacia synchronicia	2.4	0.9
Eriachne pulchella subsp. *dominii*	0.1	0.1

Eucalyptus leucophloia subsp. *leucophloia*	4	0.6
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Hakea lorea subsp. *lorea*	0.3	0.1
Ptilotus calostachyus	0.3	0.1
Senna symonii	1.6	1
Triodia basitricha (P3)	0.3	2
Triodia lanigera	0.4	0.3
Triodia wiseana	0.8	35

PHOTOS



Site Name:	WOM23
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701347.39E 7656529.78N
Landform Type:	Ridge
Slope Class:	Moderately Inclined (10°)
Aspect:	SW
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	Quartz (other), >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	>2000mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Eucalyptus leucophloia low isolated crumps of trees over Acacia acradenia, Acacia inaequilatera tall isolated clumps of shrubs over Triodiea brizoides, Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701347	7656530	
Corner 2	701347	7656580	
Corner 3	701399	7656594	
Corner 4	701408	7656543	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia acradenia*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia brizoides*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.1	2.5
Acacia bivenosa	1.9	0.1
Acacia inaequilatera	2.1	0.8
Acacia ptychophylla	0.4	0.4
Acacia trachycarpa x tumida var. pilbarensis	1	0.1
Afrohybanthus aurantiacus	0.2	0.1
Amaranthus undulatus	0.1	0.1
Arivela viscosa	0.1	0.1
Bonamia pilbarensis	0.1	0.1

Cassytha capillaris		0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.5	0.1
Cymbopogon ambiguus	0.3	0.2
Dodonaea coriacea	0.3	0.1
Dolichocarpa crouchiana	0.1	0.1
Eriachne mucronata	0.3	0.6
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	6	5
Euphorbia careyi	0.1	0.1
Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Fimbristylis simulans	0.1	0.1
Goodenia cusackiana	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Gossypium australe	0.3	0.1
Grevillea wickhamii	2	0.1
Hakea lorea subsp. *lorea*	1.8	0.1
Indigofera monophylla	0.3	0.1
Senna glutinosa subsp. *glutinosa*	1.2	0.1
Senna symonii	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.1	0.1
Solanum phlomoides	0.4	0.1
Tribulus suberosus	0.5	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia brizoides	0.4	25
Triodia wiseana	0.4	6

PHOTOS



Site Name:	WOM24
Site Type:	QUADRAT
Dimensions:	10m x 250m
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 701278.16E 7656361.25N
Orientation:	180, 270
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Sandy Loam
Soil Colour:	Brown (other)
Soil Condition:	Dry
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	10-20

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701278	7656361	
Corner 2	701280	7656359	
Corner 3	701092	7656178	
Corner 4	701086	7656183	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus victrix*
Mid Stratum 1:	*Acacia pyrifolia* var. *pyrifolia*, *Petalostylis labicheoides*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	*Chrysopogon fallax*, *Cymbopogon ambiguus*, *Themeda triandra*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.4
Acacia bivenosa	0.5	0.1
Acacia pyrifolia var. *pyrifolia*	2	8
Acacia tumida var. *pilbarensis*	2	0.9
Afrohybanthus aurantiacus	0.3	0.1
Boerhavia coccinea	0.1	0.1
Cajanus cinereus	1	0.3

Cassytha capillaris		0.1
Chrysopogon fallax	0.4	0.5
Corchorus lasiocarpus subsp. *lasiocarpus*	0.5	0.2
Corymbia hamersleyana	7	4
Crotalaria cunninghamii	0.3	0.1
Cymbopogon ambiguus	0.5	0.6
Dichanthium fecundum	0.3	0.1
Dysphania rhadinostachya	0.1	0.1
Enneapogon lindleyanus	0.2	0.1
Eriachne tenuiculmis	0.3	1
Eucalyptus victrix	6	25
Euphorbia australis var. *subtomentosa*	0.2	0.1
Flueggea virosa subsp. *melanthesoides*	2.2	0.1
Gossypium robinsonii	3	0.5
Grevillea wickhamii	1.8	0.1
Indigofera monophylla	1	0.2
Jasminum didymum subsp. *lineare*		0.1
Notoleptopus decaisnei	0.1	0.1
Petalostylis labicheoides	2	4
Polymeria mollis	0.1	0.1
Santalum lanceolatum	2	1
Scaevola amblyanthera var. *centralis*	0.1	0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	0.6	0.5
Themeda triandra	0.3	1
Triodia epactia	0.4	6
Triodia lanigera	0.3	0.1
Triodia wiseana	0.5	0.1

PHOTOS



Site Name:	WOM25
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 700875.88E 7656211.57N
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 60-200mm, 20-60mm, 6-20mm
CF Types:	Dolerite, Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated clumps of trees over Acaca acradenia, Grevillea wickhamii tall open shrubland over Triodia epactia, Triodia wiseana low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700876	7656212	
Corner 2	700920	7656212	
Corner 3	700908	7656155	
Corner 4	700860	7656174	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii*
Lower Stratum 1:	*Triodia epactia*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	3.9	10
Acacia pyrifolia var. *pyrifolia*	1	0.8
Arivela uncifera	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Corchorus laniflorus	0.6	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.6	0.1

Corymbia hamersleyana	6	2.5
Dampiera candicans	0.4	0.3
Eriachne pulchella subsp. *dominii*	0.1	0.1
Eriachne tenuiculmis	0.3	0.1
Goodenia stobbsiana	0.7	0.1
Grevillea wickhamii	4	5
Indigofera monophylla	1.4	0.3
Jasminum didymum subsp. *lineare*	1.2	0.2
Petalostylis labicheoides	1.8	0.8
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Solanum phlomoides	0.3	0.1
Tephrosia rosea var. *clementii*	0.6	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	25
Triodia wiseana	0.5	5

PHOTOS



Site Name:	WOM26
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 700075.42E 7657131.38N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Dolerite, Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Acacia acradenia, Acacia ancistrocarpa tall open shrubland over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700075	7657131	
Corner 2	700025	7657130	
Corner 3	700026	7657183	
Corner 4	700077	7657180	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.6	15
Acacia ancistrocarpa	2.6	10
Corymbia hamersleyana		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	0.1	0.1
Polygala glaucifolia	0.1	0.1
Triodia lanigera	0.4	27

PHOTOS



Site Name: WOM27

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA2020 Zone 50 699803.92E 7657606.74N

Landform Type: Plain

Slope Class: Level (0°)

Aspect: N

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: No bedrock exposed

CF Abundance: 2-10%

CF Sizes: 6-20mm, 20-60mm, 2-6mm

CF Types: Dolerite

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 10-20 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia acradenia, Acacia ancistrocarpa tall shrubland over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699804	7657607	
Corner 2	699755	7657604	
Corner 3	699757	7657658	
Corner 4	699810	7657664	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia acradenia*, *Acacia ancistrocarpa*, *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	8
Acacia ancistrocarpa	2.5	12
Acacia tumida var. *pilbarensis*	2.6	12
Afrohybanthus aurantiacus	0.3	0.1
Aristida holathera var. *holathera*	0.3	0.1
Bonamia erecta	0.4	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	1.8	0.1
Corymbia hamersleyana	2.3	0.2

Dampiera candicans	0.1	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1
Goodenia obscurata (P3)	0.3	0.1
Goodenia stobbsiana	0.2	0.1
Indigofera monophylla	0.8	0.1
Petalostylis labicheoides	2.2	0.1
Polygala glaucifolia	0.1	0.1
Ptilotus calostachyus	0.7	0.1
Senna notabilis	0.5	0.1
Seringia nephrosperma	0.6	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.1
Triodia epactia	0.4	1
Triodia lanigera	0.4	28

PHOTOS





Site Name:	WOM28
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 676062.22E 7664408.38N
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	20-60mm, 6-20mm, 2-6mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Acacia stellaticeps mid-tall open shrubland over Triodia lanigera, Triodia epactia low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676062	7664408	
Corner 2	676109	7664412	
Corner 3	676106	7664364	
Corner 4	676059	7664362	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.1	0.1
Acacia arida	0.7	0.1
Acacia stellaticeps	1.1	12
Acacia ?trachycarpa x tumida var. pilbarensis	0.3	0.1
Bonamia erecta	0.1	0.1
Ptilotus astrolasius	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Triodia epactia	0.4	9
Triodia lanigera	0.4	9

PHOTOS



Site Name:	WOM29
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 675724.84E 7665207.78N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 2-6mm, 20-60mm
CF Types:	Ironstone, Quartz, Dolerite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Acacia bivenosa tall isolated shrubs over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675725	7665208	
Corner 2	675733	7665256	
Corner 3	675785	7665258	
Corner 4	675784	7665206	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia bivenosa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.2
Acacia bivenosa	2	1
Acacia inaequilatera	0.5	0.1
Bonamia pilbarensis	0.4	0.1
Euploca pachyphylla	0.2	0.1
Hakea lorea subsp. *lorea*	1.9	0.2
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.4	0.1
Triodia lanigera	0.3	30

PHOTOS



Site Name: WOM30

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA2020 Zone 50 675942.37E 7665207.76N

Landform Type: Low Rise

Slope Class: Gently Inclined (3°)

Aspect: WNW

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: No bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Calcrete, Quartz, Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 10-20 Years

Habitat: Corymbia hamersleyana low isolated clumps of trees over Acacia inaequilatera tall isolated clumps of shrubs over Triodia chichesterensis low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675942	7665208	
Corner 2	675946	7665258	
Corner 3	675998	7665255	
Corner 4	675989	7665204	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia inaequilatera*

Lower Stratum 1: *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.6	0.1
Acacia inaequilatera	2.4	2
Afrohybanthus aurantiacus	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Chrysopogon fallax	0.1	0.1
Corchorus parviflorus	0.9	0.1
Corymbia hamersleyana	4.2	4
Euploca pachyphylla	0.2	0.1
Grevillea wickhamii	0.5	0.1

Indigofera monophylla	0.4	0.1
Melhania oblongifolia	0.4	0.1
Paraneurachne muelleri	0.3	0.1
Ptilotus astrolasius	0.5	0.1
Sida ?clementii	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.1
Triodia chichesterensis (P3)	0.2	50
Triodia epactia	0.3	0.2

PHOTOS



Site Name: WOM31

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 27/05/2024

GPS Location: GDA2020 Zone 50 676065.6E 7665229.8N

Landform Type: Plain

Slope Class: Level (0°)

Aspect: None

Soil Type: Clay Loam

Soil Colour: Red

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 10-20 Years

Habitat: Corymbia hamersleyana low isolated clumps of trees over Acacia tumida var. pilbarensis tall open shrubland over Chrysopogon fallax tall open tussock grassland over Triodia epactia low sparse hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676066	7665230	
Corner 2	676106	7665224	
Corner 3	676090	7665182	
Corner 4	676045	7665192	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Chrysopogon fallax*

Lower Stratum 2: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1	0.6
Acacia pyrifolia var. *pyrifolia*	0.5	0.1
Acacia stellaticeps	0.3	0.1
Acacia ?trachycarpa x tumida var. pilbarensis	0.4	0.1
Acacia tumida var. *pilbarensis*	2.5	20
Afrohybanthus aurantiacus	0.8	0.3

Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.4	0.6
Bonamia pilbarensis	0.1	0.1
Cajanus cinereus	2	0.6
Chrysopogon fallax	0.4	15
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	6.5	3
Cullen stipulaceum	0.7	0.1
Dampiera candicans	0.5	0.1
Eulalia aurea	0.3	0.1
Euploca pachyphylla	0.2	0.2
Goodenia microptera	0.1	0.1
Gossypium australe	0.4	0.1
Grevillea pyramidalis subsp. *leucadendron*	1.1	0.2
Grevillea wickhamii	2	0.1
Hibiscus leptocladus	0.4	0.1
Hibiscus sturtii var. *campylochlamys*	0.3	0.1
Indigofera monophylla	0.8	0.7
Isotropis atropurpurea	0.4	0.1
Paraneurachne muelleri	0.2	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polymeria mollis	0.4	0.4
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.4	0.1
Senna artemisioides subsp. *oligophylla*	1.3	0.1
Senna symonii	1.4	0.1
Solanum diversiflorum	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.5
Themeda triandra	0.4	0.5
Trichodesma zeylanicum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	7
Triumfetta chaetocarpa	0.4	0.1
Waltheria indica	0.1	0.1

PHOTOS





Site Name:	WOM32
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 675849.18E 7665020.62N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Acacia inaequilatera tall isolated shrubs over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675849	7665021	
Corner 2	675903	7665023	
Corner 3	675901	7664974	
Corner 4	675848	7664976	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.8	0.6
Acacia inaequilatera	2.5	1
Arivela uncifera	0.4	0.1
Bonamia alatisemina	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Euploca pachyphylla	0.2	0.1
Grevillea wickhamii	0.3	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus calostachyus	0.5	0.1

Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.2	0.2
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.3	30

PHOTOS



Site Name:	WOM33
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 676202.56E 7665044.03N
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Acacia ancistrocarpa, Acacia bivenosa tall isolated shrubs over Triodia longiceps low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676203	7665044	
Corner 2	676204	7665105	
Corner 3	676254	7665106	
Corner 4	676256	7665054	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia bivenosa*
Lower Stratum 1:	*Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.2	1
Acacia bivenosa	2	1
Acacia inaequilatera		
Bonamia alatisemina	0.1	0.1
Maireana georgei	0.2	0.1
Pluchea tetranthera	0.8	0.1
Senna glutinosa subsp. *glutinosa*	0.6	0.1
Senna glutinosa x leursenii	0.6	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1

Triodia epactia	0.2	1
Triodia lanigera	0.3	2
Triodia longiceps	0.4	35

PHOTOS



Site Name:	WOM34
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 674082.31E 7666605.73N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	5-10 Years
Habitat:	Acacia ancistrocarpa tall open shrubland over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674082	7666606	
Corner 2	674130	7666598	
Corner 3	674141	7666546	
Corner 4	674092	7666546	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.3	20
Bonamia erecta	0.3	0.1
Grevillea wickhamii	0.1	0.1
Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)	0.4	0.1
Indigofera monophylla	0.4	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1

Triodia lanigera	0.4	50

PHOTOS



Site Name:	WOM35
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 674616.08E 7666589N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Corymbia hamersleyana, Corymbia zygophylla low isolated trees over Acacia tumida var. pilbarensis tall sparse shrubland over Acacia ancistrocarpa mid-tall open shrubland over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674616	7666589	
Corner 2	674666	7666583	
Corner 3	674658	7666529	
Corner 4	674607	7666537	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Corymbia zygophylla*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	10
Acacia inaequilatera	1.6	1
Acacia tumida var. *pilbarensis*	2.1	6
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.6	0.2
Chrysopogon fallax	0.6	0.1

Corchorus parviflorus	0.4	0.1
Corymbia hamersleyana	2.5	0.3
Corymbia zygophylla	2.3	0.2
Eragrostis eriopoda	0.2	0.1
Goodenia stobbsiana	0.4	0.1
Hakea lorea subsp. *lorea*	2	0.2
Indigofera monophylla	0.3	0.1
Ptilotus astrolasius	0.6	0.1
Ptilotus calostachyus	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.2
Triodia lanigera	0.4	50

PHOTOS



Site Name:	WOM36
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 674328.74E 7666595.1N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	1-5 Years
Habitat:	Acacia stellaticeps mid-tall open shrubland over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674329	7666595	
Corner 2	674285	7666597	
Corner 3	674283	7666648	
Corner 4	674331	7666643	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia stellaticeps*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.1	0.3
Acacia inaequilatera	1.1	0.1
Acacia stellaticeps	1	10
Acacia ?trachycarpa x tumida var. pilbarensis	1.6	0.6
Bonamia erecta	0.4	0.1
Corchorus parviflorus	0.6	0.1
Eragrostis eriopoda	0.2	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	0.5	0.1
Ptilotus astrolasius	0.3	0.1

Ptilotus calostachyus	0.4	0.1
Triodia lanigera	0.4	25

PHOTOS



Site Name: WOM37

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 28/05/2024

GPS Location: GDA2020 Zone 50 673660.82E 7668076.54N

Landform Type: Flat

Slope Class: Level (0°)

Aspect: None

Soil Type: Sandy Clay Loam

Soil Colour: Red

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Ironstone, Quartz

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 1-5 Years

Habitat: Corymbia hamersleyana low isolated trees over Acacia tumida var. pilbarensis tall open shrubland over Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673661	7668077	
Corner 2	673669	7668128	
Corner 3	673718	7668119	
Corner 4	673711	7668068	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia hamersleyana*

Mid Stratum 1: *Acacia tumida* var. *pilbarensis*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.3	0.9
Acacia inaequilatera	1.5	0.8
Acacia tumida var. *pilbarensis*	2.2	22
Arivela uncifera	0.1	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.4	0.1
Corymbia hamersleyana	4.2	1
Dampiera candicans	0.3	0.1
Eragrostis eriopoda	0.2	0.1

Goodenia stobbsiana	0.3	0.1
Indigofera monophylla	0.5	0.2
Paspalidium clementii	0.1	0.1
Ptilotus astrolasius	0.4	0.2
Ptilotus calostachyus	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.5	0.2
Tinospora smilacina		0.1
Triodia lanigera	0.4	30

PHOTOS



Site Name: WOM38

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 28/05/2024

GPS Location: GDA2020 Zone 50 675206.4E 7666338.22N

Landform Type: Flat

Slope Class: Level (0°)

Aspect: None

Soil Type: Sandy Clay Loam

Soil Colour: Red

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Quartz, Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 1-5 Years

Habitat: Corymbia zygophylla low isolated trees over Acacia inaequilatera, Acacia ancistrocarpa tall isolated shrubs over Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	675206	7666338	
Corner 2	675256	7666324	
Corner 3	675250	7666273	
Corner 4	675200	7666281	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Corymbia zygophylla*

Mid Stratum 1: *Acacia ancistrocarpa*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.4	0.6
Acacia inaequilatera	2.3	1
Acacia ?trachycarpa x tumida var. pilbarensis	0.3	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.4	0.2
Corymbia zygophylla	2.3	0.2
Euploca pachyphylla	0.2	0.1
Grevillea wickhamii	2.5	0.2
Ptilotus astrolasius	0.5	0.1

Ptilotus calostachyus	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.2
Triodia lanigera	0.4	30

PHOTOS



Site Name:	WOM39
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	28/05/2024
GPS Location:	GDA2020 Zone 50 676470.55E 7664512.44N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	1-5 Years
Habitat:	Triodia epactia low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676471	7664512	
Corner 2	676521	7664519	
Corner 3	676527	7664469	
Corner 4	676478	7664465	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia synchronicia	1	0.5
Maireana georgei	0.5	0.1
Ptilotus exaltatus	0.1	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Triodia epactia	0.5	25
Triodia lanigera	0.3	1
Triodia longiceps	0.4	0.9

PHOTOS



Site Name: WOM40

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 28/05/2024

GPS Location: GDA2020 Zone 50 678062.11E 7659449.52N

Landform Type: Low Rise

Slope Class: Gently Inclined (3°)

Aspect: E

Soil Type: Clay Loam

Soil Colour: Red

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm

CF Types: Granite, Quartz, Ironstone

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: 5-10 Years

Habitat: Acacia orthocarpa tall isolated clumps of shrubs over Acacia ancistrocarpa mid-tall isolated clumps of shrubs over Triodia epactia, Triodia lanigera low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678062	7659450	
Corner 2	678064	7659400	
Corner 3	678013	7659408	
Corner 4	678013	7659455	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia orthocarpa*

Mid Stratum 2: *Acacia ancistrocarpa*

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.6	2
Acacia arida	0.5	0.1
Acacia orthocarpa	2.3	2
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.4	0.1
Corchorus parviflorus	0.5	0.1
Eriachne pulchella subsp. *dominii*	0.1	0.1

Goodenia stobbsiana	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Senna symonii	1	0.1
Triodia epactia	0.3	15
Triodia lanigera	0.3	10

PHOTOS



Site Name:	WOS01
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	11/08/2024
GPS Location:	GDA94 Zone 50 677466.3E 7663398.47N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Sandy Clay Loam
Soil Colour:	Light Brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Grazing - Cattle, Weeds
Fire:	>5yrs
Habitat:	Eucalyptus victrix low isolated trees over Acacia trachycarpa tall isolated shrubs over Solanum flomoides low isolated shrubs over Triodia angusta, Triodia secunda low open hummock grassland over Cenchrus ciliaris isolated tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677466	7663398	NW
Corner 2	677466	7663348	SW
Corner 3	677515	7663396	NE
Corner 4	677516	7663348	SE

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus victrix*
Mid Stratum 1:	*Acacia trachycarpa*
Mid Stratum 2:	*Solanum phlomoides*
Lower Stratum 1:	*Triodia angusta*, *Triodia secunda*
Lower Stratum 2:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Pilbara (W.R. Barker 2025)	0.3	0.1

Acacia trachycarpa	3.5	0.5
Afrohybanthus aurantiacus	0.4	0.1
Arivela viscosa	0.2	0.1
Boerhavia coccinea	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha filiformis		0.1
**Cenchrus ciliaris*	0.3	0.2
**Cenchrus setiger*	0.3	0.1
Corchorus parviflorus	0.9	0.1
Cynodon prostratus	0.1	0.1
Eucalyptus victrix	5.2	0.5
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca tenuifolia	0.2	0.1
Indigofera monophylla	0.5	0.1
Pluchea ferdinandi-muelleri	1	0.1
Polycarpaea longiflora	0.2	0.1
Portulaca oleracea	0.1	0.1
Pterocaulon sphacelatum	0.5	0.1
Ptilotus axillaris	0.1	0.1
Sclerolaena densiflora	0.3	0.1
Sclerolaena hostilis	0.3	0.1
Solanum phlomoides	0.5	0.3
Sporobolus australasicus	0.2	0.1
Trianthema triquetrum	0.1	0.1
Triodia angusta	0.4	5
Triodia epactia	0.4	0.1
Triodia secunda	0.3	6
Waltheria indica	0.2	0.1

PHOTOS



Site Name: WOS02

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 09/08/2024

GPS Location: GDA94 Zone 50 677263.71E 7663630.73N

Orientation: 90, 180

Landform Type: Undulating Plain

Slope Class: Gently Inclined (3°)

Soil Type: Sandy Clay Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: Calcrete, <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Ironstone, Quartz

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Fire: Approx. 10yrs

Habitat: Acacia inaequilatera tall isolated clumps of shrubs over Triodia chichesterensis and Triodia angusta low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677264	7663631	NW
Corner 2	677263	7663582	SW
Corner 3	677312	7663584	SE
Corner 4	677312	7663634	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia inaequilatera*

Lower Stratum 1: *Triodia angusta*, *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.3	0.1
Acacia inaequilatera	2.7	0.5
Acacia sphaerostachya	0.5	0.1
Acacia stellaticeps	0.6	0.1
Bonamia pilbarensis		0.1
Corchorus parviflorus	0.6	0.1
Cynodon prostratus	0.1	0.1
Goodenia microptera	0.1	0.1
Indigofera monophylla	0.2	0.1

Petalostylis labicheoides	0.4	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.6	0.1
Sclerolaena densiflora	0.2	0.1
Tephrosia clementii	0.2	0.1
Trianthema triquetrum	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia angusta	0.3	7
Triodia chichesterensis (P3)	0.2	5

PHOTOS



Site Name: WOS03

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 10/08/2024

GPS Location: GDA94 Zone 50 678236.9823E 7663785.672N

Orientation: 90, 180

Landform Type: Drainage Line

Slope Class: Level (0°)

Aspect: None

Soil Type: Sand

Soil Colour: Orange

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 10-20%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Colluvium

Disturbance: Weeds

Fire: >10yrs

Habitat: Melaleuca argentia low isolated lumps of trees over Acacia tumida tall isolated clumps of shrubs over Melaleuca glomerata mid sparse shrubland over Corynotheca pungens low isolated clumps of shrubs over Triodia epactia isolated hummock grasses

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA94	678237	7663786	NW
Corner 2	GDA94	678238	7663738	SW
Corner 3	GDA94	678290	7663739	SE
Corner 4	AGD66	678291	7663790	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Melaleuca glomerata*

Mid Stratum 2: *Corynotheca pungens*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2.7	0.1
Acacia trachycarpa	2.2	0.2
Acacia tumida var. *pilbarensis*	1.6	0.7
Afrohybanthus aurantiacus	0.5	0.1
Arivela viscosa	0.2	0.1
Bonamia alatisemina	0.1	0.1

Bulbostylis barbata	0.1	0.1
Calandrinia tepperiana	0.1	0.1
Cassytha filiformis		0.5
**Cenchrus ciliaris*	0.4	0.1
**Cenchrus setiger*	0.4	0.1
Corynotheca pungens	0.7	1
Crotalaria cunninghamii	1.6	0.1
Cymbopogon ambiguus	0.4	0.1
Cyperus blakeanus	0.4	0.1
Cyperus ixiocarpus	0.5	0.1
Cyperus squarrosus	0.1	0.1
Eragrostis cumingii	0.1	0.1
Eragrostis speciosa	0.7	0.1
Eragrostis tenellula	0.1	0.1
Eriachne benthamii	0.9	0.1
Eriachne obtusa	0.6	0.1
Eulalia aurea	1.6	0.1
Euphorbia australis var. *subtomentosa*	0.3	0.1
Euphorbia tannensis subsp. *eremophila*	0.3	0.1
Euphorbia trigonosperma	0.5	0.1
Evolvulus alsinoides var. *decumbens*	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Goodenia stobbsiana	0.1	0.1
Indigofera monophylla	0.7	0.1
Ipomoea muelleri		0.1
Melaleuca argentea	6.5	2.5
Melaleuca glomerata	2.2	7
Microstachys chamaelea	0.6	0.1
Nellica maderaspatensis	0.4	0.1
Paspalidium reflexum	0.4	0.1
Polycarpaea corymbosa var. *corymbosa*	0.2	0.1
Polycarpaea longiflora	0.3	0.1
Ptilotus fusiformis	0.4	0.1
Solanum phlomoides	0.1	0.1
Sorghum plumosum var. *plumosum*	1.3	0.1
Stemodia grossa	0.1	0.1
Stemodia viscosa	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.6	0.1
Triodia epactia	0.4	0.2
Vigna lanceolata var. *lanceolata*		0.1

PHOTOS



Site Name:	WOS04
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 683096.57E 7663195.69N
Orientation:	90, 180
Landform Type:	Flat
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Chert (other), Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	approx. 5 yrs
Habitat:	Triodia longiceps, Triodia lanigera and Triodia epactia low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 2	683095	7663148	SW
Corner 3	683146	7663148	SE
Corner 4	683146	7663197	NE
Corner 1	683097	7663196	NW

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia epactia*, *Triodia lanigera*, *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.4	0.1
Acacia stellaticeps	0.3	0.1
Bonamia erecta	0.4	0.1
Cynodon prostratus	0.1	0.1
Eriachne pulchella	0.1	0.1
Petalostylis labicheoides	1.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.4	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.4	0.1

Sclerolaena densiflora	0.3	0.1
Senna artemisioides subsp. *oligophylla*	1	0.1
Sporobolus australasicus	0.1	0.1
Trianthema triquetrum	0.1	0.1
Triodia epactia	0.4	0.5
Triodia lanigera	0.4	1.5
Triodia longiceps	0.3	10

PHOTOS



Site Name:	WOS05
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 683134.85E 7663275.55N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Sandy Clay Loam
Soil Colour:	Light brown (other)
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	Mixed fire history: approx. 5yrs and approx. 3yrs
Habitat:	Triodia longiceps and Triodia lanigera low open hummock grassland
Comments:	Pebble mouse mounds within quadrat and in general surrounds (both active and inactive)

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	683135	7663276	NW
Corner 2	683136	7663223	SW
Corner 3	683186	7663219	SE
Corner 4	683183	7663269	NE

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia lanigera*, *Triodia longiceps*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	0.5	0.1
Acacia bivenosa		
Acacia inaequilatera	1.7	0.1
Acacia stellaticeps	0.4	0.1
Cynodon prostratus	0.1	0.1
Eriachne pulchella	0.1	0.1
Maireana georgei	0.2	0.1

Petalostylis labicheoides	1.2	0.1
Ptilotus calostachyus	0.4	0.1
Sclerolaena densiflora	0.2	0.1
Sporobolus australasicus	0.1	0.1
Trianthema triquetrum	0.1	0.1
Triodia epactia	0.3	0.1
Triodia lanigera	0.3	12
Triodia longiceps	0.4	8

PHOTOS



Site Name: WOS06

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 07/08/2024

GPS Location: GDA94 Zone 50 681426.41E 7663376.24N

Orientation: 90, 180

Landform Type: Plain

Slope Class: Level (0°)

Aspect: None

Soil Type: Sandy Clay Loam

Soil Colour: Red-Brown

Soil Condition: Moist - Recent rains

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Ironstone

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Habitat: Triodia epactia and Triodia secunda low hummock grassland over Eriachne obtusa low isolated clumps of tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681426	7663376	NW
Corner 3	681479	7663327	SE
Corner 2	681426	7663327	SW
Corner 4	681482	7663380	NE

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Triodia epactia*, *Triodia secunda*

Lower Stratum 2: *Eriachne obtusa*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	0.1	0.1
Arivela viscosa	0.2	0.1
Bulbostylis barbata	0.1	0.1
Calandrinia ?stagnensis	0.1	0.1
Cyperus squarrosus	0.1	0.1
Dysphania plantaginella	0.1	0.1
Eriachne obtusa	0.3	0.3
Euphorbia biconvexa	0.1	0.1
Euploca cunninghamii	0.1	0.1

Gomphrena leptoclada subsp. *leptoclada*	0.1	0.1
Pluchea ferdinandi-muelleri	0.8	0.1
Polygala galeocephala	0.1	0.1
Sporobolus actinocladus	0.3	0.1
Stackhousia intermedia	0.2	0.1
Triodia epactia	0.4	0.5
Triodia secunda	0.4	30
Wahlenbergia tumidifructa	0.1	0.1

PHOTOS



Site Name: WOS07

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 08/08/2024

GPS Location: GDA94 Zone 50 684551.2E 7663160.56N

Orientation: 90, 180

Landform Type: Flat

Slope Class: Level (0°)

Aspect: None

Soil Type: Sandy Loam

Soil Colour: Red-Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: 0%

Habitat: Grevillea wickhamii tall isolated clumps of shrubs over Acacia stellaticeps mid open shrubland over Triodia lanigera low hummock grassland.

Comments: Adjacent to major drainage

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684551	7663161	NW
Corner 2	684548	7663114	
Corner 3	684597	7663111	SE
Corner 4	684596	7663164	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Grevillea wickhamii* subsp. *macrodonta*

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia stellaticeps	1.3	12
Acacia trachycarpa	1.5	0.1
Afrohybanthus aurantiacus	0.5	0.1
Arivela uncifera	0.1	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Bulbostylis barbata	0.1	0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.1	0.1
Dodonaea coriacea	1.4	0.1

Eragrostis eriopoda	0.4	0.1
Eriachne obtusa	0.5	0.1
Grevillea wickhamii subsp. *macrodonta*	4	0.6
Indigofera monophylla	0.4	0.1
Panicum australiense var. *australiense*	0.1	0.1
Pluchea ferdinandi-muelleri	1.3	0.1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Polycarpaea holtzei	0.1	0.1
Ptilotus axillaris	0.1	0.1
Senna notabilis	0.1	0.1
Trianthema pilosum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.6	60

PHOTOS



Site Name: WOS12

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 07/08/2024

GPS Location: GDA94 Zone 50 681878.56E 7663170.18N

Orientation: 90, 180

Landform Type: Plain

Slope Class: Level (0°)

Aspect: None

Soil Type: Sandy Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: No bedrock exposed

CF Abundance: <2%

CF Sizes: 2-6mm, 6-20mm

CF Types: Colluvium

Vegetation Condition: Combined Vegetation Condition - E - Excellent

Habitat: Acacia stellaticeps low isolated clumps of shrubs over Triodia wiseana and Triodia epactia mid open hummock grassland.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681879	7663170	NW
Corner 2	681876	7663122	SW
Corner 3	681924	7663120	SE
Corner 4	681927	7663172	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2: *Acacia stellaticeps*

Lower Stratum 1: *Triodia wiseana*

Lower Stratum 2: *Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	0.7	0.1
Acacia stellaticeps	0.4	0.2
Arivela viscosa	0.2	0.1
Bonamia erecta	0.3	0.1
Cassytha capillaris		0.1
Codonocarpus cotinifolius	0.5	0.1
Corymbia hamersleyana	4.2	0.1

Eriachne pulchella	0.1	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca cunninghamii	0.2	0.1
Grevillea wickhamii	0.3	0.1
Hakea lorea subsp. *lorea*	1.6	0.1
Heliotropium crispatum	0.1	0.1
Petalostylis labicheoides	1.2	0.1
Pluchea ferdinandi-muelleri	0.4	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.5	0.5
Triodia wiseana	0.5	25

PHOTOS



Site Name:	WOS13
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	07/08/2024
GPS Location:	GDA94 Zone 50 681982.3824E 7663116.554N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz
Disturbance:	Grazing - Cattle
Fire:	>5yrs
Habitat:	Petalostylis labeichoides and Acacia acradenia mid isolated clumps of shrubs over Triodia lanigera and Triodia wiseana low open hummock grassland over Bonamia erecta isolated herbs
Comments:	Evidence of drought stress, recent shrub death

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681982	7663117	NW
Corner 2	681982	7663067	SW
Corner 4	682031	7663119	NE
Corner 3	682030	7663067	SE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2: *Acacia acradenia*, *Petalostylis labicheoides*

Lower Stratum 1: *Triodia lanigera*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.6	2.5
Acacia ancistrocarpa	0.6	0.1
Acacia inaequilatera	0.5	0.1
Afrohybanthus aurantiacus	0.1	0.1
Arivela uncifera	0.1	0.1
Bonamia alatisemina		0.1

Bonamia erecta	0.3	0.2
Bulbostylis barbata	0.1	0.1
Cassytha capillaris		0.1
Chrysopogon fallax	0.4	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus sp.	0.1	0.1
Corymbia hamersleyana	2.5	0.1
Eriachne pulchella	0.1	0.1
Goodenia microptera	0.4	0.1
Grevillea wickhamii	1.7	0.1
Hakea lorea subsp. *lorea*		
Petalostylis labicheoides	1.6	1
Polycarpaea corymbosa var. *corymbosa*	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Tribulus hirsutus	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	22
Triodia wiseana	0.3	0.5

PHOTOS



Site Name:	WOS14
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 682152.23E 7663124.98N
Orientation:	90, 180
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Chert (other), Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Weeds
Fire:	>10yrs
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Acacia ancistrocarpa and Acacia acradenia mid isolated clumps of shrubs over Triodia epactia, Triodia lanigera low hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	682152	7663125	NW
Corner 2	682152	7663076	SW
Corner 3	682202	7663075	SE
Corner 4	682201	7663125	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*, *Triodia schinzii*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.6	0.2
Acacia ancistrocarpa	1.7	0.2
Acacia inaequilatera	2.1	0.5
Acacia stellaticeps	0.7	0.1
Afrohybanthus aurantiacus	0.2	0.1

Arivela uncifera	0.1	0.1
Arivela viscosa	0.3	0.1
Bonamia alatisemina		0.1
Bonamia erecta	0.4	0.1
Bulbostylis barbata	0.1	0.1
Calandrinia ?stagnensis	0.1	0.1
Corchorus parviflorus	0.2	0.1
Cynodon prostratus	0.1	0.1
Dampiera candicans	0.1	0.1
Dysphania rhadinostachya subsp. *rhadinostachya*	0.2	0.1
Eragrostis dielsii	0.1	0.1
Eriachne pulchella	0.1	0.1
Euphorbia australis var. *subtomentosa*	0.2	0.1
Euphorbia tannensis subsp. *eremophila*	0.1	0.1
Euphorbia vaccaria var. *vaccaria*	0.1	0.1
Euploca mutica (P3)	0.1	0.1
Euploca tenuifolia	0.2	0.1
Goodenia microptera	0.1	0.1
Grevillea wickhamii	3.2	0.1
Indigofera monophylla	0.2	0.1
Isotropis atropurpurea	0.1	0.1
Panicum australiense var. *australiense*	0.1	0.1
Petalostylis labicheoides	1.5	0.1
Polycarpaea corymbosa var. *corymbosa*	0.2	0.1
Polycarpaea holtzei	0.1	0.1
Polygala galeocephala	0.1	0.1
Portulaca conspicua	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.3	0.1
Ptilotus fusiformis	0.5	0.1
Ptilotus helipteroides	0.4	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	1.1	0.1
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.2	0.1
Sporobolus australasicus	0.1	0.1
Streptoglossa odora	0.2	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.1	0.1
Trianthema pilosum	0.1	0.1
Trianthema triquetrum	0.1	0.1
Tribulus hirsutus	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.1	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	1
Triodia lanigera	0.4	3

Triodia schinzii	0.4	35
Wahlenbergia tumidifructa	0.1	0.1

PHOTOS



Site Name: WOS18

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 09/08/2024

GPS Location: GDA94 Zone 50 698966.1839E 7663900.911N

Orientation: 90, 180

Landform Type: Undulating Plain

Slope Class: Moderately Inclined (10°)

Aspect: NNE

Soil Type: Sandy Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: Calcrete, 20-50% bedrock exposed

CF Abundance: 50-90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Granite, Ironstone, Quartz, Calcrete

Fire: >5yrs

Habitat: Acacia inaequilatera tall isolated shrubs over Acacia ancistrocarpa mid isolated shrubs over Acacia acradenia low isolated clumps of shrubs over Triodia chichesterensis low hummock grassland.

Comments: Historical vehicle tracks to the East of quadrat

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698966	7663901	NW
Corner 2	698965	7663852	SW
Corner 3	699017	7663853	SE
Corner 4	699017	7663904	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia inaequilatera*

Mid Stratum 2: *Acacia acradenia*, *Acacia ancistrocarpa*

Lower Stratum 1: *Triodia angusta*, *Triodia chichesterensis*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	0.5	0.2
Acacia ancistrocarpa	1	0.2
Acacia bivenosa	1.4	0.1
Acacia inaequilatera	3	0.2
Cassytha capillaris		0.1
Corymbia hamersleyana	4	0.1

Dolichocarpa crouchiana	0.1	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.1	0.1
Grevillea wickhamii	2.5	0.1
Indigofera monophylla	0.3	0.1
Petalostylis labicheoides	0.7	0.1
Ptilotus astrolasius	0.1	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Ptilotus clementii	0.1	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Solanum phlomoides	0.2	0.1
Tephrosia clementii	0.1	0.1
Tribulus hirsutus	0.1	0.1
Triodia angusta	0.4	2
Triodia chichesterensis (P3)	0.2	45
Triodia wiseana	0.3	0.1

PHOTOS



Site Name: WOS20

Site Type: QUADRAT

Dimensions: 50m x 50m

Survey Date: 09/08/2024

GPS Location: GDA94 Zone 50 700941.7769E 7656698.611N

Orientation: 90, 180

Landform Type: Other, Foothills (other)

Slope Class: Moderately Inclined (10°)

Soil Type: Clay Loam

Soil Colour: Brown

Soil Condition: Dry

Rock Outcrop: Calcrete, <2% bedrock exposed

CF Abundance: >90%

CF Sizes: 2-6mm, 6-20mm, 20-60mm, 60-200mm

CF Types: Quartz, Calcrete

Fire: >5yrs

Habitat: Acacia ineaquilatera and Acacia acradenia tall isolated clumps of shrubs over Triodia wiseana, Triodia lanigera low open hummock grassland over Goodenia stobbsiana low isolated clumps of forbs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700942	7656699	NW
Corner 2	700941	7656649	SW
Corner 3	700993	7656649	SE
Corner 4	700994	7656697	NE

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia acradenia*, *Acacia inaequilatera*

Lower Stratum 1: *Triodia lanigera*, *Triodia wiseana*

Lower Stratum 2: *Goodenia stobbsiana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.2
Acacia bivenosa	0.3	0.1
Acacia inaequilatera	2.5	0.3
Acacia pyrifolia var. *pyrifolia*	1.1	0.1
Arivela viscosa	0.4	0.1
Boerhavia coccinea	0.3	0.1
Bonamia pilbarensis	0.1	0.1
Cassytha capillaris		0.1
Corchorus parviflorus	0.2	0.1

Corymbia hamersleyana	2.6	0.1
Dolichocarpa crouchiana	0.1	0.1
Dysphania plantaginella	0.1	0.1
Enneapogon caerulescens	0.1	0.1
Eriachne mucronata	0.25	0.1
Euphorbia tannensis subsp. *eremophila*	0.4	0.1
Euploca cunninghamii	0.2	0.1
Euploca pachyphylla	0.2	0.1
Goodenia stobbsiana	0.2	0.5
Hakea lorea subsp. *lorea*	1.4	0.1
Notoleptopus decaisnei	0.1	0.1
Petalostylis labicheoides	0.8	0.1
Ptilotus axillaris	0.1	0.1
Ptilotus calostachyus	0.1	0.1
Santalum lanceolatum	0.4	0.1
Solanum phlomoides	0.2	0.1
Stackhousia intermedia	0.2	0.1
Triodia angusta	0.3	1
Triodia lanigera	0.4	7
Triodia wiseana	0.4	19

PHOTOS



Site Name:	WOS22
Site Type:	QUADRAT
Dimensions:	50m x 50m
Survey Date:	10/08/2024
GPS Location:	GDA94 Zone 50 684858.94E 7663690.49N
Orientation:	90, 180
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Sand
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Grazing - Cattle, Weeds, Animal - Feral cat prints
Habitat:	Eucalyptus camaldulensis and Atalaya hemiglauca low-mid isolated clumps of trees over Acacia trachycarpa, and Melaleuca glomerata tall isolated clumps of shrubs over Melaleuca linophylla mid isolated clumps of shrubs over Triodia epactia isolated clumps of hummock grassland over Cenchrus cilliaris low isolated clumps of tussock grasses.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684859	7663690	NW
Corner 2	684859	7663640	SW
Corner 3	684910	7663641	SE
Corner 4	684911	7663691	NE

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Atalaya hemiglauca*, *Eucalyptus camaldulensis* subsp. *refulgens*
Mid Stratum 1:	*Acacia trachycarpa*, *Melaleuca glomerata*
Mid Stratum 2:	*Melaleuca linophylla*
Lower Stratum 1:	*Triodia epactia*
Lower Stratum 2:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia coriacea subsp. *pendens*		0.1
Acacia trachycarpa	4	1

**Aerva javanica*	0.6	0.1
Afrohybanthus aurantiacus	0.4	0.1
Arivela viscosa	0.2	0.1
Atalaya hemiglauca	4.5	1.5
Bonamia pilbarensis	0.1	0.1
Bulbostylis barbata	0.1	0.1
Calandrinia tepperiana	0.1	0.1
**Cenchrus ciliaris*	0.5	1.5
**Cenchrus setiger*	0.1	0.1
Corchorus aff. incanus (Potentially undescribed)	0.7	0.1
Crotalaria cunninghamii	0.6	0.1
Cucumis variabilis		0.1
Cyperus vaginatus	0.3	0.1
Eucalyptus camaldulensis subsp. *refulgens*	11	3
Eulalia aurea	0.4	0.1
Euphorbia australis var. *subtomentosa*	0.1	0.1
Euphorbia biconvexa	0.2	0.1
Euphorbia tannensis subsp. *eremophila*	0.5	0.1
Euphorbia vaccaria var. *vaccaria*	0.2	0.1
Evolvulus alsinoides var. *decumbens*	0.1	0.1
Goodenia lamprosperma	0.3	0.1
Hibiscus austrinus var. *austrinus*	0.2	0.1
Indigofera colutea	0.1	0.1
Ipomoea polymorpha		0.1
Isotropis atropurpurea	0.1	0.1
Melaleuca glomerata	2.1	3
Melaleuca linophylla	1.7	1.5
Microstachys chamaelea	0.2	0.1
Nellica maderaspatensis	0.2	0.1
**Opuntia* sp.	0.5	0.1
Paspalidium clementii	0.1	0.1
Polycarpaea longiflora	0.3	0.1
Polymeria mollis		0.1
Portulaca oleracea	0.1	0.1
Pterocaulon serrulatum var. *velutinum*	0.1	0.1
Ptilotus fusiformis	0.3	0.1
Rhynchosia minima		0.1
Solanum diversiflorum	0.2	0.1
Solanum phlomoides	0.4	0.1
Stemodia viscosa	0.1	0.1
Synaptantha tillaeacea var. *tillaeacea*	0.1	0.1
Tephrosia rosea var. *clementii*	0.4	0.1
Tribulus hirsutus	0.1	0.1
Tribulus occidentalis	0.1	0.1
Trichodesma zeylanicum var. *zeylanicum*	0.2	0.1
Triodia epactia	0.4	3
Waltheria indica	0.1	0.1

PHOTOS



Site Name:	WHDR01
Site Type:	RELEVE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 674274.97E 7666181.36N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	> 5 years/3 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland.
Comments:	Last 10 species are fire opportunists.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	5
Acacia inaequilatera	2	0.1
Acacia tumida var. *pilbarensis*	2.5	1
Aristida holathera var. *holathera*	0.3	0.1
Arivela uncifera	0.3	0.1
Bonamia erecta	0.4	0.1
Corymbia hamersleyana	4	0.1
Corymbia zygophylla	4	0.5
Eragrostis eriopoda	0.3	0.1
Euploca vestita	0.2	0.1
Goodenia microptera	0.3	0.1
Goodenia stobbsiana	0.4	0.1
Halgania solanacea var. *solanacea* ms	0.3	0.1
Paraneurachne muelleri	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Sida arenicola	0.5	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	30

PHOTOS



Site Name:	WHDR02
Site Type:	RELEVE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 673508.6956E 7668511.908N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	>5 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	3	6
Acacia inaequilatera	2	0.1
Acacia orthocarpa		
Acacia tumida var. *pilbarensis*	3	0.5
Bonamia erecta	0.4	0.1
Corymbia hamersleyana		
Corymbia zygophylla	5	0.5
Dampiera candicans	0.4	0.1
Grevillea wickhamii	3	0.1
Halgania solanacea var. *solanacea* ms	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	30

PHOTOS



Site Name:	WHDR03
Site Type:	RELEVE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 669974.0143E 7671572.66N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	< 5 years
Habitat:	Isolated low trees over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	0.2
Acacia inaequilatera	2	1
Acacia sericophylla	2	1
Acacia stellaticeps	0.5	0.1
Bonamia alatisemina	0.1	0.1
Bonamia erecta	0.3	0.1
Corymbia hamersleyana	3	0.3
Corymbia zygophylla	3	0.5
Euploca mutica (P3)	0.2	0.1
Goodenia forrestii		
Goodenia microptera	0.1	0.1
Grevillea wickhamii	1.5	0.1
Hakea lorea subsp. *lorea*	2	0.1
Halgania solanacea var. *solanacea* ms	0.3	0.1
Indigofera monophylla	0.2	0.1
Isotropis atropurpurea	0.2	0.1
Tinospora smilacina		
Triodia lanigera		
Triodia schinzii	0.4	30

PHOTOS



Site Name:	WHDR04
Site Type:	RELEVE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 670801.9136E 7672171.109N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	> 5 years/3 years
Habitat:	Isolated tall shrubs over low sparse shrubland over low hummock grassland.
Comments:	This vegetation is a mosaic with vegetation from WHDR03. Mosaic of fire history throughout.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.5	0.2
Acacia stellaticeps	0.5	0.2
Bonamia erecta	0.3	0.1
Bulbostylis barbata	0.1	0.1
Calandrinia stagnensis	0.1	0.1
Chrysopogon fallax	0.5	0.1
Codonocarpus cotinifolius	1.2	0.1
Corchorus parviflorus	0.3	0.1
Eragrostis dielsii	0.1	0.1
Eriachne obtusa	0.3	0.1
Eriachne pulchella	0.1	0.1
Goodenia microptera	0.3	0.1
Hakea lorea subsp. *lorea*	2	0.1
Pluchea ferdinandi-muelleri	0.5	0.5
Pluchea tetranthera	0.3	0.1
Sporobolus actinocladus	0.2	0.1
Synaptantha tillaeacea	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trianthema triquetrum	0.2	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	25
Triodia lanigera	0.4	3
Triodia schinzii	0.4	0.2

PHOTOS



Site Name:	WHDR05
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 667199.34E 7668332.73N
Landform Type:	Other, Low rise (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Limited Clearing - Old tracks, Animal Disturbance - Cattle
Fire:	ca. 3 years
Habitat:	Low open woodland over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera	2	3
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	1.5	0.3
Corymbia hamersleyana	3	1
Eriachne mucronata	0.4	0.1
Euploca pachyphylla	0.3	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	2	0.3
Indigofera monophylla	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus clementii	0.3	0.1
Scaevola amblyanthera var. *centralis*	0.3	0.1
Senna artemisioides subsp. *oligophylla*	0.4	0.1
Tribulus hirsutus	0.1	0.1
Triodia chichesterensis (P3)	0.3	30
Triodia wiseana	0.3	0.1

PHOTOS



Site Name:	WHDR06
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 667196.4924E 7668277.178N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Limited Clearing - Tracks nearby, Animal Disturbance - Cattle
Fire:	ca. 3 years
Habitat:	Low isolated trees over tall sparse shrubland over low sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	5
Acacia inaequilatera	2.5	1.5
Acacia tumida var. *pilbarensis*	3	0.2
Arivela uncifera	0.5	0.1
Bonamia erecta	0.3	1
Corchorus parviflorus	0.6	0.1
Corymbia hamersleyana	3	0.2
Eragrostis eriopoda	0.4	0.1
Goodenia forrestii	0.2	0.1
Goodenia microptera	0.2	0.1
Grevillea wickhamii	2	0.1
Halgania solanacea var. *solanacea* ms	0.4	0.1
Indigofera monophylla	0.4	0.3
Ptilotus astrolasius	0.4	0.1
Ptilotus axillaris	0.1	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	15
Triodia schinzii	0.4	15

PHOTOS



Site Name:	WHDR07
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 670849.517932587E 7673472.34231295N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.5
Acacia inaequilatera	2.5	0.5
Bonamia alatisemina		0.1
Bonamia erecta	0.3	0.1
Corymbia hamersleyana	4	0.5
Grevillea wickhamii	2	3
Hakea lorea subsp. *lorea*	1	0.1
Ptilotus astrolasius	0.3	0.1
Triodia lanigera	0.4	30
Triodia schinzii	0.4	0.1

PHOTOS



Site Name:	WHDR08
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 671077.0003E 7673456.047N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Sand (mix) (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	ca. 3 years/5 years
Habitat:	Low open woodland over tall sparse shrubland over low hummock grassland.
Comments:	Mix of fire history

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	2
Acacia inaequilatera	2.5	0.5
Acacia sericophylla	2	0.2
Acacia stellaticeps	0.5	0.3
Bonamia erecta	0.3	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	4	3
Ptilotus astrolasius	0.3	0.1
Senna symonii	0.4	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Triodia lanigera	0.4	12
Triodia schinzii	0.4	18

PHOTOS



Site Name:	WHDR09
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 672926.33E 7670154.01N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Limited Clearing - Vehicle tracks, Animal Disturbance - Cattle
Fire:	3 years
Habitat:	Low open woodland over tall sparse shrubland over low hummock grassland.
Comments:	The last 10 species are fire opportunists.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	5
Acacia tumida var. *pilbarensis*	3	1
Bonamia erecta	0.4	0.3
Corymbia hamersleyana	4	0.1
Corymbia zygophylla	4	2
Dampiera candicans	0.2	0.1
Euploca skeleton	0.4	0.1
Euploca vestita	0.2	0.1
Goodenia microptera	0.3	0.1
Halgania solanacea var. *solanacea* ms	0.2	0.1
Isotropis atropurpurea	0.2	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus fusiformis	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.3	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia lanigera	0.4	15
Triodia schinzii	0.4	15

PHOTOS



Site Name:	WHDR10
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 683105.0097E 7663188.955N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	>5 years
Habitat:	Mid sparse shrubland over low open hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.2	0.2
Acacia stellaticeps	0.4	0.1
Fimbristylis dichotoma	0.1	0.1
Petalostylis labicheoides	1.2	0.2
?*Sclerolaena* sp.	0.1	0.1
Triodia angusta	0.3	15
Triodia epactia	0.3	0.1
Triodia lanigera	0.3	0.2

PHOTOS



Site Name:	WHDR11
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 684437.8823E 7663238.006N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Limited Clearing, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Tall sparse shrubland over low sparse shrubland over low open hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	2	0.5
Acacia stellaticeps	0.5	2
Acacia trachycarpa	2	4
Afrohybanthus aurantiacus	0.4	0.1
Bonamia erecta	0.4	0.1
Cajanus cinereus	1	0.1
Codonocarpus cotinifolius	1	0.1
Corchorus aff. *incanus*	1	0.1
Crotalaria cunninghamii	1.2	0.1
Eriachne obtusa	0.4	0.1
Grevillea wickhamii	2.5	0.5
Indigofera monophylla	0.5	0.1
Tephrosia rosea var. *clementii*	0.5	0.1
Triodia epactia	0.5	10
Triodia lanigera	0.5	10
Triumfetta propinqua	1	0.5

PHOTOS



Site Name:	WHDR12
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 684568.8957E 7663340.515N
Landform Type:	Other, River island (other)
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Tall sparse shrubland over mid sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia trachycarpa	2.5	3
Adriana tomentosa	1.8	0.2
**Aerva javanica*	0.5	0.1
Cajanus cinereus	1.8	0.1
**Cenchrus ciliaris*	0.5	0.2
Corchorus aff. *incanus*	1.5	0.3
Crotalaria cunninghamii	1.5	0.2
Eucalyptus victrix		
Grevillea wickhamii	3.5	0.5
Melaleuca glomerata	3.5	1
Petalostylis labicheoides	3	0.2
Triodia lanigera	0.5	30
Triumfetta propinqua	1.6	0.5
Waltheria indica	0.5	0.1

PHOTOS



Site Name:	WHDR13
Site Type:	RELEVE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 684689.2079E 7663415.018N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Light brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - P - Poor
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Mid open woodland over tall sparse shrubland over mid sparse shrubland over low tussock/hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Abutilon amplum	1.2	0.1
Acacia ampliceps	4	0.3
Acacia coriacea subsp. *pendens*	5	0.1
Acacia pyrifolia var. *pyrifolia*	1.5	0.2
Acacia trachycarpa	4	2
**Aerva javanica*	1	0.2
Afrohybanthus aurantiacus	0.3	0.1
Arivela viscosa	1	0.1
Atalaya hemiglauca	4	0.1
**Calotropis procera*	2.5	0.1
**Cenchrus ciliaris*	0.5	8
Corchorus aff. *incanus*	1.2	1.5
Crotalaria cunninghamii	1.5	0.1
Cucumis variabilis		0.1
Cyperus vaginatus	0.8	0.2
Eriachne benthamii	1	0.1
Eucalyptus camaldulensis subsp. *refulgens*	10	3
Eulalia aurea	1	0.1
Euphorbia australis var. *subtomentosa*	0.2	0.1
Euphorbia trigonosperma	0.3	0.1
Goodenia lamprosperma	0.3	0.1
Hibiscus austrinus var. *austrinus*	1.5	0.1
Indigofera colutea	0.3	0.1
Melaleuca argentea	8	2
Melaleuca glomerata	3	7
Melaleuca linophylla	3	0.5
**Opuntia* sp.	1	0.1

Taxon Name	Avg. Height	Cover Alive
Ptilotus fusiformis	0.4	0.1
Rhynchosia minima		0.1
Stemodia grossa	0.3	0.1
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)	1.5	0.2
Triodia epactia	0.4	0.5
Triodia lanigera	0.4	0.5
Triumfetta propinqua	2.5	0.1
Vigna lanceolata		0.1
Waltheria indica	0.8	0.1

PHOTOS



Site Name:	WHDR14
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 685141.6014E 7663816.434N
Landform Type:	Other, Low Rise (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	Chert (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	0.3
Acacia ancistrocarpa	3.5	2
Acacia inaequilatera	2.5	1.5
Triodia brizoides	0.4	15
Triodia wiseana	0.4	15

PHOTOS



Site Name:	WHDR15
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 685101.217E 7663745.135N
Landform Type:	Other, Low Rise (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Sandstone (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Sandstone (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Limited Clearing - Some historical clearing
Fire:	>5 years
Habitat:	Tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2.5	0.5
Acacia inaequilatera	2.5	1
Acacia orthocarpa	3	5
Fimbristylis dichotoma	0.1	0.1
Triodia epactia	0.3	30

PHOTOS



Site Name:	WHDR16
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687315.706E 7664176.143N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Acacia ancistrocarpa	2	0.5
Bonamia pilbarensis	0.1	0.1
Eriachne mucronata	0.3	0.1
Eriachne pulchella	0.1	0.1
Fimbristylis simulans	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Triodia lanigera	0.4	15
Triodia wiseana	0.4	15

PHOTOS



Site Name:	WHDR17
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687360.1762E 7664203.654N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Low open woodland over tall sparse shrubland over mid sparse shrubland over mixed low open woodland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2	0.2
Acacia tumida var. *pilbarensis*	4	3
Afrohybanthus aurantiacus	0.2	0.1
Cajanus cinereus	1.5	1
**Cenchrus ciliaris*	0.4	0.2
Chrysopogon fallax	0.4	15
Corchorus parviflorus	1	0.3
Corymbia hamersleyana	6	8
Indigofera monophylla	0.8	0.1
Perotis rara	0.1	0.1
Pluchea tetranthera	0.4	0.1
Polymeria mollis		0.1
Sporobolus australasicus	0.1	0.1
Tephrosia rosea var. *clementii*	1.2	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.6	0.1
Triodia epactia	0.4	5

PHOTOS



Site Name:	WHDR18
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687506.0235E 7664164.35N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Mid woodland over tall sparse shrubland over mid-open tussock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia colei	3	0.5
Acacia pyrifolia var. *pyrifolia*	2	0.1
Acacia trachycarpa	3	0.2
Acacia tumida var. *pilbarensis*	3	4
Cajanus cinereus	1.5	0.5
**Cenchrus ciliaris*	0.4	0.3
Chrysopogon fallax	0.5	2
Corymbia hamersleyana	8	1.5
Dichanthium fecundum	1	8
Eriachne benthamii	0.8	0.1
Eucalyptus camaldulensis subsp. *refulgens*	13	12
Eucalyptus victrix	12	3
Eulalia aurea	0.8	0.2
Goodenia lamprosperma	0.3	0.1
Gossypium robinsonii	2	0.1
Heteropogon contortus	0.8	0.3
Indigofera monophylla	1	0.1
Panicum decompositum	0.4	0.1
Petalostylis labicheoides	2.5	0.1
Polymeria sp. (potentially undescribed)		0.1
Sida spinosa	0.3	0.1
Tephrosia rosea var. *clementii*	1.5	0.3
Themeda triandra	0.8	0.1
Triodia epactia	0.5	0.3

PHOTOS



Site Name:	WHDR19
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687629.591E 7664176.013N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia orthocarpa	4	5
Acacia pyrifolia var. *pyrifolia*	5	0.2
Acacia tumida var. *pilbarensis*	4	3
Afrohybanthus aurantiacus	0.4	0.1
Bonamia erecta	0.3	0.1
Corchorus parviflorus	1	0.1
Corymbia hamersleyana	6	1
Eriachne obtusa	0.4	0.1
Grevillea wickhamii	4	0.5
Petalostylis labicheoides	2.5	0.3
Seringia nephrosperma	1.5	0.1
Tephrosia rosea var. *clementii*	1.5	0.2
Triodia epactia	0.4	30

PHOTOS



Site Name:	WHDR20
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 691611.4035E 7664296.391N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	< 5 years
Habitat:	Mid sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	1
Acacia ancistrocarpa	1.5	1
Bonamia erecta	0.3	0.1
Corchorus parviflorus	0.4	0.1
Ptilotus calostachyus	0.5	0.1
Triodia lanigera	0.4	30
Triodia wiseana	0.4	0.1

PHOTOS



Site Name:	WHDR21
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 691591.4527E 7664224.647N
Landform Type:	Other, Flow line (other)
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	< 5 years
Habitat:	Low isolated trees over tall open shrubland over low tussock/hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.1
Acacia ancistrocarpa	3	1
Acacia tumida	4	20
Afrohybanthus aurantiacus	0.4	0.2
Bonamia erecta	0.3	0.2
Bulbostylis barbata	0.1	0.1
Chrysopogon fallax	0.4	15
Corchorus parviflorus	0.4	0.2
Corymbia hamersleyana	4.5	2
Dampiera candicans	0.4	0.2
Eulalia aurea	0.6	0.2
Hibiscus sturtii var. *campylochlamys*	0.4	0.1
Indigofera monophylla	0.4	0.1
Isotropis atropurpurea	0.4	0.1
Petalostylis labicheoides	3	2
Pluchea tetranthera	0.4	0.1
Polycarpaea corymbosa	0.1	0.1
Portulaca oleracea	0.1	0.1
Ptilotus astrolasius	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Ptilotus fusiformis	0.3	0.1
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.4	0.1
Trigastrotheca molluginea	0.1	0.1
Triodia epactia	0.4	15

PHOTOS



Site Name:	WHDR22
Site Type:	RELEVE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 696313.2265E 7665822.905N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Extensive Clearing - Clearing nearby
Fire:	< 5 years
Habitat:	Low isolated trees over tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.1
Acacia bivenosa	1.5	0.1
Acacia inaequilatera	2.5	0.5
Bonamia pilbarensis	0.1	0.1
Codonocarpus cotinifolius	0.5	0.1
Corchorus parviflorus	0.3	0.1
Corymbia hamersleyana	4	1
Goodenia stobbsiana	0.3	0.1
Petalostylis labicheoides	1.5	0.1
Solanum phlomoides	0.4	0.1
Triodia angusta	0.3	15
Triodia chichesterensis (P3)	0.2	15
Triodia wiseana	0.4	0.1

PHOTOS



Site Name:	WHDR23
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 695202.67E 7664302.17N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Quartz, Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Tall sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	0.2
Acacia ancistrocarpa	2.5	5
Acacia inaequilatera	2.5	0.4
Corchorus parviflorus	0.3	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	3	0.1
Indigofera monophylla	0.3	0.1
Ptilotus calostachyus	0.5	0.1
Triodia lanigera	0.4	30

PHOTOS



Site Name:	WHDR24
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 697973.5743E 7662169.415N
Landform Type:	Other, Undulating low hills (other)
Slope Class:	Moderately Inclined (10 degrees)
Soil Type:	Clay Loam
Soil Colour:	Light brown (other)
Rock Outcrop:	<2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Shale (other), Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10 years
Habitat:	Isolated tall shrubs over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.1
Acacia inaequilatera	3	0.2
Triodia angusta	0.4	10
Triodia chichesterensis (P3)	0.3	20
Triodia wiseana	0.4	0.2

PHOTOS



Site Name:	WHDR25
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698018.4468E 7662116.609N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Isolated low trees over tall open shrubland over low hummock/tussock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	0.5
Acacia tumida var. *pilbarensis*	5	15
Afrohybanthus aurantiacus	0.4	0.1
Cajanus cinereus	1.5	0.1
Chrysopogon fallax	0.4	10
Corymbia hamersleyana	5	2
Gossypium robinsonii	3	0.2
Grevillea wickhamii	3	0.5
Heteropogon contortus	0.6	2
Hibiscus sturtii var. *campylochlamys*	0.2	0.1
Indigofera monophylla	1.5	0.1
Paraneurachne muelleri	0.4	1
Petalostylis labicheoides	2.5	0.5
Rhynchosia minima		0.1
Themeda triandra	0.5	1
Triodia angusta	0.6	20
Triodia wiseana	0.6	1

Site Name:	WHDR26
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698075.5304E 7662059.781N
Landform Type:	Other, Undulating low hills (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10 years
Habitat:	Tall open shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	1
Acacia ancistrocarpa	2.5	10
Acacia inaequilatera	3	0.5
Acacia stellaticeps	0.6	0.1
Corymbia hamersleyana	2.5	0.1
Fimbristylis simulans	0.1	0.1
Triodia lanigera	0.4	29
Triodia wiseana	0.4	1

PHOTOS



Site Name:	WHDR27
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699971.2309E 7659722.722N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Mid open woodland over tall sparse shrubland over low sparse shrubland over low hummock/tussock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2.5	1
Acacia trachycarpa	3	3
Atalaya hemiglauca	2.5	0.1
Cajanus cinereus	1	0.2
**Cenchrus ciliaris*	0.4	0.3
Chrysopogon fallax	0.4	1
Corchorus laniflorus	0.8	0.1
Corchorus parviflorus	0.4	0.1
Cymbopogon ambiguus	0.5	0.2
Cyperus vaginatus	0.8	0.1
Dichanthium fecundum	1	0.4
Eriachne tenuiculmis	0.4	0.3
Eucalyptus camaldulensis subsp. *refulgens*	12	1
Eucalyptus victrix	12	5
Goodenia lamprosperma	0.3	0.1
Gossypium robinsonii	0.5	0.1
Heteropogon contortus	0.6	0.2
Indigofera monophylla	1	0.2
Melaleuca glomerata	3	5
Nellica maderaspatensis	0.4	0.1
Petalostylis labicheoides	2.5	0.2
Senna notabilis	0.6	0.1
Stemodia grossa	0.4	0.2
Tephrosia rosea var. *clementii*	0.6	0.2
Themeda triandra	0.5	0.1
Triodia epactia	0.8	0.5

PHOTOS



Site Name:	WHDR28
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700198.6684E 7658674.485N
Landform Type:	Other, River island (other)
Slope Class:	Level (0 degrees)
Soil Type:	Sandy Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Tall sparse shrubland over low sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2	2
Acacia trachycarpa	2	1
Acacia tumida var. *pilbarensis*	2.5	2
Corchorus laniflorus	1	0.5
Dampiera candicans	0.8	0.1
Eriachne obtusa	0.3	0.1
Grevillea wickhamii	3	1
Indigofera monophylla	0.8	0.1
Petalostylis labicheoides	2	0.5
Tephrosia rosea var. *clementii*	0.8	0.2
Triodia epactia	0.4	30

PHOTOS



Site Name:	WHDR29
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 699994.9331E 7657448.434N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Animal Disturbance - Cattle
Fire:	>5 years
Habitat:	Isolated low trees over tall sparse shrubland over low sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	3
Acacia ancistrocarpa	2.5	1
Acacia inaequilatera	3	0.2
Acacia ptychophylla	0.6	2
Acacia stellaticeps	0.6	0.2
Acacia tumida var. *pilbarensis*	4	0.5
Corymbia hamersleyana	7	0.1
Eucalyptus leucophloia subsp. *leucophloia*	7	0.5
Fimbristylis simulans	0.1	0.1
Goodenia stobbsiana	0.3	0.1
Triodia lanigera	0.4	28
Triodia wiseana	0.4	2

PHOTOS



Site Name:	WHDR30
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 700213.3932E 7655623.804N
Landform Type:	Other, Low stony rise (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Chert (other), 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 5 years
Habitat:	Isolated low trees over tall sparse shrubland over low sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	0.2
Acacia adoxa var. *adoxa*	0.3	0.1
Acacia ancistrocarpa	2	0.2
Acacia bivenosa	1.8	0.1
Acacia inaequilatera	2.5	1.5
Acacia ptychophylla	0.5	0.1
Acacia synchronicia	0.8	0.1
Acacia tumida var. *pilbarensis*	2.5	0.3
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	1.8	0.1
Eriachne mucronata	0.3	0.2
Eucalyptus leucophloia subsp. *leucophloia*	5	0.3
Fimbristylis dichotoma	0.1	0.1
Goodenia stobbsiana	0.5	0.1
Senna glutinosa subsp. *glutinosa*	1	0.1
Tribulus suberosus	0.8	0.1
Triodia brizoides	0.3	12
Triodia wiseana	0.3	18

PHOTOS



Site Name:	WHDR31
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 700036.4626E 7655148.896N
Landform Type:	Ridge
Slope Class:	Steep (23 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	10-20% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5 years
Habitat:	Isolated low trees over isolated tall shrubs over mid sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1	3
Acacia inaequilatera	3	0.2
Eriachne mucronata	0.1	0.1
Eucalyptus leucophloia subsp. *leucophloia*	5	0.5
Gossypium australe	1.2	0.2
Grevillea wickhamii	1.5	0.2
Senna glutinosa subsp. *glutinosa*	0.5	0.1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	0.3	0.1
Tephrosia virens	0.3	0.1
Tribulus suberosus	0.5	0.1
Triodia brizoides	0.3	30
Triumfetta maconochieana	0.5	0.1

PHOTOS



Site Name:	WHDR32
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 699898.8696E 7655107.16N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	< 5 years
Habitat:	Low isolated trees over tall open shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	5
Acacia adoxa var. *adoxa*	0.2	0.1
Acacia tumida var. *pilbarensis*	2	0.2
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	4	1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	2.5	15
Petalostylis labicheoides	2	0.2
Ptilotus calostachyus	0.5	0.1
Scaevola browniana subsp. *browniana*	0.3	0.1
Triodia epactia	0.3	3
Triodia lanigera	0.3	27
Triodia wiseana	0.3	0.5
Waltheria virgata	0.3	0.1

PHOTOS



Site Name:	WHDR33
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 700898.951E 7656032.266N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Exotic Weeds, Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Low open woodland over tall sparse shrubland over low sparse shrubland over low tussock/hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2.5	1
Acacia tumida var. *pilbarensis*	3	0.5
Atalaya hemiglauca	2.5	0.1
Cajanus cinereus	1	0.2
**Cenchrus ciliaris*	0.4	0.2
Chrysopogon fallax	0.5	1
Corchorus laniflorus	1	0.5
Cymbopogon ambiguus	0.5	0.5
Cyperus ixiocarpus	0.5	0.1
Cyperus vaginatus	1.2	0.2
Dichanthium fecundum	1	0.1
Eragrostis cumingii	0.1	0.1
Eriachne benthamii	0.8	0.1
Eriachne tenuiculmis	0.5	3
Eucalyptus victrix	8	5
Flueggea virosa subsp. *melanthesoides*	3	0.1
Goodenia lamprosperma	0.2	0.1
Gossypium robinsonii	2.5	0.2
Grevillea wickhamii	3	2
Indigofera monophylla	0.8	0.1
Petalostylis labicheoides	2	0.1
Stemodia grossa	0.6	0.2
Tephrosia rosea var. *clementii*	1	0.3
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)	1	0.2
Terminalia circumalata	6	0.5
Triodia epactia	0.5	5

PHOTOS



Site Name:	WHDR34
Site Type:	RELEVE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 701927.8476E 7655022.462N
Landform Type:	Other, Flood plain (other)
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal Disturbance - Cattle
Fire:	>10 years
Habitat:	Tall open shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	2	5
Acacia tumida var. *pilbarensis*	3	5
Dampiera candicans	0.3	0.1
Gossypium robinsonii	2.5	0.5
Grevillea wickhamii	3	5
Indigofera monophylla	0.6	0.3
Petalostylis labicheoides	2	0.2
Pluchea dentex	0.3	0.1
Senna glutinosa subsp. *glutinosa*	0.5	0.1
Tephrosia rosea var. *clementii*	0.6	0.1
Triodia epactia	0.4	40
Waltheria virgata	0.5	0.1

PHOTOS



Site Name:	WHDR35
Site Type:	RELEVE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 701855.31E 7654849.16N
Landform Type:	Lower Slope
Slope Class:	Steep (23 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Calcrete
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10 years
Habitat:	Isolated low trees over isolated tall shrubs over mid sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.2	0.5
Acacia bivenosa	1.2	0.3
Acacia inaequilatera	3	0.5
Codonocarpus cotinifolius	5	0.1
Corymbia hamersleyana	6	1
Goodenia stobbsiana	0.3	0.1
Triodia angusta	0.3	35

PHOTOS



Site Name:	WHDR36
Site Type:	RELEVE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 701902.5773E 7654926.65N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>10 years
Habitat:	Isolated low trees over tall open shrubland over low sparse shrubland over low hummock grassland.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2.5	15
Acacia bivenosa	2	2
Acacia pyrifolia var. *pyrifolia*	2	0.3
Acacia stellaticeps	1	0.3
Acacia tumida var. *pilbarensis*	3	0.5
Cassytha capillaris		0.1
Corchorus parviflorus	0.5	0.1
Corymbia hamersleyana	5	0.5
Goodenia cusackiana	0.3	0.1
Goodenia stobbsiana	0.3	0.1
Grevillea wickhamii	2.5	0.5
Hakea lorea subsp. *lorea*	2.5	0.2
Indigofera monophylla	0.4	0.1
Petalostylis labicheoides	2	0.5
Ptilotus astrolasius	0.3	0.1
Triodia epactia	0.4	15
Triodia wiseana	0.4	15

PHOTOS



Site Name:	WHDR37
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 695828.5E 7666318.54N
Landform Type:	Other, Undulating plain (other)
Slope Class:	Very Gently Inclined (1 degree)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	60-200mm
CF Types:	Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5
Comments:	Vegetation equal to releve WHDR22

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia bivenosa		
Acacia inaequilatera		
Corchorus parviflorus		
Grevillea wickhamii		
Petalostylis labicheoides		
Ptilotus astrolasius		
Ptilotus clementii		
Triodia wiseana		

PHOTOS



Site Name:	WHDR38
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 696111.14E 7665256.57N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Types:	Chert (other), Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia ancistrocarpa		
Acacia inaequilatera		
Acacia stellaticeps		
Corchorus parviflorus		
Corymbia hamersleyana		
Grevillea wickhamii		
Indigofera monophylla		
Triodia lanigera		
Triodia wiseana		

PHOTOS



Site Name:	WHDR39
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698006.67E 7662356.05N
Landform Type:	Other, Low hills (other)
Slope Class:	Moderately Inclined (10 degrees)
Soil Type:	Clay Loam
Soil Colour:	Brown (other)
Rock Outcrop:	Chert (other), <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	60-200mm
CF Types:	Chert (other), Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5
Comments:	Vegetation equal to releve WHDR26

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia ancistrocarpa		
Acacia inaequilatera		
Fimbristylis simulans		
Triodia lanigera		
Triodia wiseana		

PHOTOS



Site Name:	WHDR40
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699517.92E 7659974.27N
Landform Type:	Other, Undulating plain (other)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
CF Abundance:	50-90%
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Comments:	Vegetation equal to releve WHDR26

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia ancistrocarpa		
Acacia inaequilatera		
Acacia ptychophylla		
Acacia stellaticeps		
Fimbristylis simulans		
Goodenia stobbsiana		
Grevillea wickhamii		
Triodia lanigera		
Triodia wiseana		

PHOTOS



Site Name:	WHDR41
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699235.32E 7660108.47N
Landform Type:	Drainage Line
Soil Type:	coarse sandy loam, colluvium (other)
Soil Colour:	Red-Brown
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Comments:	Vegetation equal to releve WHDR25

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia tumida*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia bivenosa		
Acacia tumida		
Afrohybanthus aurantiacus		
Cajanus pubescens		
Chrysopogon fallax		
Corymbia hamersleyana		
Dampiera candicans		
Grevillea wickhamii		
Hibiscus sturtii var. *campylochlamys*		
Indigofera monophylla		
Petalostylis labicheoides		
Triodia epactia		

PHOTOS



Site Name:	WHDR42
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699129.15E 7660202.33N
Landform Type:	Other, Undulating Plain (other)
Soil Type:	Clay Loam
Soil Colour:	Brown
CF Abundance:	50-90%
CF Types:	Shale (other), Quartz, Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs
Comments:	Similar to releve WHDR24

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa		
Acacia inaequilatera		
Codonocarpus cotinifolius		
Triodia angusta		
Triodia chichesterensis (P3)		
Triodia wiseana		

PHOTOS



Site Name:	WHDR43
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698889.8802E 7660321.162N
Landform Type:	Hillock
Slope Class:	Steep (23 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Chert (other), 10-20% bedrock exposed
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*, *Acacia tumida*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Acacia maitlandii		
Acacia tumida		
Corchorus parviflorus		
Eriachne mucronata		
Eriachne sp. Dugald River (B.K. Simon+ 3007)		
Eucalyptus leucophloia subsp. *leucophloia*		
Sida sp. Articulation below (A.A. Mitchell PRP 1605)		
Tribulus suberosus		
Triodia brizoides		
Triodia lanigera		

PHOTOS



Site Name:	WHDR44
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698624.8389E 7660465.104N
Landform Type:	Other, Erosional valley (other)
Soil Type:	Powdery (other)
Soil Colour:	Pale Brown (other)
CF Abundance:	>90%
CF Types:	Quartz
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia synchronicia*
Lower Stratum 1:	*Triodia angusta*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa		
Acacia synchronicia		
Trianthema triquetrum		
Triodia angusta		

PHOTOS



Site Name:	WHDR45
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698150.32E 7660717.98N
Landform Type:	Other, Low rise (other)
Slope Class:	Gently Inclined (3 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	20-60mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 2:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia ancistrocarpa		
Acacia bivenosa		
Acacia inaequilatera		
Indigofera monophylla		
Triodia lanigera		
Triodia wiseana		

PHOTOS



Site Name:	WHDR46
Site Type:	RELEVE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699466.58E 7655462.23N
Landform Type:	Drainage Line
Slope Class:	Level (0 degrees)
Soil Type:	Sand
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	200-600mm
CF Types:	Colluvium (other)
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia		
Acacia tumida		
Eriachne tenuiculmis		
Eucalyptus victrix		
Grevillea wickhamii		
Indigofera monophylla		
Petalostylis labicheoides		
Tephrosia rosea var. *clementii*		
Triodia epactia		

PHOTOS



Site Name:	WHDR47
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 700084.92E 7656383.59N
Landform Type:	Other, Low rise (other)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
CF Abundance:	50-90%
CF Types:	Pisolite (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	>5yrs
Comments:	Similar to WHDR29 but with different geology, mainly structurally different from WHDR29, dense tall shrubs.

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia ancistrocarpa		
Acacia stellaticeps		
Indigofera monophylla		
Triodia lanigera		

PHOTOS



Site Name:	WHDR48
Site Type:	RELEVE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 702561.79E 7654695.07N
Landform Type:	Plain
Slope Class:	Level (0 degrees)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	20-60mm
CF Types:	Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Grevillea wickhamii*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Acacia tumida		
Grevillea wickhamii		
Triodia lanigera		

PHOTOS



Site Name:	WHDR49
Site Type:	RELEVE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 701483.38E 7654837.66N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs
Comments:	Vegetation similar to WHDR31

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus leucophloia* subsp. *leucophloia*
Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*, *Acacia bivenosa*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia bivenosa		
Acacia inaequilatera		
Eucalyptus leucophloia subsp. *leucophloia*		
Triodia brizoides		

PHOTOS



Site Name:	WHDR50
Site Type:	RELEVE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 700871.0939E 7654992.88N
Landform Type:	Crest
Rock Outcrop:	Chert (other), 10-20% bedrock exposed
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>5yrs

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Acacia tumida		
Cymbopogon ambiguus		
Eucalyptus leucophloia subsp. *leucophloia*		
Gossypium australe		
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)		
Tribulus suberosus		
Triodia brizoides		

PHOTOS



Site Name:	WOCR01
Site Type:	RELEVE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 687462.7035E 7664247.335N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Weeds, Animal - Cattle, (other) - Rubbish
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	687463	7664247	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus camaldulensis*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Lower Stratum 1:	*Chrysopogon fallax*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia tumida var. *pilbarensis*	1.7	3
Boerhavia coccinea		
**Cenchrus ciliaris*	0.2	
Chrysopogon fallax	1.5	5
Eucalyptus camaldulensis	12	20
Euphorbia australis var. *subtomentosa*	0.1	
Evolvulus alsinoides var. *villosicalyx*		
Perotis rara		
Polymeria mollis		
Rhynchosia minima	0.1	
Senna notabilis		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.4	
Sporobolus australasicus		
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)		0.1

PHOTOS





Site Name:	WOCR02
Site Type:	RELEVE
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 685786.3775E 7664064.42N
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685786	7664064	

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	50
Afrohybanthus aurantiacus	0.1	0.1
Bonamia pilbarensis	0.1	0.1
Corchorus lasiocarpus subsp. *lasiocarpus*	0.2	0.1
Corymbia hamersleyana		
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Grevillea wickhamii subsp. *hispidula*	3	0.1
Senna notabilis	0.1	0.1
Triodia lanigera	0.4	40

PHOTOS





Site Name:	WOCR03
Site Type:	RELEVE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 684424.12E 7663242.81N
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sand
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal - Cattle
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684424	7663243	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia stellaticeps*, *Acacia trachycarpa*
Lower Stratum 1:	*Triodia epactia*, *Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa	1.8	0.1
Acacia stellaticeps	1.1	15
Acacia trachycarpa	1.6	0.5
Afrohybanthus aurantiacus	0.1	0.1
Arivela viscosa	0.2	0.1
Bonamia erecta	0.2	0.1
Cyperus vaginatus	0.2	0.1
Grevillea wickhamii subsp. *hispidula*	2	2
Indigofera monophylla	0.3	0.1
Pluchea ferdinandi-muelleri	0.4	0.1
Triodia epactia	0.4	8
Triodia lanigera	0.5	22

PHOTOS



Site Name:	WOCR04
Site Type:	RELEVE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 684240.8115E 7663137.008N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	684241	7663137	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ancistrocarpa*, *Acacia inaequilatera*
Lower Stratum 1:	*Triodia lanigera*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	2	10
Acacia inaequilatera	3	0.5
Eriachne pulchella subsp. *dominii*	0.1	0.1
Fimbristylis simulans	0.1	0.1
Triodia lanigera	0.3	30

PHOTOS



Site Name:	WOCR05
Site Type:	RELEVE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677868.1444E 7656411.194N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - G - Good
Comments:	Potentially old rehab area, recently burnt

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677868	7656411	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Mid Stratum 2:	*Acacia inaequilatera*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	2	4
Acacia ancistrocarpa	2.5	0.5
Acacia inaequilatera	1.8	0.5
Afrohybanthus aurantiacus	0.2	0.1
Bonamia erecta	0.1	0.1
Goodenia stobbsiana	0.2	0.2
Triodia epactia	0.3	15

PHOTOS





Site Name:	WOCR06
Site Type:	RELEVE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677756.2478E 7656473.523N
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	adjacent to track (other)
Fire:	>5yrs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677756	7656474	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acradenia*, *Acacia ancistrocarpa*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	3.5	5
Acacia ancistrocarpa	3	10
Goodenia stobbsiana	0.4	0.1
Triodia epactia	0.3	35

PHOTOS



Site Name:	WOER01
Site Type:	RELEVE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 678285.5954E 7657205.557N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Northern Vegetation Condition - G - Good
Disturbance:	Grazing, Weeds - Cenchrus
Fire:	>5yrs
Habitat:	Eucalyptus victrix, Corymbia hammersleyana low isolated clumps of trees over Acacia tumida tall isolated clumps of shrubs over Solanum phlomoides mid isolated clumps of shrubs over Indigofera monophylla low isolated shrubs over Cenchrus cilliaris low sparse tussock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678286	7657206	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*, *Eucalyptus victrix*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Mid Stratum 2:	*Cajanus cinereus*, *Solanum phlomoides*
Lower Stratum 1:	**Cenchrus ciliaris*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*	1.3	0.1
Acacia tumida var. *pilbarensis*	2	3
Afrohybanthus aurantiacus	0.2	0.1
Arivela viscosa	0.2	0.1
Bonamia erecta	0.3	0.1
Cajanus cinereus	1.3	1.5
**Cenchrus ciliaris*	0.3	6

Corymbia hamersleyana	2.5	2
Eucalyptus victrix	9	3
Grevillea wickhamii	0.3	0.1
Indigofera monophylla	0.4	0.2
Petalostylis labicheoides	0.4	0.1
Polycarpaea longiflora	0.1	0.1
Solanum phlomoides	1.2	0.5
Tephrosia rosea var. *clementii*	0.4	0.1

PHOTOS



Site Name:	WOJ14R
Site Type:	RELEVE
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 701296.4E 7658468.55N
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay loam and sand in bottom of drainage line (other)
Soil Colour:	Brown
Rock Outcrop:	Dolomite, Mixed Geology, Some Chert. (other), 2-10% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low trees over Acacia tumida var. pilbarensis, Grevillea wickhamii tall shrubs over Petalostylis labicheoides, Acacia acradenia mid-tall shrubs, over Corchorus parviflorus, Solanum phlomoides low shrubs over Triodia angusta hummock grasses over Eriachne mucronate tussock grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701296	7658469	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii* subsp. *hispidula*
Mid Stratum 2:	*Acacia acradenia*, *Petalostylis labicheoides*
Lower Stratum 1:	*Corchorus parviflorus*
Lower Stratum 2:	*Eriachne mucronata*, *Triodia angusta*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia tumida var. *pilbarensis*		
Afrohybanthus aurantiacus		
Cajanus cinereus		

Corchorus parviflorus		
Corymbia hamersleyana		
Cymbopogon ambiguus		
Dampiera candicans		
Eriachne mucronata		
Eriachne tenuiculmis		
Goodenia stobbsiana		
Grevillea wickhamii subsp. *hispidula*		
Hibiscus sturtii var. *campylochlamys*		
Indigofera monophylla		
Petalostylis labicheoides		
Polymeria mollis		
Scaevola amblyanthera var. *centralis*		
Solanum phlomoides		
Triodia angusta		
Triodia epactia		
Triodia wiseana		

PHOTOS



Site Name:	WOJ19R
Site Type:	RELEVE
Survey Date:	26/05/2024
GPS Location:	GDA2020 Zone 50 701463.59E 7657435.6N
Landform Type:	Ridge
Slope Class:	Very Steep (37°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	(other), 20-50% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana low isolated trees Acacia acradenia mid-tall isolated clumps of shrubs over Triodia brizoides low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701464	7657436	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia acradenia*
Lower Stratum 1:	*Triodia brizoides*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.5	4
Acacia bivenosa	2	1
Acacia inaequilatera	2	1
Corchorus parviflorus	0.8	0.1
Corymbia hamersleyana	5	1
Cymbopogon ambiguus	0.3	0.1
Eriachne mucronata	0.2	0.1
Gossypium australe	0.5	0.1
Tribulus suberosus	0.8	0.1

Triodia brizoides	0.3	20
Triumfetta propinqua	0.8	0.1

PHOTOS



Site Name:	WOJ27R
Site Type:	RELEVE
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 676161.68E 7653190.7N
Landform Type:	Other, Minor drainage line/flow line (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Rock Outcrop:	Calcrete, <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Colluvium
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years
Habitat:	Corymbia hamersleyana over Acacia tumida var. pilbarensis over Acacia acradenia, over Triodia angusta

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676162	7653191	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*, *Corymbia hamersleyana*
Lower Stratum 1:	*Triodia angusta*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia tumida var. *pilbarensis*		
Afrohybanthus aurantiacus		
Corymbia hamersleyana		
Eriachne tenuiculmis		
Grevillea wickhamii subsp. *hispidula*		
Indigofera monophylla		
Paraneurachne muelleri		
Petalostylis labicheoides		
Polymeria mollis		
Ptilotus axillaris		

Triodia angusta		
Triodia chichesterensis (P3)		
Triodia epactia		

PHOTOS



Site Name:	WOKR01
Site Type:	RELEVE
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 698361.8855E 7662242.931N
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Calcrete
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Animal - Cattle
Fire:	6mths
Habitat:	Acacia trachycarpa tall open shrubland over Triodia epactia low isolated clumps of hummock grasses over forbs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698362	7662243	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia trachycarpa*
Lower Stratum 1:	*Triodia epactia*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia var. *pyrifolia*		
Acacia trachycarpa	2.5	25
Arivela viscosa		
Boerhavia coccinea		
Corchorus laniflorus		
Goodenia microptera		
Indigofera monophylla		
Petalostylis labicheoides		
Polycarpaea corymbosa var. *corymbosa*		
Polymeria mollis		
Senna notabilis		
Solanum diversiflorum		
Sporobolus australasicus		
Striga curviflora		

Tribulus hirsutus		
Trigastrotheca molluginea		
Triodia epactia	0.4	0.5

PHOTOS



Site Name:	WOKR02
Site Type:	RELEVE
Survey Date:	23/05/2024
GPS Location:	GDA2020 Zone 50 698675.02E 7663490.61N
Landform Type:	Drainage Line
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Calcrete
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Disturbance:	Weeds, Animal
Fire:	< 1 Year
Habitat:	Corymbia hamersleyana low open woodland over Acacia tumida var. pilbarensis tall open shrubland over Chryspogon fallax, *Cenchrus cilliaris and *Cenchrus setiger tussock grassland
Comments:	Heavily grazed by cattle, no narive understory.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	698675	7663491	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Corymbia hamersleyana*
Mid Stratum 1:	*Acacia tumida* var. *pilbarensis*
Lower Stratum 2:	**Cenchrus ciliaris*, **Cenchrus setiger*, *Chrysopogon fallax*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia tumida var. *pilbarensis*	5	10
Arivela viscosa		
**Cenchrus ciliaris*	0.1	30
**Cenchrus setiger*	0.1	30
Chrysopogon fallax	0.5	5

Corymbia hamersleyana	6	5
Solanum diversiflorum		

PHOTOS





Site Name:	WOKR03
Site Type:	RELEVE
Survey Date:	25/05/2024
GPS Location:	GDA2020 Zone 50 697571.04E 7664935.17N
Landform Type:	Undulating Plain
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Ironstone, 2-10% bedrock exposed
CF Abundance:	>90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Clearing
Fire:	5-10 Years
Habitat:	Acacia inaequilatera tall isolated clumps of shrubs over Acacia acradenia mid sparse shrubland over Triodia chichesterensis (WOK02-03) and Triodia wiseana low hummock grassland
Comments:	Surrounded by drilling pads.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697571	7664935	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia inaequilatera*
Mid Stratum 2:	*Acacia acradenia*
Lower Stratum 1:	*Triodia chichesterensis*, *Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia	1.8	6
Acacia inaequilatera	3	1.5
Arivela viscosa		
Triodia chichesterensis (P3)	0.3	6
Triodia wiseana	0.6	5

PHOTOS



Site Name:	WOKR04
Site Type:	RELEVE
Survey Date:	27/05/2024
GPS Location:	GDA2020 Zone 50 670536.07E 7652820.48N
Landform Type:	Upper Slope
Slope Class:	Clifted (80°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	Other, Chert (other), >50% bedrock exposed
CF Abundance:	>90%
CF Sizes:	200-600mm, 2-6mm, 6-20mm, 20-60mm, 60-200mm, 600-2000mm
CF Types:	Ironstone, Shale, Chert (other)
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	5-10 Years
Habitat:	Terminalia circumulata low isolated clumps of trees over Gossypium australe and Triumfetta propinqua low isolated clumps of srhubs over Triodia iwseana low open hummock grassland

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670536	7652820	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Terminalia circumalata*
Mid Stratum 1:	*Gossypium australe*
Mid Stratum 2:	*Triumfetta propinqua*
Lower Stratum 1:	*Triodia wiseana*

SPECIES LIST

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Boerhavia gardneri		
Corchorus parviflorus		
Cucumis variabilis		
Cymbopogon ambiguus		

Eriachne mucronata		
Euphorbia careyi		
Goodenia stobbsiana		
Gossypium australe	0.8	0.2
Grevillea wickhamii		
Hakea lorea subsp. *lorea*		
Indigofera monophylla		
Polycarpaea corymbosa var. *corymbosa*		
Ptilotus calostachyus		
Sida sp. Pilbara (A.A. Mitchell PRP 1543)		
Solanum phlomoides		
Terminalia circumalata	3.5	5
Triodia wiseana	0.3	25
Triumfetta propinqua	0.4	0.2

PHOTOS



APPENDIX F

Detailed Figure of Significant Flora Locations in the Survey Area

APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 1

667000 668000 669000 670000 671000 672000 673000 674000

7674000 7673000 7672000 7671000 7670000 7669000 7668000

GREAT NORTHERN HWY

Eumu Trch

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

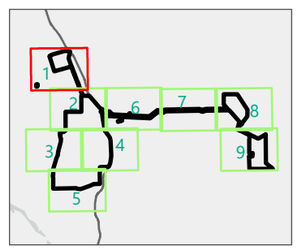
- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 2

670000 671000 672000 673000 674000 675000 676000 677000

7667000 7666000 7665000 7664000 7663000 7662000

GREAT NORTHERN HWY

KANGAN RD

YANDERRARA RD

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora Revisit Locations – Umwelt 2023 Survey

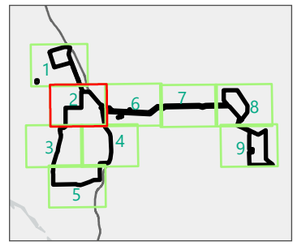
- Trch *Triodia chichesterensis* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

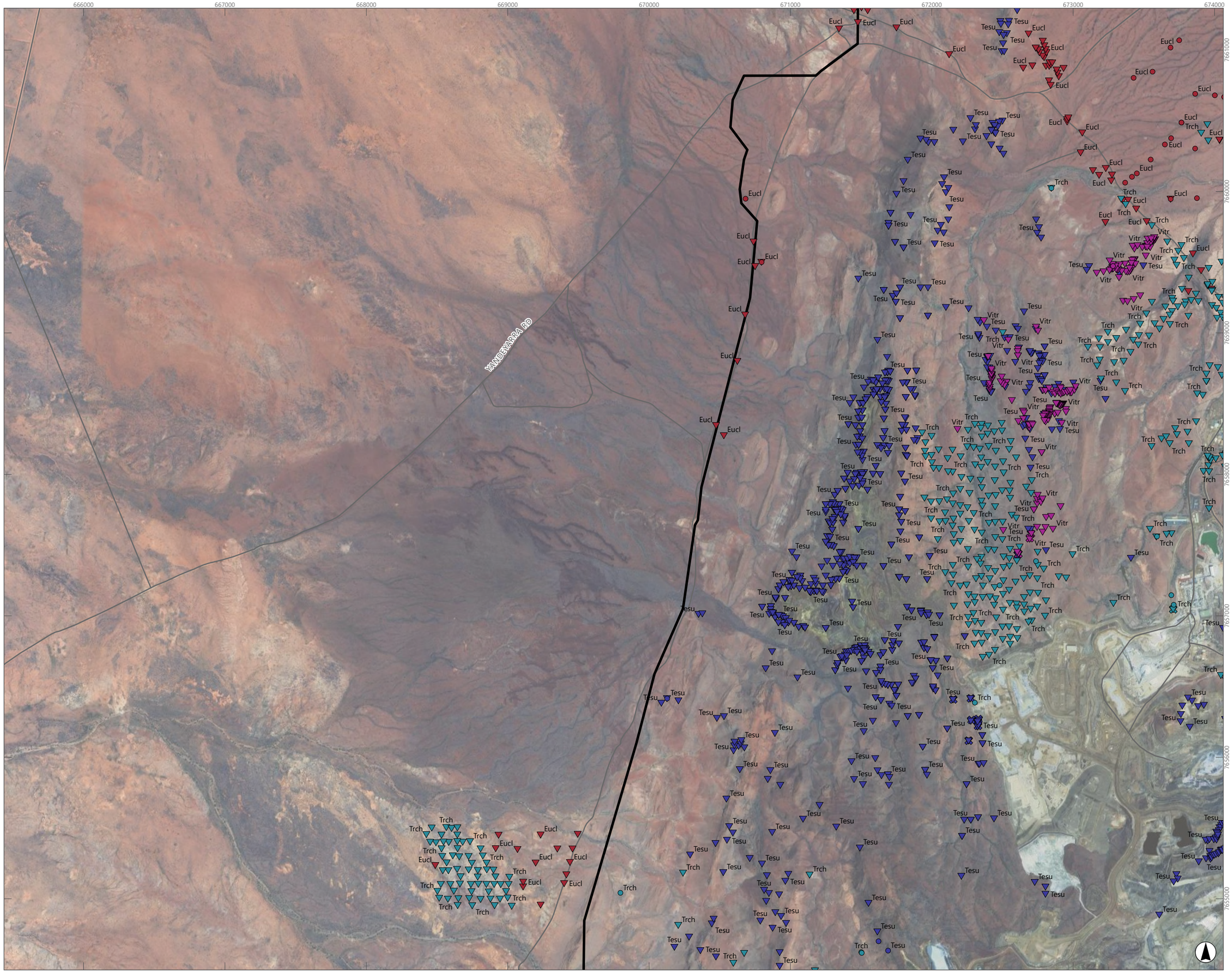
Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 3



Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora Revisit Locations – Umwelt 2023 Survey

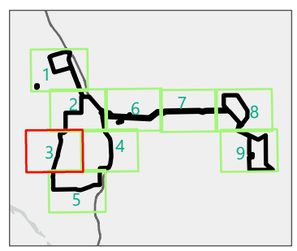
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 4

674000 675000 676000 677000 678000 679000 680000 681000 682000

7661000 7660000 7659000 7658000 7657000 7656000 7655000

GREAT NORTHERN HWY

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora Revisit Locations – Umwelt 2023 Survey

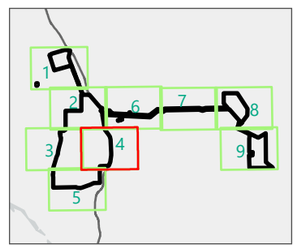
- Eucl *Euphorbia clementii* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



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Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 5

669000 670000 671000 672000 673000 674000 675000 676000 677000

7654000 7653000 7652000 7651000 7650000 7649000 7648000

GREAT NORTHERN HWY

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora Revisit Locations – Umwelt 2023 Survey

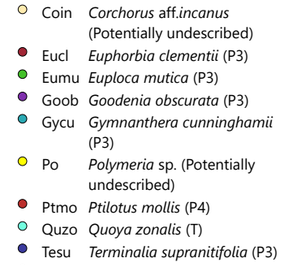
- Eucl *Euphorbia clementii* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



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Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 6

678000 679000 680000 681000 682000 683000 684000 685000 686000

7667000 7666000 7665000 7664000 7663000 7662000

Gycu
Coin Eumu
Gycu
Coin Gycu
Coin
Eumu
Eumu
Eumu
Coin
Coin
Coin

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

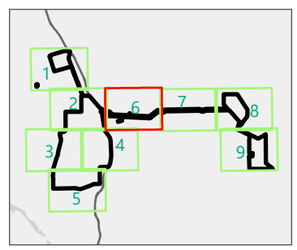
- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 7



Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

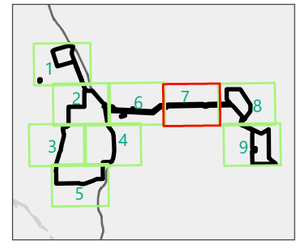
- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 8

695000 696000 697000 698000 699000 700000 701000 702000

7667000 7666000 7665000 7664000 7663000 7662000 7661000

Trch Eucl Po Goob

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

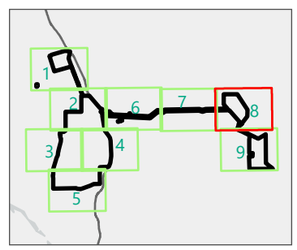
- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX F

Significant Flora Locations in the Survey Area – Sheet 9

Legend

- Survey Area
- Railway
- Road

Significant Flora – Umwelt 2023 / 2024 Surveys

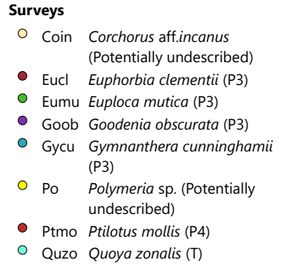
- Coin *Corchorus* aff.*incanus* (Potentially undescribed)
- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Goob *Goodenia obscurata* (P3)
- Gycu *Gymnanthera cunninghamii* (P3)
- Po *Polymeria* sp. (Potentially undescribed)
- Ptmo *Ptilotus mollis* (P4)
- Quzo *Quoya zonalis* (T)
- Tesu *Terminalia supranitifolia* (P3)
- Trba *Triodia basitricha* (P3)
- Trch *Triodia chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Woodman Environmental / Umwelt Previous Surveys

- Eucl *Euphorbia clementii* (P3)
- Eumu *Euploca mutica* (P3)
- Tesu *Terminalia supranitifolia* (P3)
- Trch *Triodia chichesterensis* (P3)
- Tr?ch *Triodia ?chichesterensis* (P3)
- Vitr *Vigna triodiophila* (P3)

Significant Flora – Other Consultant Previous Surveys

- Eumu *Euploca mutica* (P3)



0 500 1,000

Metres

Scale: 1:25,000 at A3
GDA2020 MGA Zone 50

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APPENDIX G

Location Details of Significant Flora Taxa Recorded by the 2023/2024 Survey

GOVERNMENT AGENCY REFERENCE ONLY
NOT FOR PUBLIC DISSEMINATION
CONTAINS LOCATIONS OF SIGNIFICANT FLORA TAXA

All locations are in GDA94, Zone 50.

Table G.1 Significant Flora Locations

Taxon	Status	Survey	Count	Easting	Northing	Comments
Corchorus* aff. *incanus	-	2023		684438	7663238	
Corchorus* aff. *incanus	-	2023		684569	7663341	
Corchorus* aff. *incanus	-	2023		684689	7663415	
Corchorus* aff. *incanus	-	2024		678282	7663361	
Corchorus* aff. *incanus	-	2024		677737	7664161	
Corchorus* aff. *incanus	-	2024		681578	7663240	
Corchorus* aff. *incanus	-	2024		684859	7663690	
Euphorbia clementii	P3	2023	3	674224	7652961	
Euphorbia clementii	P3	2023	1	674803	7665035	
Euphorbia clementii	P3	2023	1	675296	7662907	Dead
Euphorbia clementii	P3	2023	1	675194	7663157	
Euphorbia clementii	P3	2023	1	673981	7663423	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	3	674095	7662736	Dead, burnt 1-2 years. Slight sandsheet flowline
Euphorbia clementii	P3	2023	5	674092	7662644	Dead, burnt
Euphorbia clementii	P3	2023	2	674440	7662286	
Euphorbia clementii	P3	2023	1	674408	7662312	
Euphorbia clementii	P3	2023	1	674798	7662437	
Euphorbia clementii	P3	2023	1	674801	7663034	
Euphorbia clementii	P3	2023	1	675089	7662311	Dead
Euphorbia clementii	P3	2023	1	674428	7663902	Dead
Euphorbia clementii	P3	2023	7	674314	7663901	Dead
Euphorbia clementii	P3	2023	1	673499	7663136	Dead
Euphorbia clementii	P3	2023	2	673494	7663067	Dead
Euphorbia clementii	P3	2023	14	673489	7663055	Alive
Euphorbia clementii	P3	2023	1	673494	7662997	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	1	673505	7662947	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	5	673510	7662908	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	1	673507	7662872	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	1	673507	7662860	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	1	673523	7662338	Dead, burnt 1-2 years
Euphorbia clementii	P3	2023	1	673367	7660061	All dead
Euphorbia clementii	P3	2023	2	673415	7660102	All dead
Euphorbia clementii	P3	2023	6	673449	7660126	All dead
Euphorbia clementii	P3	2023	3	673547	7660224	All dead
Euphorbia clementii	P3	2023	15	673648	7660331	All dead
Euphorbia clementii	P3	2023	20	673692	7660375	All dead
Euphorbia clementii	P3	2023	25	673862	7660302	All dead

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	10	674201	7660162	
Euphorbia clementii	P3	2023	5	674346	7660165	All dead
Euphorbia clementii	P3	2023	4	674394	7660139	
Euphorbia clementii	P3	2023	2	674101	7659955	
Euphorbia clementii	P3	2023	4	673874	7659951	
Euphorbia clementii	P3	2023	1	675176	7660568	Alive
Euphorbia clementii	P3	2023	8	675010	7660538	Some alive
Euphorbia clementii	P3	2023	8	674884	7660507	All dead
Euphorbia clementii	P3	2023	20	674924	7660410	Half alive
Euphorbia clementii	P3	2023	12	675083	7660391	Mostly dead
Euphorbia clementii	P3	2023	1	673208	7662796	Dead. Burnt <1-2 years
Euphorbia clementii	P3	2023	1	673209	7662972	
Euphorbia clementii	P3	2023	1	673219	7663094	
Euphorbia clementii	P3	2023	1	673203	7663125	Alive
Euphorbia clementii	P3	2023	1	673207	7663133	Dead
Euphorbia clementii	P3	2023	1	673199	7663148	Dead
Euphorbia clementii	P3	2023	1	673199	7663186	Dead
Euphorbia clementii	P3	2023	1	673206	7663418	Dead
Euphorbia clementii	P3	2023	1	673485	7663445	Dead
Euphorbia clementii	P3	2023	1	673503	7663428	Dead
Euphorbia clementii	P3	2023	1	673506	7663413	Dead
Euphorbia clementii	P3	2023	1	676237	7662303	Dead
Euphorbia clementii	P3	2023	1	676226	7662297	Dead
Euphorbia clementii	P3	2023	1	676196	7662327	Dead
Euphorbia clementii	P3	2023	1	676187	7662549	Dead
Euphorbia clementii	P3	2023	15	676199	7662662	Dead
Euphorbia clementii	P3	2023	5	676209	7662679	Dead
Euphorbia clementii	P3	2023	3	674299	7662105	Alive
Euphorbia clementii	P3	2023	5	674289	7662112	Dead
Euphorbia clementii	P3	2023	1	674248	7662150	Dead
Euphorbia clementii	P3	2023	18	674306	7662125	Burnt 1-2 years
Euphorbia clementii	P3	2023	1	674076	7663852	Dead
Euphorbia clementii	P3	2023	1	674022	7664072	
Euphorbia clementii	P3	2023	1	675058	7662315	Alive
Euphorbia clementii	P3	2023	1	675358	7662873	Alive
Euphorbia clementii	P3	2023	9	676163	7662290	Dead (and 1 living)
Euphorbia clementii	P3	2023	6	676095	7662320	Dead
Euphorbia clementii	P3	2023	3	676090	7662415	Dead
Euphorbia clementii	P3	2023	1	676098	7662817	Dead
Euphorbia clementii	P3	2023	1	674372	7662033	Alive

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	1	674335	7662119	Alive
Euphorbia clementii	P3	2023	4	674327	7662147	Dead
Euphorbia clementii	P3	2023	1	674252	7662199	Dead
Euphorbia clementii	P3	2023	2	674260	7662236	Dead
Euphorbia clementii	P3	2023	12	674343	7662055	Dead
Euphorbia clementii	P3	2023	2	674505	7663491	Dead
Euphorbia clementii	P3	2023	1	674438	7663501	Dying
Euphorbia clementii	P3	2023	2	674385	7663502	Dead
Euphorbia clementii	P3	2023	10	674211	7663504	Dead
Euphorbia clementii	P3	2023	2	674004	7663680	Dead
Euphorbia clementii	P3	2023	11	674014	7663706	Dead
Euphorbia clementii	P3	2023	2	674151	7663704	Dead
Euphorbia clementii	P3	2023	1	674437	7663704	Dead
Euphorbia clementii	P3	2023	1	674627	7663702	Dead
Euphorbia clementii	P3	2023	5	674979	7663697	Dead
Euphorbia clementii	P3	2023	2	675069	7663697	Dead
Euphorbia clementii	P3	2023	15	673388	7662699	All recently dead
Euphorbia clementii	P3	2023	40	673388	7662743	All recently dead
Euphorbia clementii	P3	2023	10	673392	7662812	All recently dead
Euphorbia clementii	P3	2023	30	673401	7662897	All recently dead
Euphorbia clementii	P3	2023	20	673401	7663013	All recently dead
Euphorbia clementii	P3	2023	1	673704	7663184	All recently dead
Euphorbia clementii	P3	2023	10	673703	7663010	All recently dead
Euphorbia clementii	P3	2023	1	673996	7662360	All recently dead
Euphorbia clementii	P3	2023	10	673991	7662437	All recently dead
Euphorbia clementii	P3	2023	1	673985	7662480	All recently dead
Euphorbia clementii	P3	2023	1	674018	7662643	All recently dead
Euphorbia clementii	P3	2023	3	673998	7662672	All recently dead
Euphorbia clementii	P3	2023	2	674004	7663410	All recently dead
Euphorbia clementii	P3	2023	5	674298	7663163	All recently dead
Euphorbia clementii	P3	2023	7	674304	7662590	All recently dead
Euphorbia clementii	P3	2023	2	674306	7662557	Alive
Euphorbia clementii	P3	2023	1	674304	7662464	Alive
Euphorbia clementii	P3	2023	30	674305	7662392	All recently dead
Euphorbia clementii	P3	2023	15	674311	7662342	All recently dead
Euphorbia clementii	P3	2023	1	676004	7663019	Dead
Euphorbia clementii	P3	2023	1	675993	7662755	Dead
Euphorbia clementii	P3	2023	2	676010	7662471	Dead
Euphorbia clementii	P3	2023	2	676047	7662281	Dead
Euphorbia clementii	P3	2023	24	676053	7662363	Dead

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	1	674987	7664111	Dead
Euphorbia clementii	P3	2023	2	673163	7662929	Recently burnt, dead
Euphorbia clementii	P3	2023	1	673127	7663081	
Euphorbia clementii	P3	2023	3	673116	7663115	
Euphorbia clementii	P3	2023	3	673086	7663171	
Euphorbia clementii	P3	2023	30	673084	7663192	
Euphorbia clementii	P3	2023	10	673059	7663218	
Euphorbia clementii	P3	2023	25	673036	7663248	
Euphorbia clementii	P3	2023	35	673024	7663262	
Euphorbia clementii	P3	2023	8	673001	7663313	
Euphorbia clementii	P3	2023	20	672981	7663327	
Euphorbia clementii	P3	2023	10	672964	7663338	
Euphorbia clementii	P3	2023	15	672724	7663201	Outside study area
Euphorbia clementii	P3	2023	1	675096	7664299	Dead
Euphorbia clementii	P3	2023	1	674533	7664504	Alive but almost dead
Euphorbia clementii	P3	2023	2	674432	7661608	Both dead
Euphorbia clementii	P3	2023	1	674477	7661570	Dead
Euphorbia clementii	P3	2023	6	674494	7661551	Dead
Euphorbia clementii	P3	2023	8	674630	7661412	Some alive, some dead
Euphorbia clementii	P3	2023	6	674642	7661127	Dead, detached
Euphorbia clementii	P3	2023	15	674641	7660915	Dead
Euphorbia clementii	P3	2023	3	674599	7660845	Dead
Euphorbia clementii	P3	2023	1	674397	7660460	Dead
Euphorbia clementii	P3	2023	6	674327	7660519	Dead
Euphorbia clementii	P3	2023	1	674306	7660492	Dead
Euphorbia clementii	P3	2023	1	674300	7660440	Dead
Euphorbia clementii	P3	2023	1	674067	7660667	Dead
Euphorbia clementii	P3	2023	2	674001	7660678	Dead
Euphorbia clementii	P3	2023	1	673862	7660689	Dead
Euphorbia clementii	P3	2023	2	673560	7660846	Dead
Euphorbia clementii	P3	2023	1	673688	7661016	Dead
Euphorbia clementii	P3	2023	2	673749	7661068	Both alive
Euphorbia clementii	P3	2023	1	674155	7652991	
Euphorbia clementii	P3	2023	31	676658	7662455	Alive
Euphorbia clementii	P3	2023	1	676654	7662524	Alive
Euphorbia clementii	P3	2023	15	674445	7662441	Alive
Euphorbia clementii	P3	2023	13	673254	7662685	Dead
Euphorbia clementii	P3	2023	2	673236	7662842	Dead
Euphorbia clementii	P3	2023	15	673245	7662966	Dead
Euphorbia clementii	P3	2023	2	673244	7663021	Dead

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	9	673243	7663095	Dead
Euphorbia clementii	P3	2023	15	673250	7663144	Dead
Euphorbia clementii	P3	2023	3	673239	7663201	Dead
Euphorbia clementii	P3	2023	3	673251	7663325	Dead
Euphorbia clementii	P3	2023	2	673243	7663402	Dead
Euphorbia clementii	P3	2023	1	673551	7663405	Alive
Euphorbia clementii	P3	2023	4	673556	7663089	Dead
Euphorbia clementii	P3	2023	2	673561	7662996	Dead
Euphorbia clementii	P3	2023	10	673544	7662938	Dead
Euphorbia clementii	P3	2023	7	673834	7662362	Dead
Euphorbia clementii	P3	2023	3	673848	7662459	Dead
Euphorbia clementii	P3	2023	3	673849	7663389	Dead
Euphorbia clementii	P3	2023	2	674149	7662782	Alive
Euphorbia clementii	P3	2023	6	674148	7662720	Dead
Euphorbia clementii	P3	2023	6	674153	7662474	Dead
Euphorbia clementii	P3	2023	5	674471	7662273	Alive
Euphorbia clementii	P3	2023	7	674441	7662346	Alive
Euphorbia clementii	P3	2023	1	674839	7662542	Dead
Euphorbia clementii	P3	2023	1	674452	7662853	Alive
Euphorbia clementii	P3	2023	3	674649	7662370	Alive
Euphorbia clementii	P3	2023	1	674648	7662324	Dead
Euphorbia clementii	P3	2023	4	674654	7662232	Dead and alive
Euphorbia clementii	P3	2023	1	675068	7662860	Dead
Euphorbia clementii	P3	2023	1	675056	7662786	Dead
Euphorbia clementii	P3	2023	1	675058	7662758	Alive
Euphorbia clementii	P3	2023	3	675247	7662814	Dead
Euphorbia clementii	P3	2023	2	674416	7663551	Dead
Euphorbia clementii	P3	2023	1	674190	7663749	Alive
Euphorbia clementii	P3	2023	1	675083	7663415	Dead
Euphorbia clementii	P3	2023	3	674057	7664000	
Euphorbia clementii	P3	2023	3	674939	7664199	
Euphorbia clementii	P3	2023	1	675304	7662430	
Euphorbia clementii	P3	2023	3	676402	7662670	Alive
Euphorbia clementii	P3	2023	1	676409	7662719	Alive
Euphorbia clementii	P3	2023	1	674384	7662199	Alive
Euphorbia clementii	P3	2023	3	675094	7664002	
Euphorbia clementii	P3	2023	2	674019	7664398	
Euphorbia clementii	P3	2023	2	675005	7654243	
Euphorbia clementii	P3	2023	2	674594	7654029	
Euphorbia clementii	P3	2023	1	673291	7662764	Recently dead

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	1	673294	7663082	Recently dead
Euphorbia clementii	P3	2023	2	673283	7663179	Dead
Euphorbia clementii	P3	2023	3	673889	7662338	Very dead
Euphorbia clementii	P3	2023	1	674201	7662519	Alive, pebbly-loamy patch
Euphorbia clementii	P3	2023	5	674193	7662465	Alive, pebbly-loamy patch
Euphorbia clementii	P3	2023	3	674204	7662385	Alive, pebble loam
Euphorbia clementii	P3	2023	1	674485	7663234	Dead
Euphorbia clementii	P3	2023	4	674505	7662394	
Euphorbia clementii	P3	2023	4	674897	7662470	
Euphorbia clementii	P3	2023	1	673445	7662764	Dead
Euphorbia clementii	P3	2023	9	673444	7662812	Dead
Euphorbia clementii	P3	2023	2	673450	7662844	Dead
Euphorbia clementii	P3	2023	4	673447	7662879	Dead
Euphorbia clementii	P3	2023	1	673450	7662955	Dead
Euphorbia clementii	P3	2023	8	673459	7662999	Dead
Euphorbia clementii	P3	2023	5	673455	7663078	Dead
Euphorbia clementii	P3	2023	3	673452	7663120	Dead
Euphorbia clementii	P3	2023	2	673752	7663184	Dead
Euphorbia clementii	P3	2023	12	673748	7663103	Dead
Euphorbia clementii	P3	2023	8	673748	7663077	Dead
Euphorbia clementii	P3	2023	1	674053	7662331	Dead
Euphorbia clementii	P3	2023	9	674054	7662501	Dead
Euphorbia clementii	P3	2023	3	674048	7662575	Dead
Euphorbia clementii	P3	2023	8	674050	7662612	Dead
Euphorbia clementii	P3	2023	5	674048	7662672	Dead
Euphorbia clementii	P3	2023	5	674351	7663414	Dead
Euphorbia clementii	P3	2023	3	674351	7663390	Dead
Euphorbia clementii	P3	2023	1	674355	7662820	Dead
Euphorbia clementii	P3	2023	2	674346	7662711	Dead
Euphorbia clementii	P3	2023	2	674349	7662582	
Euphorbia clementii	P3	2023	10	674350	7662462	
Euphorbia clementii	P3	2023	15	674345	7662418	Dead
Euphorbia clementii	P3	2023	2	674346	7662346	Dead
Euphorbia clementii	P3	2023	3	674708	7661144	
Euphorbia clementii	P3	2023	2	674673	7661096	
Euphorbia clementii	P3	2023	5	674464	7660731	
Euphorbia clementii	P3	2023	3	674465	7660687	
Euphorbia clementii	P3	2023	1	674455	7660618	
Euphorbia clementii	P3	2023	7	674401	7660406	
Euphorbia clementii	P3	2023	11	674340	7660431	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	50	674352	7660466	
Euphorbia clementii	P3	2023	10	674349	7660510	
Euphorbia clementii	P3	2023	3	674350	7660703	
Euphorbia clementii	P3	2023	2	674275	7660695	
Euphorbia clementii	P3	2023	1	674215	7660579	
Euphorbia clementii	P3	2023	2	674195	7660416	
Euphorbia clementii	P3	2023	2	673427	7660802	
Euphorbia clementii	P3	2023	1	673345	7662672	
Euphorbia clementii	P3	2023	7	673347	7662702	
Euphorbia clementii	P3	2023	9	673347	7662740	
Euphorbia clementii	P3	2023	14	673349	7662795	
Euphorbia clementii	P3	2023	6	673347	7662841	
Euphorbia clementii	P3	2023	14	673352	7662935	
Euphorbia clementii	P3	2023	7	673350	7662993	
Euphorbia clementii	P3	2023	8	673352	7663041	
Euphorbia clementii	P3	2023	4	673348	7663142	
Euphorbia clementii	P3	2023	11	673347	7663202	
Euphorbia clementii	P3	2023	23	673347	7663232	
Euphorbia clementii	P3	2023	4	673650	7663373	
Euphorbia clementii	P3	2023	2	673654	7663199	
Euphorbia clementii	P3	2023	3	673651	7663104	
Euphorbia clementii	P3	2023	8	673654	7663080	
Euphorbia clementii	P3	2023	8	673652	7663045	
Euphorbia clementii	P3	2023	2	673656	7662981	
Euphorbia clementii	P3	2023	3	673948	7663105	
Euphorbia clementii	P3	2023	1	673952	7663426	
Euphorbia clementii	P3	2023	2	674261	7662758	
Euphorbia clementii	P3	2023	1	674254	7662472	
Euphorbia clementii	P3	2023	4	674252	7662416	
Euphorbia clementii	P3	2023	3	674252	7662344	
Euphorbia clementii	P3	2023	3	674256	7662322	
Euphorbia clementii	P3	2023	6	673024	7663166	
Euphorbia clementii	P3	2023	18	673016	7663184	
Euphorbia clementii	P3	2023	24	673002	7663198	
Euphorbia clementii	P3	2023	22	672992	7663209	
Euphorbia clementii	P3	2023	9	672992	7663234	
Euphorbia clementii	P3	2023	1	672772	7663330	
Euphorbia clementii	P3	2023	2	672720	7663333	
Euphorbia clementii	P3	2023	4	674428	7661696	
Euphorbia clementii	P3	2023	2	674506	7661599	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	3	674632	7661451	
Euphorbia clementii	P3	2023	7	674666	7661404	
Euphorbia clementii	P3	2023	15	674551	7663125	
Euphorbia clementii	P3	2023	3	674549	7663314	
Euphorbia clementii	P3	2023	3	674751	7663328	
Euphorbia clementii	P3	2023	5	674752	7663284	
Euphorbia clementii	P3	2023	2	674740	7663114	
Euphorbia clementii	P3	2023	3	674950	7663191	
Euphorbia clementii	P3	2023	7	676605	7662906	
Euphorbia clementii	P3	2023	6	676597	7662811	
Euphorbia clementii	P3	2023	4	676592	7662725	
Euphorbia clementii	P3	2023	2	676357	7662891	
Euphorbia clementii	P3	2023	2	676357	7662796	
Euphorbia clementii	P3	2023	3	676352	7662752	
Euphorbia clementii	P3	2023	9	676353	7662721	
Euphorbia clementii	P3	2023	26	676351	7662668	
Euphorbia clementii	P3	2023	11	676352	7662521	
Euphorbia clementii	P3	2023	8	676298	7662576	
Euphorbia clementii	P3	2023	30	676301	7662636	
Euphorbia clementii	P3	2023	25	676309	7662675	
Euphorbia clementii	P3	2023	7	676298	7662765	
Euphorbia clementii	P3	2023	7	674342	7662194	
Euphorbia clementii	P3	2023	6	674282	7662238	
Euphorbia clementii	P3	2023	5	674301	7662152	
Euphorbia clementii	P3	2023	4	674795	7663608	
Euphorbia clementii	P3	2023	7	674558	7663598	
Euphorbia clementii	P3	2023	20	674434	7663596	
Euphorbia clementii	P3	2023	2	674043	7663602	
Euphorbia clementii	P3	2023	4	674220	7663795	
Euphorbia clementii	P3	2023	2	675065	7663797	
Euphorbia clementii	P3	2023	2	675187	7664199	
Euphorbia clementii	P3	2023	2	672651	7653215	
Euphorbia clementii	P3	2023		674032	7662652	
Euphorbia clementii	P3	2023	1	674301	7660500	
Euphorbia clementii	P3	2023	3	673765	7660486	
Euphorbia clementii	P3	2023	20	674798	7660480	
Euphorbia clementii	P3	2023		674964	7660409	
Euphorbia clementii	P3	2023	5	674379	7660320	
Euphorbia clementii	P3	2023	5	674411	7660056	
Euphorbia clementii	P3	2023	1	677015	7661962	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euphorbia clementii	P3	2023	1	673796	7653684	
Euphorbia clementii	P3	2024	2	695800	7666260	
Euphorbia clementii	P3	2024	1	678280	7657804	
Euphorbia clementii	P3	2024		670682	7659947	
Euphorbia clementii	P3	2024	1	669658	7653106	
Euphorbia clementii	P3	2024	1	669486	7653745	
Euphorbia clementii	P3	2024	2	670795	7659499	
Euphorbia clementii	P3	2024	6	672948	7661371	
Euphorbia clementii	P3	2024	10	673689	7659945	
Euphorbia clementii	P3	2024	1	696615	7665874	
Euphorbia clementii	P3	2024	1	696679	7666464	
Euploca mutica	P3	2023	21	671123	7673381	
Euploca mutica	P3	2023	2	671095	7673392	
Euploca mutica	P3	2023	6	671036	7673530	
Euploca mutica	P3	2023	8	671068	7673515	
Euploca mutica	P3	2023	6	671099	7673503	
Euploca mutica	P3	2023	4	671144	7673491	
Euploca mutica	P3	2023	21	671190	7673477	
Euploca mutica	P3	2023	14	671256	7673453	
Euploca mutica	P3	2023	6	672095	7672109	
Euploca mutica	P3	2023	1	671950	7672091	
Euploca mutica	P3	2023	50	671912	7672095	
Euploca mutica	P3	2023	4	671870	7672093	
Euploca mutica	P3	2023	8	671764	7672080	
Euploca mutica	P3	2023	1	671614	7672064	
Euploca mutica	P3	2023	1	671147	7671974	
Euploca mutica	P3	2023	1	671120	7671970	
Euploca mutica	P3	2023	7	671072	7671956	
Euploca mutica	P3	2023	5	670982	7671937	
Euploca mutica	P3	2023	5	670899	7671907	
Euploca mutica	P3	2023	16	670875	7671896	
Euploca mutica	P3	2023	2	670840	7671891	
Euploca mutica	P3	2023	10	670796	7671889	
Euploca mutica	P3	2023	26	670653	7671882	
Euploca mutica	P3	2023	11	670636	7671871	
Euploca mutica	P3	2023	16	670507	7671806	
Euploca mutica	P3	2023	15	670473	7671789	
Euploca mutica	P3	2023	14	670424	7671753	
Euploca mutica	P3	2023	8	670227	7671648	
Euploca mutica	P3	2023	6	670165	7671617	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euploca mutica	P3	2023	20	670017	7671554	
Euploca mutica	P3	2023	8	669984	7671483	
Euploca mutica	P3	2023	6	669994	7671429	
Euploca mutica	P3	2023	5	670025	7671289	
Euploca mutica	P3	2023	1	670057	7671233	
Euploca mutica	P3	2023	6	670353	7671612	
Euploca mutica	P3	2023	40	670362	7671583	
Euploca mutica	P3	2023	42	670394	7671506	
Euploca mutica	P3	2023	50	670399	7671457	
Euploca mutica	P3	2023	30	670409	7671444	
Euploca mutica	P3	2023	25	670441	7671406	
Euploca mutica	P3	2023	20	670461	7671370	
Euploca mutica	P3	2023	25	670479	7671304	
Euploca mutica	P3	2023	45	670486	7671274	
Euploca mutica	P3	2023	3	670503	7671230	
Euploca mutica	P3	2023	10	670549	7671228	
Euploca mutica	P3	2023	50	670561	7671251	
Euploca mutica	P3	2023	22	670564	7671284	
Euploca mutica	P3	2023	50	670540	7671314	
Euploca mutica	P3	2023	50	670527	7671325	
Euploca mutica	P3	2023	50	670522	7671342	
Euploca mutica	P3	2023	50	670517	7671354	
Euploca mutica	P3	2023	5	670498	7671378	
Euploca mutica	P3	2023	1	670835	7671774	
Euploca mutica	P3	2023	15	671222	7671633	
Euploca mutica	P3	2023	22	670855	7671996	
Euploca mutica	P3	2023	18	670849	7672028	
Euploca mutica	P3	2023	3	670843	7672069	
Euploca mutica	P3	2023	2	670785	7672265	
Euploca mutica	P3	2023	14	670780	7672298	
Euploca mutica	P3	2023	22	670763	7672337	
Euploca mutica	P3	2023	40	670744	7672385	
Euploca mutica	P3	2023	20	671498	7672342	
Euploca mutica	P3	2023	32	672361	7671646	
Euploca mutica	P3	2023	50	672371	7671632	
Euploca mutica	P3	2023	35	672375	7671609	
Euploca mutica	P3	2023	30	672377	7671588	
Euploca mutica	P3	2023	35	672417	7671585	
Euploca mutica	P3	2023	15	672412	7671603	
Euploca mutica	P3	2023	40	672401	7671628	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euploca mutica	P3	2023	10	672393	7671658	
Euploca mutica	P3	2023	22	672382	7671680	
Euploca mutica	P3	2023	1	671047	7673487	Recently burnt
Euploca mutica	P3	2023	10	671074	7673478	Recently burnt
Euploca mutica	P3	2023	2	671225	7673435	Recently burnt
Euploca mutica	P3	2023	5	671293	7673413	Road verge
Euploca mutica	P3	2023	1	671250	7673379	Road verge
Euploca mutica	P3	2023	1	683056	7663195	
Euploca mutica	P3	2023	1	687449	7664193	Dead
Euploca mutica	P3	2023	1	687434	7664197	
Euploca mutica	P3	2023	10	672125	7672153	Recently burnt
Euploca mutica	P3	2023	9	671678	7672109	Recently burnt
Euploca mutica	P3	2023	6	671446	7672079	Recently burnt
Euploca mutica	P3	2023	11	670841	7671949	Recently burnt
Euploca mutica	P3	2023	1	670820	7671944	Recently burnt
Euploca mutica	P3	2023	3	670696	7671938	Recently burnt
Euploca mutica	P3	2023	12	670622	7671915	Recently burnt
Euploca mutica	P3	2023	2	670477	7671846	Recently burnt
Euploca mutica	P3	2023	10	670412	7671794	Recently burnt
Euploca mutica	P3	2023	28	670372	7671774	Recently burnt
Euploca mutica	P3	2023	3	669997	7671595	Recently burnt
Euploca mutica	P3	2023	7	669911	7671573	Recently burnt
Euploca mutica	P3	2023	8	669852	7671744	Recently burnt
Euploca mutica	P3	2023	1	669820	7671800	Recently burnt
Euploca mutica	P3	2023	26	669691	7671866	Recently burnt
Euploca mutica	P3	2023	50	669745	7671838	Recently burnt
Euploca mutica	P3	2023	3	669789	7671798	Recently burnt
Euploca mutica	P3	2023	3	669796	7671762	Recently burnt
Euploca mutica	P3	2023	2	669803	7671711	Recently burnt
Euploca mutica	P3	2023	1	669823	7671616	Recently burnt
Euploca mutica	P3	2023	2	669840	7671570	Recently burnt
Euploca mutica	P3	2023	1	669922	7671519	Recently burnt
Euploca mutica	P3	2023	5	670118	7671715	Recently burnt
Euploca mutica	P3	2023	2	670092	7671804	Recently burnt
Euploca mutica	P3	2023	6	670047	7671872	Recently burnt
Euploca mutica	P3	2023	6	670016	7671916	Recently burnt
Euploca mutica	P3	2023	6	669993	7672003	Recently burnt
Euploca mutica	P3	2023	45	670069	7671984	Recently burnt
Euploca mutica	P3	2023	2	670101	7671917	Recently burnt
Euploca mutica	P3	2023	3	670149	7671834	Recently burnt

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euploca mutica	P3	2023	4	670167	7671800	Recently burnt
Euploca mutica	P3	2023	1	670411	7671596	Recently burnt
Euploca mutica	P3	2023	10	670424	7671567	Recently burnt
Euploca mutica	P3	2023	4	670457	7671467	Recently burnt
Euploca mutica	P3	2023	15	670471	7671444	Recently burnt
Euploca mutica	P3	2023	4	670757	7671844	Recently burnt
Euploca mutica	P3	2023	20	670765	7671822	Recently burnt
Euploca mutica	P3	2023	5	670799	7671737	Recently burnt
Euploca mutica	P3	2023	30	670921	7671301	Recently burnt
Euploca mutica	P3	2023	25	671103	7671942	Recently burnt
Euploca mutica	P3	2023	15	670816	7671993	Recently burnt
Euploca mutica	P3	2023	2	670764	7672175	Recently burnt
Euploca mutica	P3	2023	10	670742	7672255	Recently burnt
Euploca mutica	P3	2023	35	670716	7672321	Recently burnt
Euploca mutica	P3	2023	4	670696	7672364	Recently burnt
Euploca mutica	P3	2023	10	670654	7672416	Recently burnt
Euploca mutica	P3	2023	25	670638	7672459	Recently burnt
Euploca mutica	P3	2023	5	670617	7672502	Recently burnt
Euploca mutica	P3	2023	50	670936	7672496	Recently burnt
Euploca mutica	P3	2023	25	671235	7672439	Recently burnt
Euploca mutica	P3	2023	150	671389	7672415	Heaps, recently burnt
Euploca mutica	P3	2023	22	671452	7672410	Recently burnt
Euploca mutica	P3	2023	23	671454	7672391	Recently burnt
Euploca mutica	P3	2023	14	671466	7672323	Recently burnt
Euploca mutica	P3	2023	11	671471	7672214	Recently burnt
Euploca mutica	P3	2023	25	672343	7671658	Recently burnt
Euploca mutica	P3	2023	15	672351	7671626	Recently burnt
Euploca mutica	P3	2023	25	672364	7671599	Recently burnt
Euploca mutica	P3	2023	55	672373	7671580	Recently burnt
Euploca mutica	P3	2023	35	672382	7671556	Recently burnt
Euploca mutica	P3	2023	12	672431	7671602	Recently burnt
Euploca mutica	P3	2023	30	672426	7671629	Recently burnt
Euploca mutica	P3	2023	5	672416	7671654	Recently burnt
Euploca mutica	P3	2023	2	672406	7671674	Recently burnt
Euploca mutica	P3	2023		669974	7671573	
Euploca mutica	P3	2024	30	671931	7671834	
Euploca mutica	P3	2024	30	671749	7671733	
Euploca mutica	P3	2024	20	670652	7671082	
Euploca mutica	P3	2024	10	669881	7671797	
Euploca mutica	P3	2024	150	682152	7663125	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Euploca mutica	P3	2024	10	670278	7670906	
Euploca mutica	P3	2024	30	670485	7672446	
Euploca mutica	P3	2024	5	671576	7671571	
Euploca mutica	P3	2024		672037	7671726	
Euploca mutica	P3	2024		677737	7664161	
Euploca mutica	P3	2024		686557	7664245	
Euploca mutica	P3	2024		683586	7663174	
Euploca mutica	P3	2024	10	671742	7672450	
Euploca mutica	P3	2024	2	671829	7673169	
Goodenia obscurata	P3	2024	1	699804	7657607	
Goodenia obscurata	P3	2024	5	695092	7661841	
Goodenia obscurata	P3	2024	26	675815	7660146	
Gymnanthera cunninghamii	P3	2024	1	681064	7667285	
Gymnanthera cunninghamii	P3	2024	2	678073	7664091	
Gymnanthera cunninghamii	P3	2024	1	678371	7663386	
***Polymeria* sp.**	-	2023	1	687541	7664104	
***Polymeria* sp.**	-	2023	1	675513	7663068	
***Polymeria* sp.**	-	2023	1	675352	7662870	Sandy depression
***Polymeria* sp.**	-	2023		674798	7660480	
***Polymeria* sp.**	-	2023		687506	7664164	
***Polymeria* sp.**	-	2024		697609	7663180	
***Polymeria* sp.**	-	2024		699863	7655077	
***Polymeria* sp.**	-	2024		699460	7655473	
***Polymeria* sp.**	-	2024		699454	7655772	
Ptilotus mollis	P4	2024	22	700806	7657162	
Ptilotus mollis	P4	2024	13	700962	7657189	
Ptilotus mollis	P4	2024	11	700918	7657154	
Ptilotus mollis	P4	2024	150	700868	7657144	
Ptilotus mollis	P4	2024	25	700829	7657230	
Ptilotus mollis	P4	2024	40	700842	7657273	
Ptilotus mollis	P4	2024	15	700864	7657306	
Ptilotus mollis	P4	2024	25	700971	7657452	
Ptilotus mollis	P4	2024	15	701637	7656478	
Terminalia supranitifolia	P3	2023	1	671568	7653666	In steep rocky gully
Terminalia supranitifolia	P3	2023	4	671690	7654632	1 plant here and 3 or 4 plants 15 m north
Terminalia supranitifolia	P3	2023	1	675113	7656283	Fire regrowth 1.5 m tall, only one plant. Burnt trunks next to it, possibly deadold records.
Terminalia supranitifolia	P3	2023	2	671622	7654698	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Terminalia supranitifolia	P3	2024		675907	7657517	
Terminalia supranitifolia	P3	2024		675456	7657136	
Terminalia supranitifolia	P3	2024	1	670127	7656414	WD47
Terminalia supranitifolia	P3	2024		672697	7661630	WDD23
Terminalia supranitifolia	P3	2024	2	673281	7659471	HER018
Triodia basitricha	P3	2023	5	701710	7654835	
Triodia basitricha	P3	2023	5	701674	7654837	
Triodia basitricha	P3	2023	75	701871	7654914	
Triodia basitricha	P3	2023	10	702236	7654769	
Triodia basitricha	P3	2023	50	702262	7654788	
Triodia basitricha	P3	2023	250	702641	7654685	
Triodia basitricha	P3	2023	300	701842	7654935	
Triodia basitricha	P3	2023	250	701845	7654917	
Triodia basitricha	P3	2023	250	701811	7654805	
Triodia basitricha	P3	2023	750	701809	7654783	Dominant
Triodia basitricha	P3	2023	500	701853	7654764	
Triodia basitricha	P3	2023	750	701882	7654766	Dominant
Triodia basitricha	P3	2023	1500	701909	7654762	Dominant, 750 outside of study area.
Triodia basitricha	P3	2023	300	702355	7654706	
Triodia basitricha	P3	2023	300	702631	7654661	Dominant
Triodia basitricha	P3	2023	5000	702811	7654817	Outside of study area, extensive on lower slope
Triodia basitricha	P3	2023	750	701750	7654787	Dominant
Triodia basitricha	P3	2023	500	701718	7654785	Dominant
Triodia basitricha	P3	2023	50	701677	7654798	
Triodia basitricha	P3	2023		701834	7654761	
Triodia basitricha	P3	2024		701513	7656175	
Triodia basitricha	P3	2024	500	701506	7655642	
Triodia basitricha	P3	2024	500	701555	7655574	
Triodia chichesterensis	P3	2023	100	674976	7664117	Juveniles
Triodia chichesterensis	P3	2023	500	675209	7662384	Burnt 1-2 years. Stony/SP mosaic
Triodia chichesterensis	P3	2023	500	675206	7662481	Triodia lanigera also here
Triodia chichesterensis	P3	2023	500	675191	7662597	Stony plus calcrete
Triodia chichesterensis	P3	2023	500	675184	7662638	Stony plus calcrete
Triodia chichesterensis	P3	2023	500	675192	7662677	Stony plus quartz
Triodia chichesterensis	P3	2023	2000	675193	7662819	
Triodia chichesterensis	P3	2023	2000	675190	7662894	
Triodia chichesterensis	P3	2023	500	675199	7662994	
Triodia chichesterensis	P3	2023	2000	675201	7663106	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	50	675006	7663093	
Triodia chichesterensis	P3	2023	500	674995	7662781	
Triodia chichesterensis	P3	2023	200	675000	7662631	Triodia lanigera here too
Triodia chichesterensis	P3	2023	300	674795	7663238	
Triodia chichesterensis	P3	2023	500	674791	7663392	
Triodia chichesterensis	P3	2023	50	675004	7663277	
Triodia chichesterensis	P3	2023	500	674809	7662446	
Triodia chichesterensis	P3	2023	100	674814	7662530	
Triodia chichesterensis	P3	2023	200	674799	7662655	
Triodia chichesterensis	P3	2023	500	674796	7662756	
Triodia chichesterensis	P3	2023	500	674803	7662815	
Triodia chichesterensis	P3	2023	500	674804	7662870	
Triodia chichesterensis	P3	2023	500	674811	7662888	
Triodia chichesterensis	P3	2023	50	674401	7662328	At southern end on low rocky spurs
Triodia chichesterensis	P3	2023	100	674394	7662622	
Triodia chichesterensis	P3	2023	500	674406	7662668	Triodia lanigera and Triodia chichesterensis together
Triodia chichesterensis	P3	2023	50	674409	7662717	Burnt 1-2 years. Triodia lanigera (5%) and Triodia chichesterensis (95%) on stony rises (crests only)
Triodia chichesterensis	P3	2023	500	674581	7662661	Triodia lanigera also here (1%)
Triodia chichesterensis	P3	2023	200	674617	7662623	Long stony spur
Triodia chichesterensis	P3	2023	500	674598	7662266	
Triodia chichesterensis	P3	2023	500	674795	7662345	Triodia lanigera and epactia also here
Triodia chichesterensis	P3	2023	500	675209	7664049	
Triodia chichesterensis	P3	2023	2000	675247	7664038	
Triodia chichesterensis	P3	2023	100	675403	7664250	Sparse covere <1%
Triodia chichesterensis	P3	2023	100	675354	7664250	Burnt 1-2 years
Triodia chichesterensis	P3	2023	2000	675334	7664254	
Triodia chichesterensis	P3	2023	2000	675278	7664245	Drops out to the west
Triodia chichesterensis	P3	2023	100	674962	7664449	Drops out to the west
Triodia chichesterensis	P3	2023	2000	675309	7664450	Unburnt
Triodia chichesterensis	P3	2023	2000	675349	7664445	
Triodia chichesterensis	P3	2023	50	674075	7664655	Small stony rise
Triodia chichesterensis	P3	2023	500	674107	7664656	Stony incline

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	500	675077	7664839	Hard to pick numbers as Triodia lanigera here too. Burnt 1-2 years. On edges of rise rather than crest or slope.
Triodia chichesterensis	P3	2023	2000	675141	7664837	
Triodia chichesterensis	P3	2023	500	675171	7664838	
Triodia chichesterensis	P3	2023	2000	675371	7663452	Burnt 1-2 years
Triodia chichesterensis	P3	2023	2000	675318	7663455	Burnt 1-2 years
Triodia chichesterensis	P3	2023	2000	675268	7663454	
Triodia chichesterensis	P3	2023	50	675153	7663458	
Triodia chichesterensis	P3	2023	2000	675084	7663463	
Triodia chichesterensis	P3	2023	2000	675203	7663643	
Triodia chichesterensis	P3	2023	2000	675262	7663836	Triodia lanigera increases near edge of stony area and to the west
Triodia chichesterensis	P3	2023	50	674910	7663838	
Triodia chichesterensis	P3	2023	50	674841	7663853	
Triodia chichesterensis	P3	2023	200	674824	7663839	Patch of calcrete
Triodia chichesterensis	P3	2023	10	671973	7653545	
Triodia chichesterensis	P3	2023	5000	672800	7653430	Hillslope - spur
Triodia chichesterensis	P3	2023	5000	672802	7653343	Hillslope - spur
Triodia chichesterensis	P3	2023	5000	672795	7653309	Hillslope - spur
Triodia chichesterensis	P3	2023	500	672804	7653239	Hillslope - spur
Triodia chichesterensis	P3	2023	50	672821	7652894	Spur
Triodia chichesterensis	P3	2023	5000	672823	7652812	Spur
Triodia chichesterensis	P3	2023	50	672754	7653189	Saddle
Triodia chichesterensis	P3	2023	2000	672753	7653211	Spur
Triodia chichesterensis	P3	2023	2000	672748	7653268	Saddle
Triodia chichesterensis	P3	2023	5000	672750	7653360	Big spur
Triodia chichesterensis	P3	2023	5000	672745	7653405	Big spur
Triodia chichesterensis	P3	2023	500	672767	7653474	Stony footslopes
Triodia chichesterensis	P3	2023	500	672756	7653502	Stony footslopes
Triodia chichesterensis	P3	2023	500	672742	7653525	Stony footslopes
Triodia chichesterensis	P3	2023	500	672747	7653540	Stony footslopes
Triodia chichesterensis	P3	2023	2000	672176	7653256	Spur
Triodia chichesterensis	P3	2023	2000	672206	7653172	Spur
Triodia chichesterensis	P3	2023	100	672198	7653025	Saddle
Triodia chichesterensis	P3	2023	2000	672187	7653004	Saddle and shelts
Triodia chichesterensis	P3	2023	5000	672183	7652958	Saddle and shelts
Triodia chichesterensis	P3	2023	500	672184	7652895	Scree gentle
Triodia chichesterensis	P3	2023	50	672146	7652928	Shelf

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	200	672153	7652939	Shelf
Triodia chichesterensis	P3	2023	2000	672159	7652958	Shelf and scree
Triodia chichesterensis	P3	2023	2000	672165	7652983	Shelf and scree
Triodia chichesterensis	P3	2023	2000	672177	7653005	Saddle
Triodia chichesterensis	P3	2023	2000	672147	7653138	Shelf and saddle
Triodia chichesterensis	P3	2023	2000	672147	7653137	Shelf and saddle
Triodia chichesterensis	P3	2023	50	672158	7653200	Slope
Triodia chichesterensis	P3	2023	2000	672149	7653269	Bench
Triodia chichesterensis	P3	2023	5000	672149	7653342	Bench
Triodia chichesterensis	P3	2023	50	672409	7653442	Shelf
Triodia chichesterensis	P3	2023	5000	672411	7653370	Spur
Triodia chichesterensis	P3	2023	5000	672424	7653349	Spur
Triodia chichesterensis	P3	2023	500	672400	7653286	Shelf
Triodia chichesterensis	P3	2023	200	672405	7653272	Patch
Triodia chichesterensis	P3	2023	50	672407	7653244	Patch
Triodia chichesterensis	P3	2023	500	672411	7653192	Saddle
Triodia chichesterensis	P3	2023	2000	672405	7653164	Saddle
Triodia chichesterensis	P3	2023	500	672403	7652947	Shelf
Triodia chichesterensis	P3	2023	500	672402	7652866	Shelf
Triodia chichesterensis	P3	2023	500	672598	7652899	Saddle
Triodia chichesterensis	P3	2023	2000	672607	7652942	Spur
Triodia chichesterensis	P3	2023	200	672581	7653153	Patch
Triodia chichesterensis	P3	2023	2000	672597	7653187	Spur
Triodia chichesterensis	P3	2023	50	672605	7653374	Scree
Triodia chichesterensis	P3	2023	100	672597	7653434	Patch of quartz
Triodia chichesterensis	P3	2023	100	672602	7653453	From waypoint to south
Triodia chichesterensis	P3	2023	1	672653	7653536	In rehab
Triodia chichesterensis	P3	2023	200	673006	7653759	
Triodia chichesterensis	P3	2023	2000	673008	7653698	Shelf
Triodia chichesterensis	P3	2023	2000	673012	7653649	
Triodia chichesterensis	P3	2023	2000	673010	7653621	Hill
Triodia chichesterensis	P3	2023	5000	672990	7653571	Hill
Triodia chichesterensis	P3	2023	5000	673000	7653505	Hill
Triodia chichesterensis	P3	2023	2000	673012	7653459	Footslopes
Triodia chichesterensis	P3	2023	2000	673008	7653411	Footslopes
Triodia chichesterensis	P3	2023	2000	673008	7653225	
Triodia chichesterensis	P3	2023	500	675001	7662530	Calcrete and quartz
Triodia chichesterensis	P3	2023	2000	674102	7653097	
Triodia chichesterensis	P3	2023	100	673605	7653246	
Triodia chichesterensis	P3	2023	5000	673608	7653268	Spur

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	5000	673612	7653324	Big spur
Triodia chichesterensis	P3	2023	2000	673605	7653622	Big spur
Triodia chichesterensis	P3	2023	5000	673606	7653648	Big spur
Triodia chichesterensis	P3	2023	5000	673854	7653093	
Triodia chichesterensis	P3	2023	500	673845	7653152	
Triodia chichesterensis	P3	2023	100	673848	7653726	
Triodia chichesterensis	P3	2023	500	673934	7653824	
Triodia chichesterensis	P3	2023	500	673949	7653813	
Triodia chichesterensis	P3	2023	2000	674053	7653731	
Triodia chichesterensis	P3	2023	100	674068	7653081	
Triodia chichesterensis	P3	2023	500	675195	7663171	
Triodia chichesterensis	P3	2023	200	675199	7663378	A lot of Triodia lanigera here and also Triodia epactia
Triodia chichesterensis	P3	2023	200	675304	7663383	A lot of Triodia lanigera here and also Triodia epactia
Triodia chichesterensis	P3	2023	500	675298	7663331	
Triodia chichesterensis	P3	2023	2000	675301	7663283	Big stony spur SW-NE
Triodia chichesterensis	P3	2023	2000	675286	7663236	Big stony spur SW-NE
Triodia chichesterensis	P3	2023	2000	675292	7663196	Big stony spur SW-NE
Triodia chichesterensis	P3	2023	2000	675304	7663107	Big stony spur SW-NE
Triodia chichesterensis	P3	2023	2000	675300	7663059	Big stony spur SW-NE
Triodia chichesterensis	P3	2023	2000	675296	7662964	Big stony spur SW-NE 10% calcrete here
Triodia chichesterensis	P3	2023	2000	675295	7662887	Stony spur
Triodia chichesterensis	P3	2023	2000	675300	7662796	Stony spur calcrete 10%
Triodia chichesterensis	P3	2023	2000	675303	7662762	Stony spur calcrete 5%
Triodia chichesterensis	P3	2023	2000	675303	7662665	Stony spur calcrete 5%
Triodia chichesterensis	P3	2023	50	676094	7663335	Low stony rise with Triodia lanigera dominant
Triodia chichesterensis	P3	2023	50	676252	7663121	
Triodia chichesterensis	P3	2023	500	673413	7653402	Unburnt and growing with Triodia brizoides, look very similar
Triodia chichesterensis	P3	2023	500	673410	7653383	
Triodia chichesterensis	P3	2023	500	673408	7653350	
Triodia chichesterensis	P3	2023	200	673399	7653327	
Triodia chichesterensis	P3	2023	50	673314	7653330	Slope
Triodia chichesterensis	P3	2023	200	673308	7653357	Slope
Triodia chichesterensis	P3	2023	2000	673310	7653436	Slope
Triodia chichesterensis	P3	2023	500	673307	7653473	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	500	673313	7653501	Saddle
Triodia chichesterensis	P3	2023	500	673304	7653518	
Triodia chichesterensis	P3	2023	50	673291	7653731	Mainly Triodia brizoides here
Triodia chichesterensis	P3	2023	50	673288	7653776	
Triodia chichesterensis	P3	2023	500	673293	7653821	
Triodia chichesterensis	P3	2023	1000	673402	7653734	Saddle
Triodia chichesterensis	P3	2023	2000	673400	7653704	
Triodia chichesterensis	P3	2023	200	673420	7653594	
Triodia chichesterensis	P3	2023	100	673410	7653551	
Triodia chichesterensis	P3	2023	200	673397	7653513	
Triodia chichesterensis	P3	2023	500	671912	7653332	Burnt 1-2 years
Triodia chichesterensis	P3	2023	500	671905	7653302	Quartz, calcrete, basalt, silcrete
Triodia chichesterensis	P3	2023	500	671916	7653271	
Triodia chichesterensis	P3	2023	500	671893	7653233	
Triodia chichesterensis	P3	2023	5000	671896	7653212	Whole hill
Triodia chichesterensis	P3	2023	500	671900	7653144	
Triodia chichesterensis	P3	2023	5000	671902	7653093	Whole hill and slope, mosaic with Triodia wiseana
Triodia chichesterensis	P3	2023	5000	671937	7652891	Slope of hill
Triodia chichesterensis	P3	2023	5000	671945	7652968	Slope of hill
Triodia chichesterensis	P3	2023	5000	671932	7653001	Slope of hill
Triodia chichesterensis	P3	2023	500	671945	7653056	Slope of hill
Triodia chichesterensis	P3	2023	5000	671951	7653096	Saddle crest and slope
Triodia chichesterensis	P3	2023	5000	671942	7653160	
Triodia chichesterensis	P3	2023	5000	671959	7653217	
Triodia chichesterensis	P3	2023	5000	671940	7653309	
Triodia chichesterensis	P3	2023	5000	671953	7653349	
Triodia chichesterensis	P3	2023	1000	675277	7664496	On calcrete soil
Triodia chichesterensis	P3	2023	10	675368	7664500	On calcrete soil
Triodia chichesterensis	P3	2023	500	675027	7664698	Juveniles post-burn
Triodia chichesterensis	P3	2023	200	674977	7664700	Juveniles post-burn
Triodia chichesterensis	P3	2023	2000	674122	7664703	Juveniles post-burn
Triodia chichesterensis	P3	2023	35	673711	7657076	
Triodia chichesterensis	P3	2023	20	673693	7657145	
Triodia chichesterensis	P3	2023	500	696308	7665828	Plus 500 to the south
Triodia chichesterensis	P3	2023	1000	696398	7665752	Outside study area
Triodia chichesterensis	P3	2023	200	696063	7666063	
Triodia chichesterensis	P3	2023	1000	696072	7666047	Outside study area

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	200	698249	7661810	
Triodia chichesterensis	P3	2023	50	698261	7661833	
Triodia chichesterensis	P3	2023	500	698258	7661869	Dominant
Triodia chichesterensis	P3	2023	1000	698235	7661894	Plus 1000 to the east
Triodia chichesterensis	P3	2023	1000	698204	7661926	Dominant
Triodia chichesterensis	P3	2023	200	698178	7661962	Dominant
Triodia chichesterensis	P3	2023	350	698156	7661984	Dominant
Triodia chichesterensis	P3	2023	300	698090	7662070	Dominant
Triodia chichesterensis	P3	2023	500	698070	7662093	Dominant
Triodia chichesterensis	P3	2023	1000	698003	7662151	Dominant
Triodia chichesterensis	P3	2023	1000	697976	7662176	Dominant
Triodia chichesterensis	P3	2023	1000	697962	7662214	Dominant
Triodia chichesterensis	P3	2023	1000	697963	7662249	Dominant
Triodia chichesterensis	P3	2023	1000	697965	7662269	Dominant
Triodia chichesterensis	P3	2023	1000	697978	7662287	Dominant
Triodia chichesterensis	P3	2023	1000	697983	7662322	Dominant
Triodia chichesterensis	P3	2023	100	699176	7660156	
Triodia chichesterensis	P3	2023	300	699149	7660186	
Triodia chichesterensis	P3	2023	1000	699129	7660202	
Triodia chichesterensis	P3	2023	800	698715	7660412	Dominant
Triodia chichesterensis	P3	2023	800	698679	7660435	
Triodia chichesterensis	P3	2023	100	698461	7660537	
Triodia chichesterensis	P3	2023	100	698390	7660565	
Triodia chichesterensis	P3	2023	50	698375	7660586	
Triodia chichesterensis	P3	2023	150	698349	7660604	
Triodia chichesterensis	P3	2023	100	698336	7660614	
Triodia chichesterensis	P3	2023	1000	699714	7659522	Dominant, plus 1000 outside of study area
Triodia chichesterensis	P3	2023	300	699706	7659539	
Triodia chichesterensis	P3	2023	1000	699720	7659572	Dominant
Triodia chichesterensis	P3	2023	100	671699	7654216	Gentle rocky slope
Triodia chichesterensis	P3	2023	1000	671595	7654228	On calcrete slope
Triodia chichesterensis	P3	2023	500	671590	7654282	On calcrete slope
Triodia chichesterensis	P3	2023	500	671603	7654327	On rocky slope
Triodia chichesterensis	P3	2023	500	671595	7654388	On rocky slope
Triodia chichesterensis	P3	2023	1000	671500	7654621	On calcrete ridge
Triodia chichesterensis	P3	2023	1000	671503	7654616	
Triodia chichesterensis	P3	2023	50	671513	7654464	On calcrete slope
Triodia chichesterensis	P3	2023	1000	671509	7654262	On calcrete slope
Triodia chichesterensis	P3	2023	1000	671516	7654202	Slope with calcrete and quartz

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	2000	671538	7654138	Rocky ridge with quartz
Triodia chichesterensis	P3	2023	2000	671547	7654199	Rocky ridge with quartz
Triodia chichesterensis	P3	2023	2000	671505	7654165	Rocky ridge with quartz
Triodia chichesterensis	P3	2023	500	671512	7654116	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	100	671507	7654056	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	2000	671504	7654005	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	200	671504	7653954	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	500	671505	7653784	Rocky slope with calcrete
Triodia chichesterensis	P3	2023	50	671505	7653712	Rocky slope with calcrete
Triodia chichesterensis	P3	2023	2000	675390	7664294	Associated with calcrete soil
Triodia chichesterensis	P3	2023	7000	675329	7664296	Associated with calcrete soil, dominating
Triodia chichesterensis	P3	2023	2000	675265	7664295	Associated with calcrete soil, dominating
Triodia chichesterensis	P3	2023	500	675228	7664100	Juveniles
Triodia chichesterensis	P3	2023	200	675315	7664106	Juveniles
Triodia chichesterensis	P3	2023	500	675387	7664098	Juveniles
Triodia chichesterensis	P3	2023	500	667196	7668320	Dominant
Triodia chichesterensis	P3	2023	1000	667220	7668328	Outside study area, dominant
Triodia chichesterensis	P3	2023	500	667194	7668357	Dominant
Triodia chichesterensis	P3	2023	2000	675255	7654853	Juveniles on calcrete
Triodia chichesterensis	P3	2023	1000	675253	7654512	Mid-age plants on slope
Triodia chichesterensis	P3	2023	1000	675242	7654438	Mid-age plants on slope
Triodia chichesterensis	P3	2023	1000	675256	7654308	Juveniles and old-age plants on calcrete
Triodia chichesterensis	P3	2023	500	675257	7654255	Juveniles on calcrete
Triodia chichesterensis	P3	2023	250	675244	7654195	Juveniles on calcrete
Triodia chichesterensis	P3	2023	300	675234	7654056	Juveniles on pockets of calcrete
Triodia chichesterensis	P3	2023	1000	675245	7653955	Juveniles on calcrete
Triodia chichesterensis	P3	2023	1000	675240	7653855	Mixed ages on calcrete
Triodia chichesterensis	P3	2023	2000	675146	7653904	Mixed ages on calcrete
Triodia chichesterensis	P3	2023	1000	675142	7654296	Mature plants on banks
Triodia chichesterensis	P3	2023	1000	675151	7654386	Mature plants on slopes
Triodia chichesterensis	P3	2023	1000	675148	7654449	Mature plants on slopes
Triodia chichesterensis	P3	2023	500	675150	7654535	Mature plants on slopes
Triodia chichesterensis	P3	2023	1000	675051	7654508	Mid-age plants on slope
Triodia chichesterensis	P3	2023	1000	675056	7654404	On calcrete
Triodia chichesterensis	P3	2023	1000	675055	7653856	On calcrete
Triodia chichesterensis	P3	2023	200	674949	7653899	On calcrete

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	500	674946	7654237	On calcrete
Triodia chichesterensis	P3	2023	1000	674866	7654128	On calcrete
Triodia chichesterensis	P3	2023	100	674855	7654052	On calcrete, juvenile
Triodia chichesterensis	P3	2023	100	674744	7653960	On calcrete
Triodia chichesterensis	P3	2023	400	674744	7654051	On calcrete
Triodia chichesterensis	P3	2023	1000	674654	7654077	On calcrete
Triodia chichesterensis	P3	2023	1000	674549	7653905	On calcrete
Triodia chichesterensis	P3	2023	700	674439	7653886	On calcrete
Triodia chichesterensis	P3	2023	2000	674370	7653905	On calcrete
Triodia chichesterensis	P3	2023	50	674300	7653889	On calcrete
Triodia chichesterensis	P3	2023	300	674266	7654002	On calcrete
Triodia chichesterensis	P3	2023	50	672304	7656384	Edge of waste dump
Triodia chichesterensis	P3	2023	500	671552	7653721	Rocky slope
Triodia chichesterensis	P3	2023	200	671549	7653782	Rocky slope
Triodia chichesterensis	P3	2023	300	671555	7653857	Rocky slope
Triodia chichesterensis	P3	2023	300	671543	7653910	Rocky slope
Triodia chichesterensis	P3	2023	200	671560	7654121	On rocky ridge
Triodia chichesterensis	P3	2023	500	672098	7653277	Rocky ridge
Triodia chichesterensis	P3	2023	150	672100	7653172	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	2000	672099	7653098	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	500	672106	7653023	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	100	672299	7652973	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	1000	672305	7653078	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	500	672553	7653462	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	2000	672555	7653413	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	500	672549	7653323	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	2000	672542	7653251	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	2000	672555	7653181	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	500	672946	7653072	Rocky ridge with calcrete
Triodia chichesterensis	P3	2023	50	672957	7653252	Isolated calcrete on slope
Triodia chichesterensis	P3	2023	200	672951	7653320	Calcrete slope
Triodia chichesterensis	P3	2023	1000	672952	7653360	Calcrete slope
Triodia chichesterensis	P3	2023	2000	672951	7653418	Calcrete slope
Triodia chichesterensis	P3	2023	2000	672947	7653475	Calcrete slope
Triodia chichesterensis	P3	2023	2000	672950	7653518	Calcrete slope
Triodia chichesterensis	P3	2023	2000	672952	7653573	Calcrete slope
Triodia chichesterensis	P3	2023	200	672951	7653617	Calcrete slope
Triodia chichesterensis	P3	2023	400	672952	7653670	Calcrete slope
Triodia chichesterensis	P3	2023	10	672947	7653721	
Triodia chichesterensis	P3	2023	500	673153	7653820	Calcrete

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	200	673140	7653657	Calcrete
Triodia chichesterensis	P3	2023	100	673154	7653598	Calcrete
Triodia chichesterensis	P3	2023	100	673155	7653550	Calcrete
Triodia chichesterensis	P3	2023	20	673158	7653476	Calcrete
Triodia chichesterensis	P3	2023	2000	673155	7653429	Calcrete
Triodia chichesterensis	P3	2023	500	673154	7653358	Calcrete
Triodia chichesterensis	P3	2023	1000	673153	7653304	Calcrete
Triodia chichesterensis	P3	2023	2000	673349	7653278	Calcrete ridge
Triodia chichesterensis	P3	2023	2000	673350	7653335	Calcrete slope
Triodia chichesterensis	P3	2023	1000	673353	7653537	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673348	7653636	Calcrete slope
Triodia chichesterensis	P3	2023	100	673338	7653745	Calcrete slope
Triodia chichesterensis	P3	2023	100	673341	7653811	Calcrete slope
Triodia chichesterensis	P3	2023	500	673350	7653857	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673454	7653731	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673453	7653625	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673448	7653571	Calcrete slope
Triodia chichesterensis	P3	2023	1000	673450	7653527	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673454	7653421	Rocky slope
Triodia chichesterensis	P3	2023	50	673573	7653099	Rocky slope
Triodia chichesterensis	P3	2023	2000	673639	7653267	Rocky slope
Triodia chichesterensis	P3	2023	2000	673661	7653345	Rocky slope
Triodia chichesterensis	P3	2023	2000	673667	7653396	Calcrete slope
Triodia chichesterensis	P3	2023	200	673640	7653450	Calcrete slope
Triodia chichesterensis	P3	2023	200	673645	7653615	Calcrete slope
Triodia chichesterensis	P3	2023	2000	673651	7653669	Calcrete slope
Triodia chichesterensis	P3	2023	100	673643	7653751	Calcrete slope
Triodia chichesterensis	P3	2023	500	673590	7653764	Calcrete slope
Triodia chichesterensis	P3	2023	1000	673052	7653911	Calcrete slope
Triodia chichesterensis	P3	2023	1000	673022	7653940	Calcrete slope
Triodia chichesterensis	P3	2023	2000	675367	7662847	Alive
Triodia chichesterensis	P3	2023	2000	675364	7662796	Alive
Triodia chichesterensis	P3	2023	50	675358	7662728	Alive
Triodia chichesterensis	P3	2023	300	676153	7663304	Low abundance on ground
Triodia chichesterensis	P3	2023	100	675261	7662335	Juveniles on stony rise
Triodia chichesterensis	P3	2023	20	675260	7662389	Juveniles on stony rise
Triodia chichesterensis	P3	2023	100	675247	7662435	Juveniles on stony rise
Triodia chichesterensis	P3	2023	500	675239	7662638	Juveniles on stony rise
Triodia chichesterensis	P3	2023	500	675239	7662695	Juveniles on stony rise
Triodia chichesterensis	P3	2023	500	675248	7662739	Juveniles on stony rise

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	2000	675370	7663504	Juveniles on calcrete
Triodia chichesterensis	P3	2023	500	675301	7663503	Juveniles on calcrete
Triodia chichesterensis	P3	2023	500	675174	7663500	Juveniles on calcrete
Triodia chichesterensis	P3	2023	2000	675108	7663506	Juveniles on calcrete
Triodia chichesterensis	P3	2023	100	675043	7663503	Juveniles on calcrete
Triodia chichesterensis	P3	2023	2000	675101	7663704	Juveniles on stony rise
Triodia chichesterensis	P3	2023	2000	675158	7663704	Juveniles on stony rise
Triodia chichesterensis	P3	2023	2000	675210	7663706	Juveniles on stony rise
Triodia chichesterensis	P3	2023	2000	675280	7663699	Juveniles on stony rise
Triodia chichesterensis	P3	2023	500	675329	7663706	Juveniles on stony rise
Triodia chichesterensis	P3	2023	2000	675398	7663708	Juveniles on stony rise
Triodia chichesterensis	P3	2023	2000	675252	7663893	Juveniles on stony rise
Triodia chichesterensis	P3	2023	1000	675193	7663897	Juveniles on stony rise
Triodia chichesterensis	P3	2023	1000	675128	7663885	Juveniles on stony rise
Triodia chichesterensis	P3	2023	500	674986	7663892	Juveniles on stony rise
Triodia chichesterensis	P3	2023	450	674819	7661238	
Triodia chichesterensis	P3	2023	500	667133	7668332	
Triodia chichesterensis	P3	2023	1500	667134	7668352	
Triodia chichesterensis	P3	2023	300	667136	7668380	
Triodia chichesterensis	P3	2023	300	674752	7663097	
Triodia chichesterensis	P3	2023	200	674751	7663047	
Triodia chichesterensis	P3	2023	250	674750	7662973	
Triodia chichesterensis	P3	2023	300	674750	7662911	
Triodia chichesterensis	P3	2023	50	674745	7662856	
Triodia chichesterensis	P3	2023	200	674753	7662821	
Triodia chichesterensis	P3	2023	400	674747	7662758	
Triodia chichesterensis	P3	2023	300	674747	7662700	
Triodia chichesterensis	P3	2023	300	674759	7662636	
Triodia chichesterensis	P3	2023	300	674749	7662573	
Triodia chichesterensis	P3	2023	200	674749	7662517	
Triodia chichesterensis	P3	2023	400	674748	7662432	
Triodia chichesterensis	P3	2023	200	674746	7662395	
Triodia chichesterensis	P3	2023	200	674746	7662373	
Triodia chichesterensis	P3	2023	300	674746	7662323	
Triodia chichesterensis	P3	2023	40	674948	7662339	
Triodia chichesterensis	P3	2023	300	674957	7662437	
Triodia chichesterensis	P3	2023	200	674953	7662534	
Triodia chichesterensis	P3	2023	200	674951	7662631	
Triodia chichesterensis	P3	2023	50	674957	7662713	
Triodia chichesterensis	P3	2023	250	674950	7662794	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	200	674946	7663089	
Triodia chichesterensis	P3	2023	200	675405	7663603	
Triodia chichesterensis	P3	2023	200	675258	7663602	
Triodia chichesterensis	P3	2023	200	675198	7663601	
Triodia chichesterensis	P3	2023	100	675130	7663606	
Triodia chichesterensis	P3	2023	50	675064	7663598	
Triodia chichesterensis	P3	2023	50	674953	7663226	
Triodia chichesterensis	P3	2023	300	674953	7663345	
Triodia chichesterensis	P3	2023	200	675158	7663422	
Triodia chichesterensis	P3	2023	200	675154	7663101	
Triodia chichesterensis	P3	2023	200	675151	7663052	
Triodia chichesterensis	P3	2023	200	675159	7662989	
Triodia chichesterensis	P3	2023	200	675152	7662941	
Triodia chichesterensis	P3	2023	50	675153	7662841	
Triodia chichesterensis	P3	2023	100	675150	7662784	
Triodia chichesterensis	P3	2023	100	675157	7662713	
Triodia chichesterensis	P3	2023	50	675158	7662631	
Triodia chichesterensis	P3	2023	100	675149	7662578	
Triodia chichesterensis	P3	2023	50	675157	7662359	
Triodia chichesterensis	P3	2023	100	675150	7662332	
Triodia chichesterensis	P3	2023	100	675354	7662333	
Triodia chichesterensis	P3	2023	100	675352	7662409	
Triodia chichesterensis	P3	2023	100	675350	7662498	
Triodia chichesterensis	P3	2023	200	675350	7662587	
Triodia chichesterensis	P3	2023	50	675343	7662662	
Triodia chichesterensis	P3	2023	50	671552	7654476	
Triodia chichesterensis	P3	2023	100	671547	7654418	
Triodia chichesterensis	P3	2023	50	671556	7654356	
Triodia chichesterensis	P3	2023	150	671549	7654244	
Triodia chichesterensis	P3	2023	150	671547	7654202	
Triodia chichesterensis	P3	2023	150	671652	7654175	
Triodia chichesterensis	P3	2023	300	671625	7654104	
Triodia chichesterensis	P3	2023	200	671667	7653796	
Triodia chichesterensis	P3	2023	300	671705	7653760	
Triodia chichesterensis	P3	2023	250	671707	7653711	
Triodia chichesterensis	P3	2023	20	671701	7653630	
Triodia chichesterensis	P3	2023	500	671616	7653724	
Triodia chichesterensis	P3	2023	200	671639	7653776	
Triodia chichesterensis	P3	2023	100	671609	7653819	
Triodia chichesterensis	P3	2023	100	671755	7653681	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	400	671796	7653193	
Triodia chichesterensis	P3	2023	200	671801	7653128	
Triodia chichesterensis	P3	2023	400	671808	7653050	
Triodia chichesterensis	P3	2023	500	672356	7653181	
Triodia chichesterensis	P3	2023	350	672340	7653243	
Triodia chichesterensis	P3	2023	300	672356	7653292	
Triodia chichesterensis	P3	2023	500	672456	7653497	
Triodia chichesterensis	P3	2023	500	672456	7653385	
Triodia chichesterensis	P3	2023	400	672450	7653327	
Triodia chichesterensis	P3	2023	500	672454	7653285	
Triodia chichesterensis	P3	2023	300	672448	7653187	
Triodia chichesterensis	P3	2023	200	672449	7653076	
Triodia chichesterensis	P3	2023	300	672651	7653127	
Triodia chichesterensis	P3	2023	400	672655	7653170	
Triodia chichesterensis	P3	2023	100	675246	7664203	
Triodia chichesterensis	P3	2023	50	675272	7664199	
Triodia chichesterensis	P3	2023	200	675352	7664206	
Triodia chichesterensis	P3	2023	300	675400	7664198	
Triodia chichesterensis	P3	2023	700	675324	7664401	
Triodia chichesterensis	P3	2023	400	675271	7664402	
Triodia chichesterensis	P3	2023	200	674634	7664399	
Triodia chichesterensis	P3	2023	400	675180	7663805	
Triodia chichesterensis	P3	2023	500	675264	7663796	
Triodia chichesterensis	P3	2023	300	675378	7663793	
Triodia chichesterensis	P3	2023	200	675315	7664004	
Triodia chichesterensis	P3	2023	200	675259	7664007	
Triodia chichesterensis	P3	2023	400	675159	7663993	
Triodia chichesterensis	P3	2023	300	672651	7653236	
Triodia chichesterensis	P3	2023	500	672656	7653270	
Triodia chichesterensis	P3	2023	300	672655	7653308	
Triodia chichesterensis	P3	2023	600	672651	7653444	
Triodia chichesterensis	P3	2023	400	672656	7653485	
Triodia chichesterensis	P3	2023	300	673047	7653767	
Triodia chichesterensis	P3	2023	100	673055	7653712	
Triodia chichesterensis	P3	2023	500	673053	7653638	
Triodia chichesterensis	P3	2023	500	673055	7653580	
Triodia chichesterensis	P3	2023	500	673055	7653538	
Triodia chichesterensis	P3	2023	400	673057	7653492	
Triodia chichesterensis	P3	2023	400	673053	7653344	
Triodia chichesterensis	P3	2023	300	673049	7653293	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	400	673054	7653214	
Triodia chichesterensis	P3	2023	300	673251	7653323	
Triodia chichesterensis	P3	2023	300	673250	7653433	
Triodia chichesterensis	P3	2023	300	673244	7653563	
Triodia chichesterensis	P3	2023	50	673250	7653792	
Triodia chichesterensis	P3	2023	300	673552	7653738	
Triodia chichesterensis	P3	2023	300	673550	7653690	
Triodia chichesterensis	P3	2023	200	673549	7653655	
Triodia chichesterensis	P3	2023	400	673551	7653595	
Triodia chichesterensis	P3	2023	300	673555	7653427	
Triodia chichesterensis	P3	2023	50	673743	7653146	
Triodia chichesterensis	P3	2023	1000	673747	7653199	
Triodia chichesterensis	P3	2023	1000	673751	7653265	
Triodia chichesterensis	P3	2023	1000	673752	7653324	
Triodia chichesterensis	P3	2023	1000	673756	7653385	
Triodia chichesterensis	P3	2023	1000	673751	7653430	
Triodia chichesterensis	P3	2023	50	673747	7653509	
Triodia chichesterensis	P3	2023	600	673750	7653693	
Triodia chichesterensis	P3	2023	50	673252	7653887	
Triodia chichesterensis	P3	2023	400	673254	7653952	
Triodia chichesterensis	P3	2023	300	673254	7654012	
Triodia chichesterensis	P3	2023	100	673202	7654004	
Triodia chichesterensis	P3	2023	300	673204	7653958	
Triodia chichesterensis	P3	2023	300	673199	7653884	
Triodia chichesterensis	P3	2023	500	675297	7654412	
Triodia chichesterensis	P3	2023	200	675298	7654344	
Triodia chichesterensis	P3	2023	1000	675305	7654277	
Triodia chichesterensis	P3	2023	300	675305	7653963	
Triodia chichesterensis	P3	2023	400	675208	7653865	
Triodia chichesterensis	P3	2023	400	675200	7653939	
Triodia chichesterensis	P3	2023	400	675201	7654066	
Triodia chichesterensis	P3	2023	400	675197	7654193	
Triodia chichesterensis	P3	2023	300	675201	7654220	
Triodia chichesterensis	P3	2023	1000	675196	7654295	
Triodia chichesterensis	P3	2023	1000	675197	7654416	
Triodia chichesterensis	P3	2023	1000	675201	7654478	
Triodia chichesterensis	P3	2023	1000	675211	7654684	
Triodia chichesterensis	P3	2023	1000	675095	7654516	
Triodia chichesterensis	P3	2023	1000	675095	7654431	
Triodia chichesterensis	P3	2023	1500	675099	7654371	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	300	675008	7653869	
Triodia chichesterensis	P3	2023	1000	696326	7665852	
Triodia chichesterensis	P3	2023	600	696346	7665845	
Triodia chichesterensis	P3	2023	40	696001	7666069	
Triodia chichesterensis	P3	2023	400	696017	7666059	
Triodia chichesterensis	P3	2023	150	696033	7666050	
Triodia chichesterensis	P3	2023	150	696044	7666041	
Triodia chichesterensis	P3	2023	1000	696012	7666059	Outside of study area.
Triodia chichesterensis	P3	2023	40	698212	7661780	
Triodia chichesterensis	P3	2023	70	698207	7661820	
Triodia chichesterensis	P3	2023	1000	698205	7661868	
Triodia chichesterensis	P3	2023	100	698174	7661882	T. angusta now dominant
Triodia chichesterensis	P3	2023	800	698153	7661919	T. chichesterensis dominant
Triodia chichesterensis	P3	2023	600	698121	7661961	Co-dominant
Triodia chichesterensis	P3	2023	1000	698093	7661994	
Triodia chichesterensis	P3	2023	500	698064	7662023	
Triodia chichesterensis	P3	2023	900	697977	7662116	
Triodia chichesterensis	P3	2023	900	697940	7662163	
Triodia chichesterensis	P3	2023	800	697928	7662207	
Triodia chichesterensis	P3	2023	600	697916	7662258	
Triodia chichesterensis	P3	2023	150	697925	7662297	
Triodia chichesterensis	P3	2023	60	698320	7660708	Outside study area
Triodia chichesterensis	P3	2023	20	698371	7660634	
Triodia chichesterensis	P3	2023	700	698377	7660659	
Triodia chichesterensis	P3	2023	10000	698387	7660673	Outside of study area.
Triodia chichesterensis	P3	2023	250	698384	7660618	
Triodia chichesterensis	P3	2023	800	698426	7660617	
Triodia chichesterensis	P3	2023	1000	698468	7660595	
Triodia chichesterensis	P3	2023	100	698678	7660474	
Triodia chichesterensis	P3	2023	120	698718	7660464	
Triodia chichesterensis	P3	2023	200	698732	7660472	
Triodia chichesterensis	P3	2023	100	698792	7660435	
Triodia chichesterensis	P3	2023	15	698814	7660422	
Triodia chichesterensis	P3	2023	250	699076	7660267	
Triodia chichesterensis	P3	2023	250	699100	7660252	
Triodia chichesterensis	P3	2023	250	699118	7660226	
Triodia chichesterensis	P3	2023	1000	699142	7660223	
Triodia chichesterensis	P3	2023	6000	699159	7660252	Outside of study area.
Triodia chichesterensis	P3	2023	600	699182	7660217	
Triodia chichesterensis	P3	2023	1000	699761	7659573	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	10000	699765	7659545	Outside of study area.
Triodia chichesterensis	P3	2023	1000	699791	7659574	
Triodia chichesterensis	P3	2023	250	699810	7659573	
Triodia chichesterensis	P3	2023	300	699665	7659551	
Triodia chichesterensis	P3	2023	150	699651	7659591	
Triodia chichesterensis	P3	2023	80	699638	7659597	Outside of study area.
Triodia chichesterensis	P3	2023	300	699676	7659605	
Triodia chichesterensis	P3	2023	200	674551	7662198	Growing amongst T. lanigera
Triodia chichesterensis	P3	2023	300	674549	7662278	
Triodia chichesterensis	P3	2023	200	674551	7662340	
Triodia chichesterensis	P3	2023	200	674554	7662400	
Triodia chichesterensis	P3	2023	300	674551	7662512	Dominating the stony rises
Triodia chichesterensis	P3	2023	300	674556	7662595	
Triodia chichesterensis	P3	2023	300	674551	7662667	
Triodia chichesterensis	P3	2023	300	674552	7662750	
Triodia chichesterensis	P3	2023	250	675022	7663995	
Triodia chichesterensis	P3	2023	50	675085	7664807	
Triodia chichesterensis	P3	2023	300	671650	7654207	
Triodia chichesterensis	P3	2023	100	671650	7654311	
Triodia chichesterensis	P3	2023	1000	675009	7654356	
Triodia chichesterensis	P3	2023	500	675006	7654410	
Triodia chichesterensis	P3	2023	300	674899	7654097	
Triodia chichesterensis	P3	2023	200	674901	7653861	
Triodia chichesterensis	P3	2023	2000	674806	7653958	
Triodia chichesterensis	P3	2023	1000	674701	7654113	
Triodia chichesterensis	P3	2023	300	674701	7654012	
Triodia chichesterensis	P3	2023	400	674599	7653943	
Triodia chichesterensis	P3	2023	500	674496	7662324	Juvenille
Triodia chichesterensis	P3	2023	500	674505	7662394	Juvenille
Triodia chichesterensis	P3	2023	2000	674392	7653862	
Triodia chichesterensis	P3	2023	400	674319	7653857	
Triodia chichesterensis	P3	2023	50	674229	7653852	
Triodia chichesterensis	P3	2023	10	674297	7653951	
Triodia chichesterensis	P3	2023	200	674679	7657548	
Triodia chichesterensis	P3	2023	500	674721	7657551	
Triodia chichesterensis	P3	2023	500	674654	7657454	
Triodia chichesterensis	P3	2023	50	674885	7662524	
Triodia chichesterensis	P3	2023	50	674895	7662601	
Triodia chichesterensis	P3	2023	50	674896	7662749	
Triodia chichesterensis	P3	2023	50	674898	7662829	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	50	674900	7662920	
Triodia chichesterensis	P3	2023	100	674895	7663026	
Triodia chichesterensis	P3	2023	50	674898	7663173	
Triodia chichesterensis	P3	2023	50	674896	7663272	
Triodia chichesterensis	P3	2023	50	674891	7663356	
Triodia chichesterensis	P3	2023	500	674503	7662473	Juvenille
Triodia chichesterensis	P3	2023	500	674505	7662559	Juvenille
Triodia chichesterensis	P3	2023	500	674508	7662643	Juvenille
Triodia chichesterensis	P3	2023	200	674491	7662897	Juvenille, stony rise/sand border
Triodia chichesterensis	P3	2023	200	674507	7662958	Juvenille
Triodia chichesterensis	P3	2023	200	674496	7663049	Juvenille
Triodia chichesterensis	P3	2023	400	674514	7663131	Juvenille
Triodia chichesterensis	P3	2023	150	674489	7663276	Juvenille
Triodia chichesterensis	P3	2023	100	674504	7663354	Juvenille
Triodia chichesterensis	P3	2023	100	674505	7663425	Juvenille
Triodia chichesterensis	P3	2023	200	674710	7663366	Juvenille
Triodia chichesterensis	P3	2023	300	674700	7663290	Juvenille
Triodia chichesterensis	P3	2023	200	674704	7663234	Juvenille
Triodia chichesterensis	P3	2023	100	674701	7663136	Very old track
Triodia chichesterensis	P3	2023	100	674716	7663060	Juvenille
Triodia chichesterensis	P3	2023	100	674695	7662900	Juvenille
Triodia chichesterensis	P3	2023	200	674706	7662860	Juvenille
Triodia chichesterensis	P3	2023	200	674704	7662688	Juvenille
Triodia chichesterensis	P3	2023	100	674700	7662582	Juvenille
Triodia chichesterensis	P3	2023	100	674695	7662506	Juvenille
Triodia chichesterensis	P3	2023	100	674697	7662449	
Triodia chichesterensis	P3	2023	100	674695	7662361	
Triodia chichesterensis	P3	2023	50	674892	7662362	
Triodia chichesterensis	P3	2023	100	675064	7664751	
Triodia chichesterensis	P3	2023	100	674995	7664749	
Triodia chichesterensis	P3	2023	50	674933	7664746	
Triodia chichesterensis	P3	2023	50	674116	7664734	
Triodia chichesterensis	P3	2023	100	674094	7664749	
Triodia chichesterensis	P3	2023	50	671843	7653463	
Triodia chichesterensis	P3	2023	50	671843	7653373	
Triodia chichesterensis	P3	2023	50	671849	7653321	
Triodia chichesterensis	P3	2023	200	671852	7653284	
Triodia chichesterensis	P3	2023	300	671854	7653241	
Triodia chichesterensis	P3	2023	200	671851	7653186	
Triodia chichesterensis	P3	2023	200	671848	7653135	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	100	671846	7653101	
Triodia chichesterensis	P3	2023	500	671855	7653057	
Triodia chichesterensis	P3	2023	1000	672001	7652890	
Triodia chichesterensis	P3	2023	1000	672010	7652988	
Triodia chichesterensis	P3	2023	500	671997	7653044	
Triodia chichesterensis	P3	2023	500	671998	7653079	
Triodia chichesterensis	P3	2023	1000	672004	7653129	
Triodia chichesterensis	P3	2023	500	671993	7653185	
Triodia chichesterensis	P3	2023	500	672000	7653229	
Triodia chichesterensis	P3	2023	500	672007	7653283	
Triodia chichesterensis	P3	2023	500	672008	7653360	
Triodia chichesterensis	P3	2023	500	672011	7653428	
Triodia chichesterensis	P3	2023	500	671998	7653494	
Triodia chichesterensis	P3	2023	150	671997	7653528	Vegetation type interface
Triodia chichesterensis	P3	2023	200	672856	7653579	
Triodia chichesterensis	P3	2023	150	672854	7653417	
Triodia chichesterensis	P3	2023	500	672847	7653368	
Triodia chichesterensis	P3	2023	150	672868	7653300	
Triodia chichesterensis	P3	2023	500	672848	7653220	
Triodia chichesterensis	P3	2023	200	672842	7652788	
Triodia chichesterensis	P3	2023	200	672851	7652760	
Triodia chichesterensis	P3	2023	500	672695	7652970	
Triodia chichesterensis	P3	2023	500	672697	7653008	
Triodia chichesterensis	P3	2023	100	672702	7653092	
Triodia chichesterensis	P3	2023	100	672701	7653152	
Triodia chichesterensis	P3	2023	100	672697	7653205	
Triodia chichesterensis	P3	2023	1000	672699	7653297	
Triodia chichesterensis	P3	2023	500	672697	7653389	
Triodia chichesterensis	P3	2023	500	672705	7653433	
Triodia chichesterensis	P3	2023	1000	672705	7653495	
Triodia chichesterensis	P3	2023	1000	672702	7653540	
Triodia chichesterensis	P3	2023	1000	672052	7653517	
Triodia chichesterensis	P3	2023	1000	672049	7653466	
Triodia chichesterensis	P3	2023	1000	672056	7653412	
Triodia chichesterensis	P3	2023	500	672047	7653332	
Triodia chichesterensis	P3	2023	500	672049	7653290	
Triodia chichesterensis	P3	2023	500	672055	7653262	
Triodia chichesterensis	P3	2023	500	672049	7653184	
Triodia chichesterensis	P3	2023	500	672050	7653149	
Triodia chichesterensis	P3	2023	1000	672050	7653083	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	1000	672050	7653039	
Triodia chichesterensis	P3	2023	1000	672049	7652991	
Triodia chichesterensis	P3	2023	500	672051	7652950	
Triodia chichesterensis	P3	2023	500	672049	7652903	
Triodia chichesterensis	P3	2023	500	672051	7652847	
Triodia chichesterensis	P3	2023	200	672058	7652808	
Triodia chichesterensis	P3	2023	25	672244	7652792	
Triodia chichesterensis	P3	2023	100	672237	7652813	
Triodia chichesterensis	P3	2023	1000	672258	7652887	
Triodia chichesterensis	P3	2023	100	672251	7652918	
Triodia chichesterensis	P3	2023	500	672247	7652960	
Triodia chichesterensis	P3	2023	500	672247	7653010	
Triodia chichesterensis	P3	2023	500	672255	7653105	
Triodia chichesterensis	P3	2023	200	672247	7653184	
Triodia chichesterensis	P3	2023	1000	672252	7653249	
Triodia chichesterensis	P3	2023	1000	672250	7653303	
Triodia chichesterensis	P3	2023	500	672254	7653356	
Triodia chichesterensis	P3	2023	700	672253	7653406	
Triodia chichesterensis	P3	2023	1000	672252	7653462	
Triodia chichesterensis	P3	2023	1000	672497	7653478	
Triodia chichesterensis	P3	2023	1000	672510	7653424	
Triodia chichesterensis	P3	2023	1000	672501	7653370	
Triodia chichesterensis	P3	2023	1000	672502	7653277	
Triodia chichesterensis	P3	2023	500	672494	7653238	
Triodia chichesterensis	P3	2023	500	672503	7653197	
Triodia chichesterensis	P3	2023	250	672499	7653154	
Triodia chichesterensis	P3	2023	200	672506	7653116	
Triodia chichesterensis	P3	2023	200	672506	7653090	Bedrock crest
Triodia chichesterensis	P3	2023	500	672504	7653034	
Triodia chichesterensis	P3	2023	200	672503	7652992	
Triodia chichesterensis	P3	2023	200	672503	7652900	
Triodia chichesterensis	P3	2023	200	672504	7652820	
Triodia chichesterensis	P3	2023	500	672508	7652761	
Triodia chichesterensis	P3	2023	1000	672517	7652735	
Triodia chichesterensis	P3	2023	300	672900	7653013	
Triodia chichesterensis	P3	2023	500	672894	7653130	
Triodia chichesterensis	P3	2023	500	672901	7653186	
Triodia chichesterensis	P3	2023	1000	672908	7653246	
Triodia chichesterensis	P3	2023	500	672900	7653297	
Triodia chichesterensis	P3	2023	500	672898	7653428	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	1000	672901	7653486	
Triodia chichesterensis	P3	2023	500	672897	7653529	
Triodia chichesterensis	P3	2023	500	672911	7653572	
Triodia chichesterensis	P3	2023	500	672900	7653606	Present on some ripped/refuse terrain
Triodia chichesterensis	P3	2023	25	673102	7653787	
Triodia chichesterensis	P3	2023	1000	673100	7653725	
Triodia chichesterensis	P3	2023	500	673106	7653659	
Triodia chichesterensis	P3	2023	500	673102	7653590	
Triodia chichesterensis	P3	2023	1000	673093	7653523	
Triodia chichesterensis	P3	2023	200	673098	7653373	
Triodia chichesterensis	P3	2023	500	673105	7653321	
Triodia chichesterensis	P3	2023	1000	673098	7653282	
Triodia chichesterensis	P3	2023	500	673103	7653239	
Triodia chichesterensis	P3	2023	500	673106	7653111	
Triodia chichesterensis	P3	2023	500	673100	7652991	
Triodia chichesterensis	P3	2023	200	673203	7653117	
Triodia chichesterensis	P3	2023	1000	674655	7657599	
Triodia chichesterensis	P3	2023	250	674733	7657594	
Triodia chichesterensis	P3	2023	50	676653	7662719	
Triodia chichesterensis	P3	2023	500	674451	7662519	Alive
Triodia chichesterensis	P3	2023	500	674458	7662570	Alive
Triodia chichesterensis	P3	2023	200	674451	7662853	Alive
Triodia chichesterensis	P3	2023	1000	674143	7653095	
Triodia chichesterensis	P3	2023	250	674146	7653910	
Triodia chichesterensis	P3	2023	1000	674101	7653901	
Triodia chichesterensis	P3	2023	200	675402	7664340	
Triodia chichesterensis	P3	2023	500	675348	7664345	
Triodia chichesterensis	P3	2023	500	675294	7664350	
Triodia chichesterensis	P3	2023	500	674454	7662372	Alive, tiny post fire plants
Triodia chichesterensis	P3	2023	300	674446	7662440	Alive, tiny post fire plants
Triodia chichesterensis	P3	2023	500	675245	7662861	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675244	7662946	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675248	7663003	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675258	7663072	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675253	7663130	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675253	7663179	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675249	7663229	Juveniles, dominates
Triodia chichesterensis	P3	2023	200	675248	7663357	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675256	7663418	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675354	7663405	Juveniles, dominates

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	2000	675350	7663332	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675346	7663269	Juveniles, dominates
Triodia chichesterensis	P3	2023	100	675344	7663212	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675357	7663164	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675356	7663111	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675356	7663063	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675350	7663009	Juveniles, dominates
Triodia chichesterensis	P3	2023	2000	675354	7662962	Juveniles, dominates
Triodia chichesterensis	P3	2023	500	675058	7662600	Juveniles on calcrete rise
Triodia chichesterensis	P3	2023	500	675051	7662527	Juveniles on calcrete rise
Triodia chichesterensis	P3	2023	50	675052	7662462	Juveniles on calcrete rise
Triodia chichesterensis	P3	2023	500	675062	7662318	Juveniles on calcrete rise
Triodia chichesterensis	P3	2023	100	674843	7662507	Young, post-burn juveniles
Triodia chichesterensis	P3	2023	300	674842	7662572	Alive juveniles
Triodia chichesterensis	P3	2023	100	674850	7662670	Alive juveniles
Triodia chichesterensis	P3	2023	100	674850	7662735	Alive juveniles
Triodia chichesterensis	P3	2023	200	674846	7662812	Alive juveniles
Triodia chichesterensis	P3	2023	200	674844	7662928	Alive juveniles
Triodia chichesterensis	P3	2023	50	674843	7662995	Alive juveniles
Triodia chichesterensis	P3	2023	500	674850	7663096	Intermediate chichesternsis/lanigera, alive juveniles
Triodia chichesterensis	P3	2023	300	674835	7663160	Intermediate chichesternsis/lanigera, juveniles
Triodia chichesterensis	P3	2023	100	674838	7663346	Juveniles
Triodia chichesterensis	P3	2023	200	674844	7663405	Juveniles
Triodia chichesterensis	P3	2023	50	675061	7663388	Juveniles
Triodia chichesterensis	P3	2023	50	675053	7662905	Intermediate chichesternsis/lanigera, juveniles
Triodia chichesterensis	P3	2023	40	675207	7663555	
Triodia chichesterensis	P3	2023	100	675279	7662546	
Triodia chichesterensis	P3	2023	50	675291	7662607	
Triodia chichesterensis	P3	2023	100	674986	7664198	
Triodia chichesterensis	P3	2023	50	675100	7663290	
Triodia chichesterensis	P3	2023	25	675103	7663235	
Triodia chichesterensis	P3	2023	25	675098	7663055	
Triodia chichesterensis	P3	2023	100	675107	7662985	
Triodia chichesterensis	P3	2023	50	675104	7662897	
Triodia chichesterensis	P3	2023	200	675107	7662664	
Triodia chichesterensis	P3	2023	200	675100	7662590	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	200	675099	7662533	
Triodia chichesterensis	P3	2023	150	675101	7662481	Border flow line
Triodia chichesterensis	P3	2023	200	675103	7662385	
Triodia chichesterensis	P3	2023	200	675302	7662328	
Triodia chichesterensis	P3	2023	300	675298	7662374	
Triodia chichesterensis	P3	2023	50	675304	7662430	
Triodia chichesterensis	P3	2023	500	675190	7663746	Juvenille
Triodia chichesterensis	P3	2023	500	675239	7663753	Juvenille
Triodia chichesterensis	P3	2023	300	675311	7663752	
Triodia chichesterensis	P3	2023	200	675275	7663947	
Triodia chichesterensis	P3	2023	200	675214	7663950	
Triodia chichesterensis	P3	2023	500	675150	7663949	
Triodia chichesterensis	P3	2023	500	674996	7663950	
Triodia chichesterensis	P3	2023	200	674940	7663952	
Triodia chichesterensis	P3	2023	200	674975	7664149	
Triodia chichesterensis	P3	2023	200	675239	7664150	
Triodia chichesterensis	P3	2023	200	675286	7664147	
Triodia chichesterensis	P3	2023	200	675355	7664149	
Triodia chichesterensis	P3	2023	200	673193	7653271	
Triodia chichesterensis	P3	2023	1000	673209	7653313	
Triodia chichesterensis	P3	2023	1000	673203	7653358	
Triodia chichesterensis	P3	2023	1000	673201	7653433	
Triodia chichesterensis	P3	2023	1000	673199	7653544	
Triodia chichesterensis	P3	2023	50	673211	7653622	
Triodia chichesterensis	P3	2023	200	673196	7653654	
Triodia chichesterensis	P3	2023	100	673200	7653737	
Triodia chichesterensis	P3	2023	200	673197	7653799	
Triodia chichesterensis	P3	2023	500	673499	7653703	
Triodia chichesterensis	P3	2023	500	673502	7653617	
Triodia chichesterensis	P3	2023	200	673472	7653546	
Triodia chichesterensis	P3	2023	1000	673491	7653489	
Triodia chichesterensis	P3	2023	500	673484	7653445	
Triodia chichesterensis	P3	2023	200	673502	7653407	
Triodia chichesterensis	P3	2023	1000	673699	7653128	
Triodia chichesterensis	P3	2023	500	673705	7653199	
Triodia chichesterensis	P3	2023	1000	673710	7653247	
Triodia chichesterensis	P3	2023	1000	673702	7653303	
Triodia chichesterensis	P3	2023	1000	673690	7653379	
Triodia chichesterensis	P3	2023	500	673698	7653654	
Triodia chichesterensis	P3	2023	1000	673700	7653712	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023	100	673152	7653873	
Triodia chichesterensis	P3	2023	500	673149	7653929	
Triodia chichesterensis	P3	2023	1000	673152	7653990	
Triodia chichesterensis	P3	2023	1000	673096	7654004	
Triodia chichesterensis	P3	2023	1000	673103	7653964	
Triodia chichesterensis	P3	2023	1000	673097	7653906	
Triodia chichesterensis	P3	2023	500	673094	7653842	
Triodia chichesterensis	P3	2023	250	673802	7653090	
Triodia chichesterensis	P3	2023	1000	673803	7653138	
Triodia chichesterensis	P3	2023	1000	673802	7653252	
Triodia chichesterensis	P3	2023	1000	673799	7653312	
Triodia chichesterensis	P3	2023	1000	673800	7653370	
Triodia chichesterensis	P3	2023	1000	673807	7653448	
Triodia chichesterensis	P3	2023	500	673799	7653515	
Triodia chichesterensis	P3	2023	500	673802	7653576	
Triodia chichesterensis	P3	2023	1000	673802	7653704	
Triodia chichesterensis	P3	2023	1000	673802	7653760	
Triodia chichesterensis	P3	2023	200	673907	7653782	
Triodia chichesterensis	P3	2023	25	673975	7653542	
Triodia chichesterensis	P3	2023	300	673955	7653500	
Triodia chichesterensis	P3	2023	50	673978	7653450	
Triodia chichesterensis	P3	2023	100	674001	7653436	
Triodia chichesterensis	P3	2023	100	673979	7653386	
Triodia chichesterensis	P3	2023	50	673987	7653358	
Triodia chichesterensis	P3	2023	50	673972	7653334	
Triodia chichesterensis	P3	2023	300	673958	7653306	
Triodia chichesterensis	P3	2023	100	673964	7653379	
Triodia chichesterensis	P3	2023	50	673899	7653510	
Triodia chichesterensis	P3	2023	500	673892	7653473	
Triodia chichesterensis	P3	2023	100	673900	7653432	
Triodia chichesterensis	P3	2023	200	673896	7653389	
Triodia chichesterensis	P3	2023	250	673898	7653320	
Triodia chichesterensis	P3	2023	500	673894	7653288	
Triodia chichesterensis	P3	2023	500	673903	7653257	
Triodia chichesterensis	P3	2023	300	673907	7653241	
Triodia chichesterensis	P3	2023	1000	673897	7653220	
Triodia chichesterensis	P3	2023	500	673902	7653078	
Triodia chichesterensis	P3	2023	1000	673947	7653075	
Triodia chichesterensis	P3	2023	50	674003	7653265	
Triodia chichesterensis	P3	2023	50	673999	7653297	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2023		696313	7665823	
Triodia chichesterensis	P3	2023		697974	7662169	
Triodia chichesterensis	P3	2023	2	675677	7656265	
Triodia chichesterensis	P3	2023	1000	676471	7657056	
Triodia chichesterensis	P3	2023		675683	7655796	
Triodia chichesterensis	P3	2023		671875	7653030	
Triodia chichesterensis	P3	2023		672766	7653042	
Triodia chichesterensis	P3	2023		674420	7663140	
Triodia chichesterensis	P3	2023		675349	7664052	
Triodia chichesterensis	P3	2023		673310	7653296	
Triodia chichesterensis	P3	2023		674068	7653081	
Triodia chichesterensis	P3	2023	250	671622	7654093	
Triodia chichesterensis	P3	2023	1000	675030	7654362	
Triodia chichesterensis	P3	2023		675344	7664219	
Triodia chichesterensis	P3	2023		699129	7660202	
Triodia chichesterensis	P3	2023		667199	7668333	
Triodia chichesterensis	P3	2023		672479	7657214	
Triodia chichesterensis	P3	2023		672736	7657385	
Triodia chichesterensis	P3	2023		674411	7660056	
Triodia chichesterensis	P3	2023		674803	7664371	
Triodia chichesterensis	P3	2023	100	673941	7653144	
Triodia chichesterensis	P3	2024	900	698966	7663901	
Triodia chichesterensis	P3	2024	550	677264	7663631	
Triodia chichesterensis	P3	2024	8000	675360	7662097	
Triodia chichesterensis	P3	2024	10000	674656	7658575	
Triodia chichesterensis	P3	2024	6000	674821	7658360	
Triodia chichesterensis	P3	2024	1200	675501	7658467	
Triodia chichesterensis	P3	2024	8	675240	7658543	
Triodia chichesterensis	P3	2024	300	697726	7661219	
Triodia chichesterensis	P3	2024		697571	7664935	
Triodia chichesterensis	P3	2024		676162	7653191	
Triodia chichesterensis	P3	2024		676538	7652780	
Triodia chichesterensis	P3	2024		675784	7652567	
Triodia chichesterensis	P3	2024	14000	676046	7653567	
Triodia chichesterensis	P3	2024		671114	7652540	
Triodia chichesterensis	P3	2024		671280	7652956	
Triodia chichesterensis	P3	2024		669798	7655042	
Triodia chichesterensis	P3	2024	10	675763	7656809	
Triodia chichesterensis	P3	2024		673592	7657560	
Triodia chichesterensis	P3	2024	2000	669634	7653542	

Taxon	Status	Survey	Count	Easting	Northing	Comments
Triodia chichesterensis	P3	2024	2000	675261	7653742	
Triodia chichesterensis	P3	2024	5000	674958	7652144	
Triodia chichesterensis	P3	2024	10000	674337	7651847	
Triodia chichesterensis	P3	2024	300	697445	7666595	
Triodia chichesterensis	P3	2024	10000	669878	7654237	
Triodia chichesterensis	P3	2024	50	669865	7653424	
Triodia chichesterensis	P3	2024	60	675733	7656635	
Triodia chichesterensis	P3	2024	5000	675745	7663848	
Triodia chichesterensis	P3	2024		672845	7660022	
Triodia chichesterensis	P3	2024		677710	7655244	
Triodia chichesterensis	P3	2024		698674	7660440	
Triodia chichesterensis	P3	2024	2000	699160	7660230	
Triodia chichesterensis	P3	2024		699738	7659544	
Triodia chichesterensis	P3	2024	500	677380	7660031	
Triodia chichesterensis	P3	2024	4	677513	7660133	
Triodia chichesterensis	P3	2024		676870	7655547	
Triodia chichesterensis	P3	2024		678042	7658704	
Triodia chichesterensis	P3	2024		686728	7664236	
Triodia chichesterensis	P3	2024	5	696221	7666645	
Triodia chichesterensis	P3	2024		697700	7666381	
Triodia chichesterensis	P3	2024		696513	7665581	
Triodia chichesterensis	P3	2024	1000	698966	7664083	
Triodia chichesterensis	P3	2024		675942	7665208	
Triodia chichesterensis	P3	2024	1000	698294	7664845	
Triodia chichesterensis	P3	2024	1000	698619	7664873	
Triodia chichesterensis	P3	2024	500	698037	7662070	
Triodia chichesterensis	P3	2024		697961	7662252	
Triodia chichesterensis	P3	2024		671829	7673169	
Triodia chichesterensis	P3	2024		696765	7666641	
Triodia chichesterensis	P3	2024		697171	7666230	
Vigna triodiophila	P3	2024	1	673281	7659471	Quadrat HER018

Table G.2 Introduced Flora Locations

Taxon	Survey	Easting	Northing
Aerva javanica	2023	684569	7663341
Aerva javanica	2023	684689	7663415
Aerva javanica	2023	675677	7656265
Aerva javanica	2024	677737	7664161
Aerva javanica	2024	685000	7663754
Aerva javanica	2024	684834	7663451

Taxon	Survey	Easting	Northing
Aerva javanica	2024	695661	7665598
Aerva javanica	2024	678007	7659079
Aerva javanica	2024	698053	7665576
Aerva javanica	2024	697221	7664752
Aerva javanica	2024	701222	7657933
Aerva javanica	2024	697337	7664844
Aerva javanica	2024	678016	7655682
Aerva javanica	2024	674043	7652926
Aerva javanica	2024	673706	7658680
Aerva javanica	2024	669634	7653542
Aerva javanica	2024	675803	7663909
Aerva javanica	2024	670564	7657000
Aerva javanica	2024	670127	7656414
Aerva javanica	2024	675087	7656669
Aerva javanica	2024	674623	7659273
Aerva javanica	2024	677002	7663577
Aerva javanica	2024	701719	7659181
Aerva javanica	2024	684859	7663690
Aerva javanica	2024	685200	7663778
Calotropis procera	2023	684689	7663415
Calotropis procera	2023	673796	7653684
Calotropis procera	2024	697221	7664752
Calotropis procera	2024	684834	7663451
Cenchrus ciliaris	2023	672479	7657214
Cenchrus ciliaris	2023	676365	7663344
Cenchrus ciliaris	2023	696399	7665801
Cenchrus ciliaris	2023	696134	7666387
Cenchrus ciliaris	2023	685158	7663754
Cenchrus ciliaris	2023	684569	7663341
Cenchrus ciliaris	2023	687360	7664204
Cenchrus ciliaris	2023	687506	7664164
Cenchrus ciliaris	2023	699971	7659723
Cenchrus ciliaris	2023	700899	7656032
Cenchrus ciliaris	2023	677015	7661962
Cenchrus ciliaris	2023	684689	7663415
Cenchrus ciliaris	2024	684834	7663451
Cenchrus ciliaris	2024	685000	7663754
Cenchrus ciliaris	2024	677463	7655405
Cenchrus ciliaris	2024	700048	7659430
Cenchrus ciliaris	2024	699943	7659442

Taxon	Survey	Easting	Northing
Cenchrus ciliaris	2024	677737	7664161
Cenchrus ciliaris	2024	701721	7659988
Cenchrus ciliaris	2024	678282	7663361
Cenchrus ciliaris	2024	678402	7663338
Cenchrus ciliaris	2024	681578	7663240
Cenchrus ciliaris	2024	677513	7660133
Cenchrus ciliaris	2024	678286	7657206
Cenchrus ciliaris	2024	678280	7657804
Cenchrus ciliaris	2024	687463	7664247
Cenchrus ciliaris	2024	695661	7665598
Cenchrus ciliaris	2024	701530	7659008
Cenchrus ciliaris	2024	700381	7658598
Cenchrus ciliaris	2024	677891	7656237
Cenchrus ciliaris	2024	678007	7659079
Cenchrus ciliaris	2024	695800	7666260
Cenchrus ciliaris	2024	698895	7664364
Cenchrus ciliaris	2024	697221	7664752
Cenchrus ciliaris	2024	698053	7665576
Cenchrus ciliaris	2024	696540	7665160
Cenchrus ciliaris	2024	675602	7653666
Cenchrus ciliaris	2024	698196	7662301
Cenchrus ciliaris	2024	698675	7663491
Cenchrus ciliaris	2024	673706	7658680
Cenchrus ciliaris	2024	697337	7664844
Cenchrus ciliaris	2024	678016	7655682
Cenchrus ciliaris	2024	674043	7652926
Cenchrus ciliaris	2024	685200	7663778
Cenchrus ciliaris	2024	684859	7663690
Cenchrus ciliaris	2024	677466	7663398
Cenchrus ciliaris	2024	678237	7663786
Cenchrus ciliaris	2024	701719	7659181
Cenchrus ciliaris	2024	677492	7663618
Cenchrus ciliaris	2024	674623	7659273
Cenchrus ciliaris	2024	677002	7663577
Cenchrus ciliaris	2024	670564	7657000
Cenchrus ciliaris	2024	675087	7656669
Cenchrus setiger	2023	695778	7666336
Cenchrus setiger	2024	677002	7663577
Cenchrus setiger	2024	677492	7663618
Cenchrus setiger	2024	678237	7663786

Taxon	Survey	Easting	Northing
Cenchrus setiger	2024	677466	7663398
Cenchrus setiger	2024	684859	7663690
Cenchrus setiger	2024	678016	7655682
Cenchrus setiger	2024	698675	7663491
Cenchrus setiger	2024	698196	7662301
Cenchrus setiger	2024	697337	7664844
Cenchrus setiger	2024	696540	7665160
Cenchrus setiger	2024	698053	7665576
Cenchrus setiger	2024	697221	7664752
Cenchrus setiger	2024	698895	7664364
Cenchrus setiger	2024	678007	7659079
Cenchrus setiger	2024	677891	7656237
Cenchrus setiger	2024	695800	7666260
Cenchrus setiger	2024	695661	7665598
Cenchrus setiger	2024	677737	7664161
Cenchrus setiger	2024	678282	7663361
Chloris barbata	2024	677764	7663384
Digitaria ciliaris	2024	677764	7663384
Flaveria trinervia	2024	681578	7663240
Flaveria trinervia	2024	673706	7658680
Malvastrum americanum	2023	696134	7666387
Malvastrum americanum	2024	698895	7664364
***Opuntia* sp.**	2023	684798	7663546
***Opuntia* sp.**	2023	684663	7663374
***Opuntia* sp.**	2023	684689	7663415
***Opuntia* sp.**	2024	698895	7664364
***Opuntia* sp.**	2024	684834	7663451
Trianthema portulacastrum	2024	684859	7663690
Trianthema portulacastrum	2024	670564	7657000
Tribulus terrestris	2024	673706	7658680

APPENDIX H

2023 Survey Significant Flora Revisit Data

All GPS Points as GDA94, Zone 50

Taxon	Date	Easting	Northing	Comments
Euphorbia clementii	1/06/2023	674460	7660038	Confirmation previous observations (Woodman Environmental 2020) are valid, individuals are not those previously recorded, but is present in same abundance, several plants are dead. Burnt 18 months ago.
Euphorbia clementii	31/05/2023	673885	7653733	Could not locate any individuals, age of burn at least 3-4 years.
Terminalia supranitifolia	1/06/2023	672151	7656407	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672276	7656415	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672280	7656262	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672326	7656248	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672326	7656221	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672261	7656116	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	1/06/2023	672605	7657431	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	31/05/2023	674922	7656443	Surrounding previous records still extant. Burnt since last observation. 1.5-3 m tall.
Terminalia supranitifolia	2/06/2023	675678	7656268	Viewed with binoculars, all individuals previously recorded (Woodman Environmental 2020) extant. Most apparently recently burnt
Terminalia supranitifolia	31/05/2023	673984	7653603	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Terminalia supranitifolia	31/05/2023	674918	7656188	Recently burnt. Nearby individual plant no longer extant following the fire. Records along the ridge to the south are intact and also unburnt.
Terminalia supranitifolia	1/06/2023	672328	7656269	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	31/05/2023	675276	7654942	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt

Taxon	Date	Easting	Northing	Comments
Triodia chichesterensis	31/05/2023	675251	7654691	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	31/05/2023	675157	7654698	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	31/05/2023	675052	7654343	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	31/05/2023	674855	7653982	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675298	7654995	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675300	7654937	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675307	7654869	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675303	7654693	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675206	7654809	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	675099	7653857	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	674907	7654276	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	674936	7654232	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	674836	7654110	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	29/05/2023	674218	7654104	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	30/05/2023	674714	7658248	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	674740	7661283	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt

Taxon	Date	Easting	Northing	Comments
Triodia chichesterensis	1/06/2023	674692	7661243	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	674616	7661162	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	673707	7657044	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	674301	7660150	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	674302	7659926	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	2/06/2023	674794	7660393	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	2/06/2023	674849	7660409	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	2/06/2023	675639	7656178	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	2/06/2023	676549	7657004	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Triodia chichesterensis	1/06/2023	674739	7661166	Confirmation previous observations (Woodman Environmental 2020) are valid, alive and unburnt
Vigna triodiophila	1/06/2023	672701	7657579	Recently burnt, numbers similar to previous observations, some plants dying back.
Vigna triodiophila	1/06/2023	672692	7657548	Recently burnt, numbers similar to previous observations, but only 1 live plant, most have died back
Vigna triodiophila	1/06/2023	672612	7657436	Recently burnt, numbers increased, but most very small plants

APPENDIX I

Detailed Figure of Vegetation Condition and Introduced Flora of the Survey Area

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 1

669000 669600 670200 670800 671400 672000 672600 673200

7674000 7673400 7672800 7672200 7671600 7671000 7670400

E C G R GREAT NORTHERN HWY

Legend

- Survey Area
- Road

Vegetation Condition

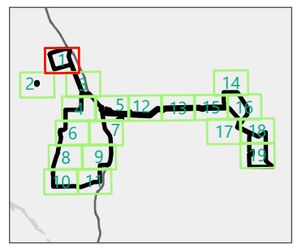
- Excellent
- Good
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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664800 665400 666000 666600 667200 667800 668400 669000 669600

7669800 7669200 7668600 7668000 7667400 7666800 7666200

C
R
VG

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 2

Legend

- Survey Area
- Road

Vegetation Condition

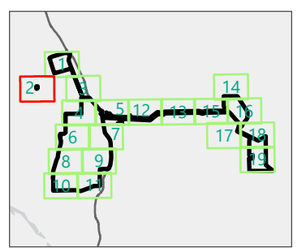
- Very Good
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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672000 672600 673200 673800 674400 675000 675600 676200 676800

7669800 7669200 7668600 7668000 7667400 7666800 7666200

GREAT NORTHERN HWY

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 3

Legend

- Survey Area
- Road

Vegetation Condition

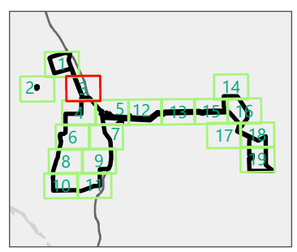
- Excellent
- Good
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

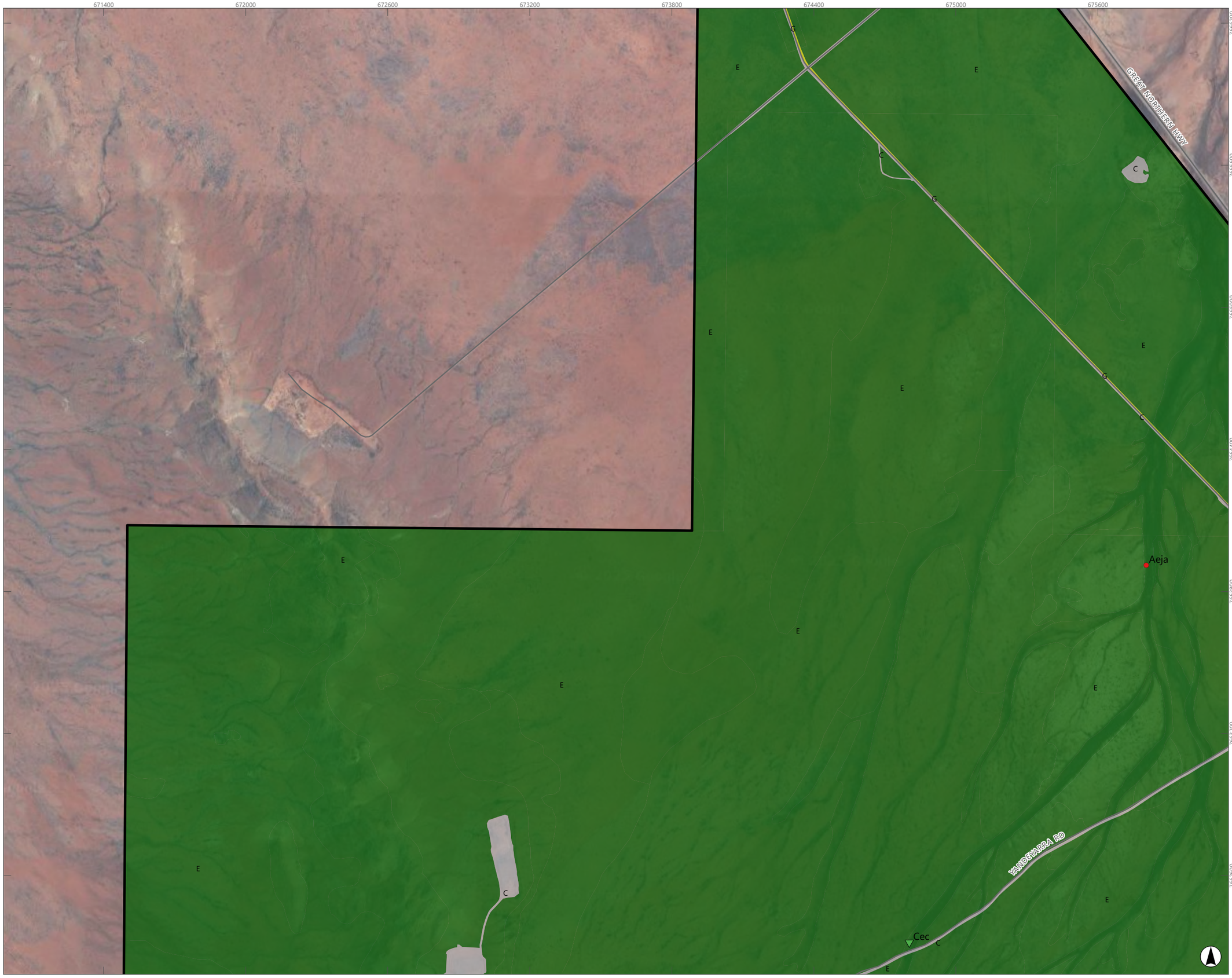
Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 4



Legend

- Survey Area
- Road

Vegetation Condition

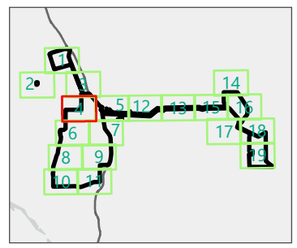
- Excellent
- Good
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 5

676200 676800 677400 678000 678600 679200 679800 680400 681000

7666200 7665600 7665000 7664400 7663800 7663200 7662600

GREAT NORTHERN HWY

YANDEYARRA RD

E G C GP VG R P

Cec Cse Aeja Dci Chb Flt Maa Op Pfh Trp Trt

Legend

- Survey Area
- Railway
- Road

Vegetation Condition

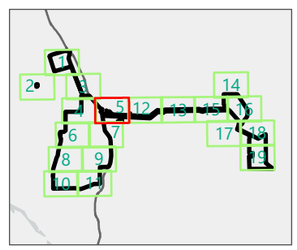
- Excellent
- Very Good
- Good
- Good/Poor
- Poor
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 6

670200 670800 671400 672000 672600 673200 673800 674400 675000

7662000 7661400 7660800 7660200 7659600 7659000 7658400

KANGAN RD

YANDEYARRA RD

Legend

- Survey Area
- Road

Vegetation Condition

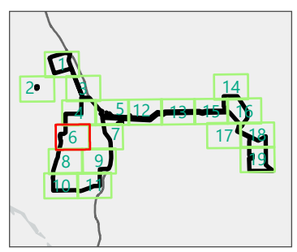
- Excellent
- Very Good
- Good
- Good/Poor
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), DBCA (2024), Umwelt (2024), MRL (2024)

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 7



Legend

- Survey Area
- Road

Vegetation Condition

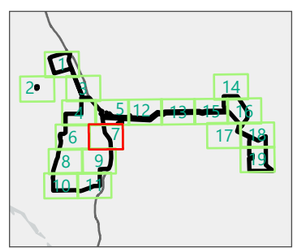
- Excellent
- Very Good
- Good
- Good/Poor
- Poor
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 8

669000 669600 670200 670800 671400 672000 672600 673200 673800

7658400 7657800 7657200 7656600 7656000 7655400 7654800

Legend

- Survey Area
- Road

Vegetation Condition

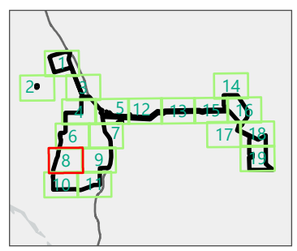
- Excellent
- Very Good
- Good
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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umwelt

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 9

674400 675000 675600 676200 676800 677400 678000 678600

7658400 7657800 7657200 7656600 7656000 7655400 7654800

Legend

- Survey Area
- Road

Vegetation Condition

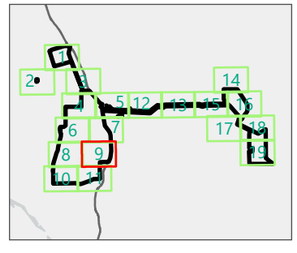
- Excellent
- Excellent/Very Good
- Very Good
- Good
- Poor
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

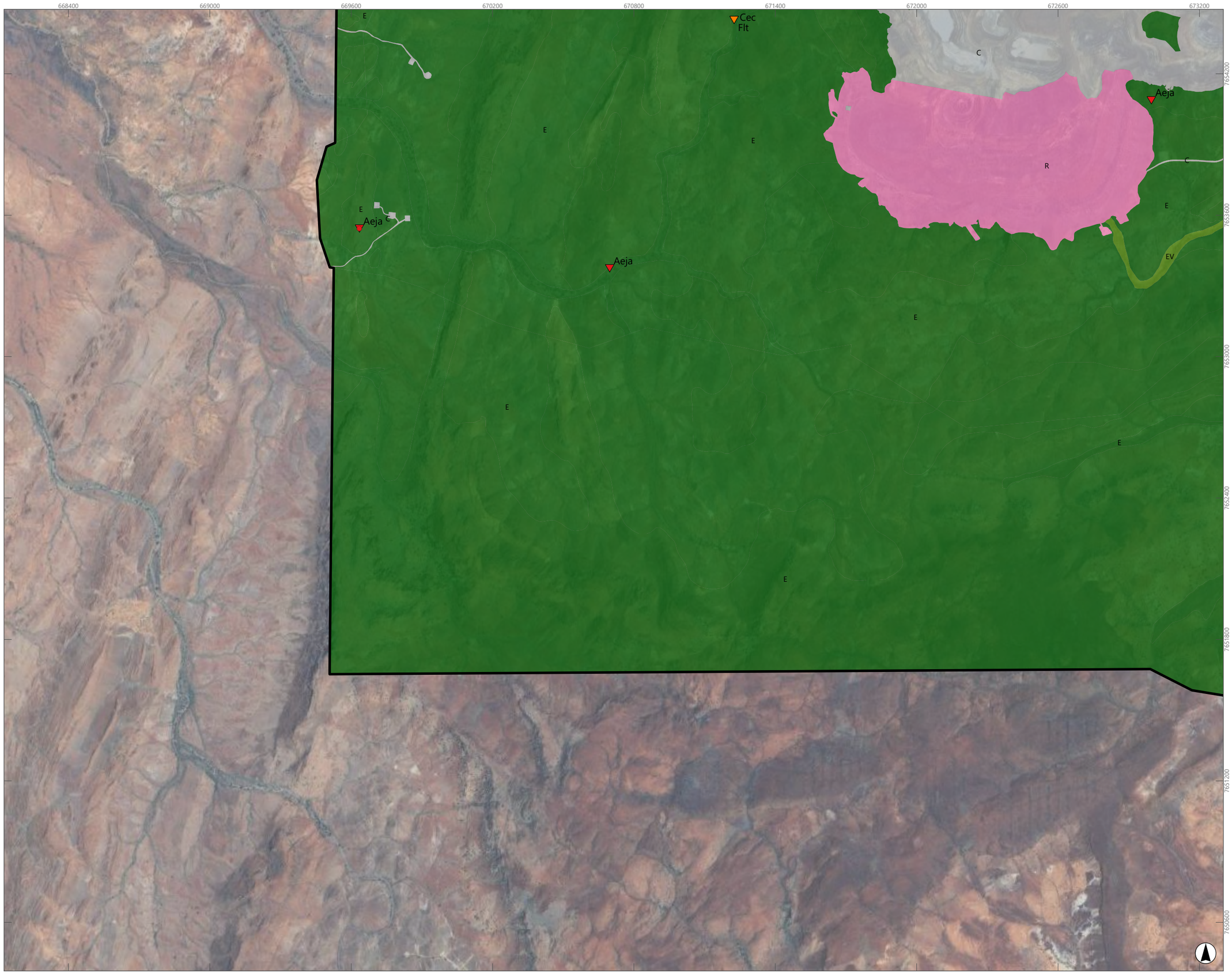
Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 10



Legend

- Survey Area

Vegetation Condition

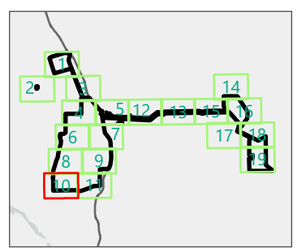
- Excellent
- Excellent/Very Good
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 11

673200 673800 674400 675000 675600 676200 676800 677400 678000

7654200 7653600 7653000 7652400 7651800 7651200 7650600

GREAT NORTHERN HWY

Legend

Survey Area
Road

Vegetation Condition

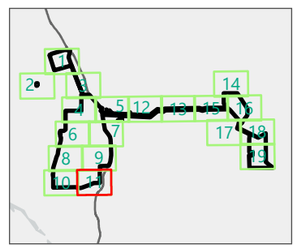
Excellent
Excellent/Very Good
Very Good
Good
Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

Aeja **Aerva javanica*
Cap **Calotropis procera*
Cec **Cenchrus ciliaris*
Cse **Cenchrus setiger*
Chb **Chloris barbata*
Dci **Digitaria ciliaris*
Flt **Flaveria trinervia*
Maa **Malvastrum americanum*
Op **Opuntia* sp.
Pfh **Passiflora foetida* var. *hispida*
Trp **Trianthema portulacastrum*
Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

Aeja **Aerva javanica*
Cap **Calotropis procera*
Cec **Cenchrus ciliaris*
Cse **Cenchrus setiger*
Cyd **Cynodon dactylon*
Erm **Eragrostis minor*
Flt **Flaveria trinervia*
Pfh **Passiflora foetida* var. *hispida*
Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 12

681600 682200 682800 683400 684000 684600 685200 685800

7666200 7665600 7665000 7664400 7663800 7663200 7662600

Legend

- Survey Area
- Railway
- Road

Vegetation Condition

- Excellent
- Very Good
- Good
- Poor
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

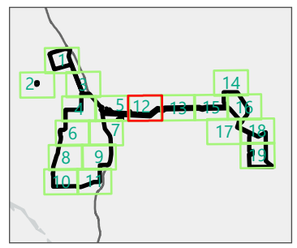
Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*

G VG E P C

Cec Flt

Aeja Cse Cec Aeja Op Cap Cec Aeja Op Cec



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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C:\Users\JoeMorys\UMWELT (AUSTRALIA) PTY LTD\3255 - 03 SWX\2 Projects\3255_2_R007_BaseMapPrint_A3pt_s2.aprx

C:\Users\JoeMorys\UMWELT (AUSTRALIA) PTY LTD\3255 - GS SWXX\2.Projects\3255_2_RAP\7. Baseline\Report_Appx_v2.aprx

686400 687000 687600 688200 688800 689400 690000 690600 691200

7666200 7665600 7665000 7664400 7663800 7663200 7662600

C E VG G Cec

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 13

Legend

- Survey Area
- Railway
- Road

Vegetation Condition

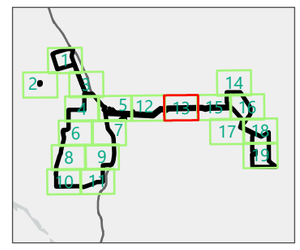
- Excellent
- Very Good
- Good
- Poor
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 14

694200 694800 695400 696000 696600 697200 697800 698400 699000

7669800 7669200 7668600 7668000 7667400 7666800 7666200

Legend

- Survey Area
- Road

Vegetation Condition

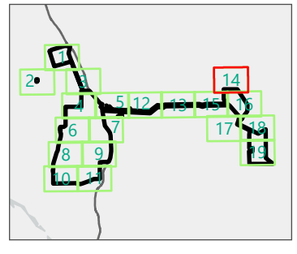
- Excellent
- Very Good
- Good
- Cleared Land
- Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPROVED FOR AND ON BEHALF OF Umwelt

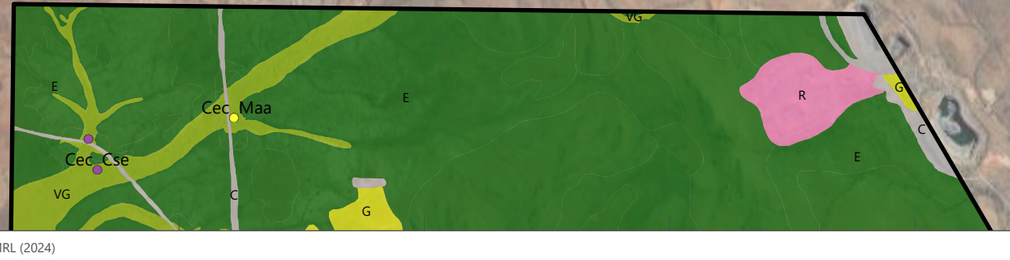


Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), DBCA (2024), Umwelt (2024), MRL (2024)

691200 691800 692400 693000 693600 694200 694800 695400 696000

7666200 7665600 7665000 7664400 7663800 7663200 7662600

Cec Cse VG C E Cec Aeja Trt Cse G C VG E C E VG E C E VG E C E VG E

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 15

Legend

- Survey Area
- Road

Vegetation Condition

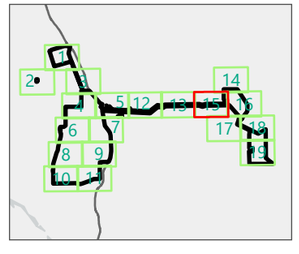
- Excellent
- Very Good
- Good
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 16

696600 697200 697800 698400 699000 699600 700200 700800

7666200 7665600 7665000 7664400 7663800 7663200 7662600

Legend

Survey Area
Road

Vegetation Condition

Excellent
Very Good
Good
Degraded
Cleared Land
Rehabilitated Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

Aeja **Aerva javanica*
Cap **Calotropis procera*
Cec **Cenchrus ciliaris*
Cse **Cenchrus setiger*
Chb **Chloris barbata*
Dci **Digitaria ciliaris*
Flt **Flaveria trinervia*
Maa **Malvastrum americanum*
Op **Opuntia* sp.
Pfh **Passiflora foetida* var. *hispida*
Trp **Trianthema portulacastrum*
Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

Aeja **Aerva javanica*
Cap **Calotropis procera*
Cec **Cenchrus ciliaris*
Cse **Cenchrus setiger*
Cyd **Cynodon dactylon*
Erm **Eragrostis minor*
Flt **Flaveria trinervia*
Pfh **Passiflora foetida* var. *hispida*
Trp **Trianthema portulacastrum*

0 300 600
Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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693600 694200 694800 695400 696000 696600 697200 697800

7662000 7661400 7660800 7660200 7659600 7659000 7658400

VG E E C

APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 17

Legend

- Survey Area
- Road

Vegetation Condition

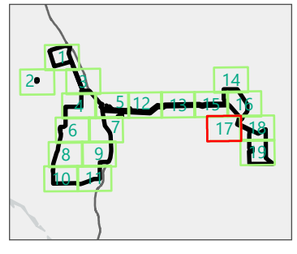
- Excellent
- Very Good
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX I

Vegetation Condition and Introduced Flora of the Survey Area – Sheet 18

Legend

- Survey Area
- Road

Vegetation Condition

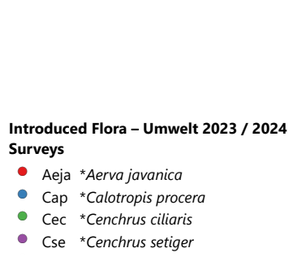
- Excellent
- Very Good
- Good
- Cleared Land

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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Vegetation Condition and Introduced Flora of the Survey Area – Sheet 19



Legend

- Survey Area
- Road

Vegetation Condition

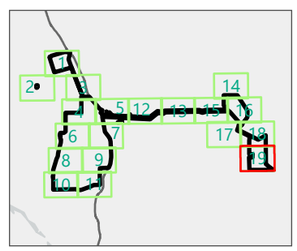
- Excellent
- Very Good

Introduced Flora – Umwelt 2023 / 2024 Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Chb **Chloris barbata*
- Dci **Digitaria ciliaris*
- Flt **Flaveria trinervia*
- Maa **Malvastrum americanum*
- Op **Opuntia* sp.
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*
- Trt **Tribulus terrestris*

Introduced Flora – Previous Surveys

- Aeja **Aerva javanica*
- Cap **Calotropis procera*
- Cec **Cenchrus ciliaris*
- Cse **Cenchrus setiger*
- Cyd **Cynodon dactylon*
- Erm **Eragrostis minor*
- Flt **Flaveria trinervia*
- Pfh **Passiflora foetida* var. *hispida*
- Trp **Trianthema portulacastrum*



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

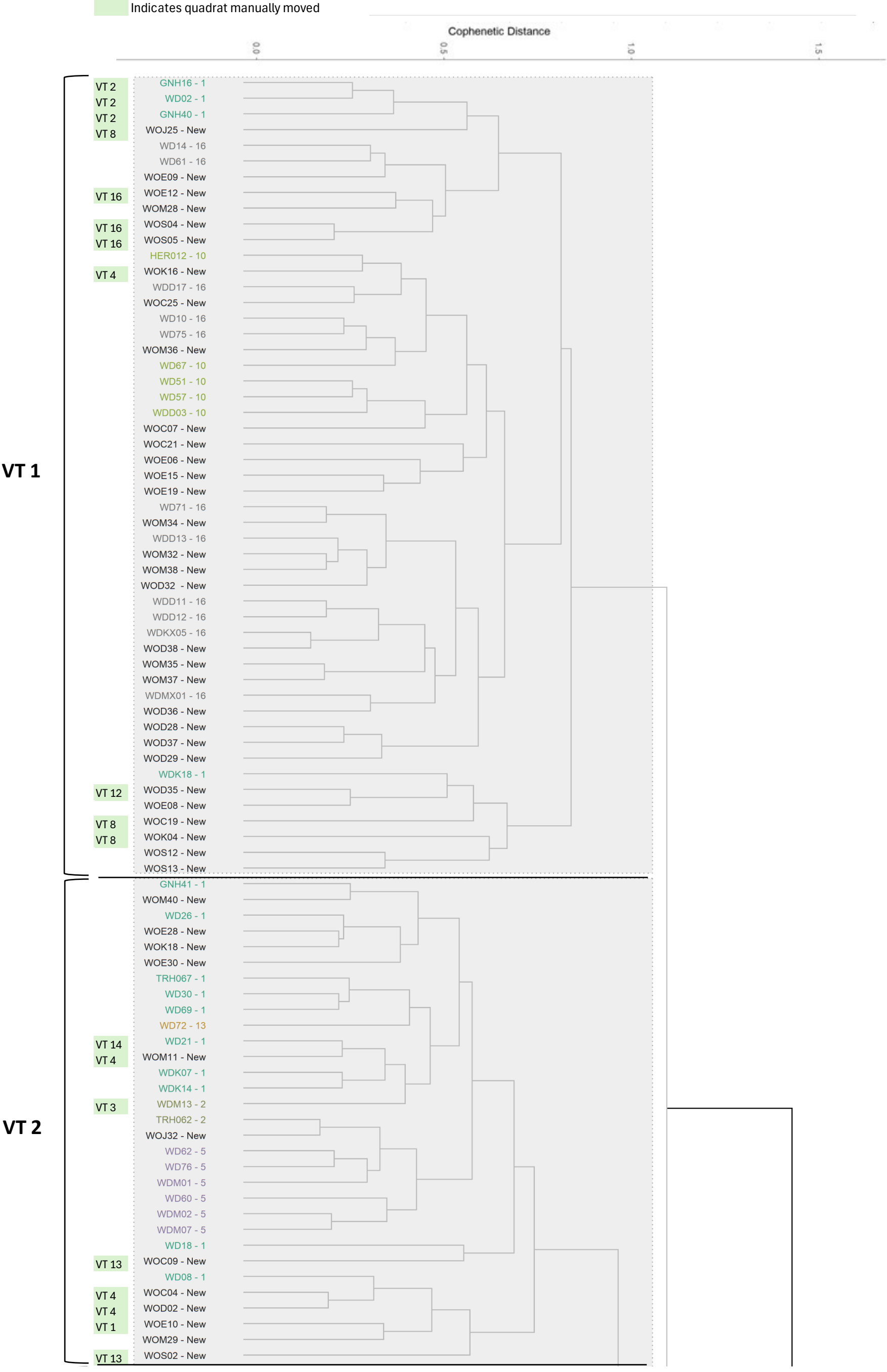
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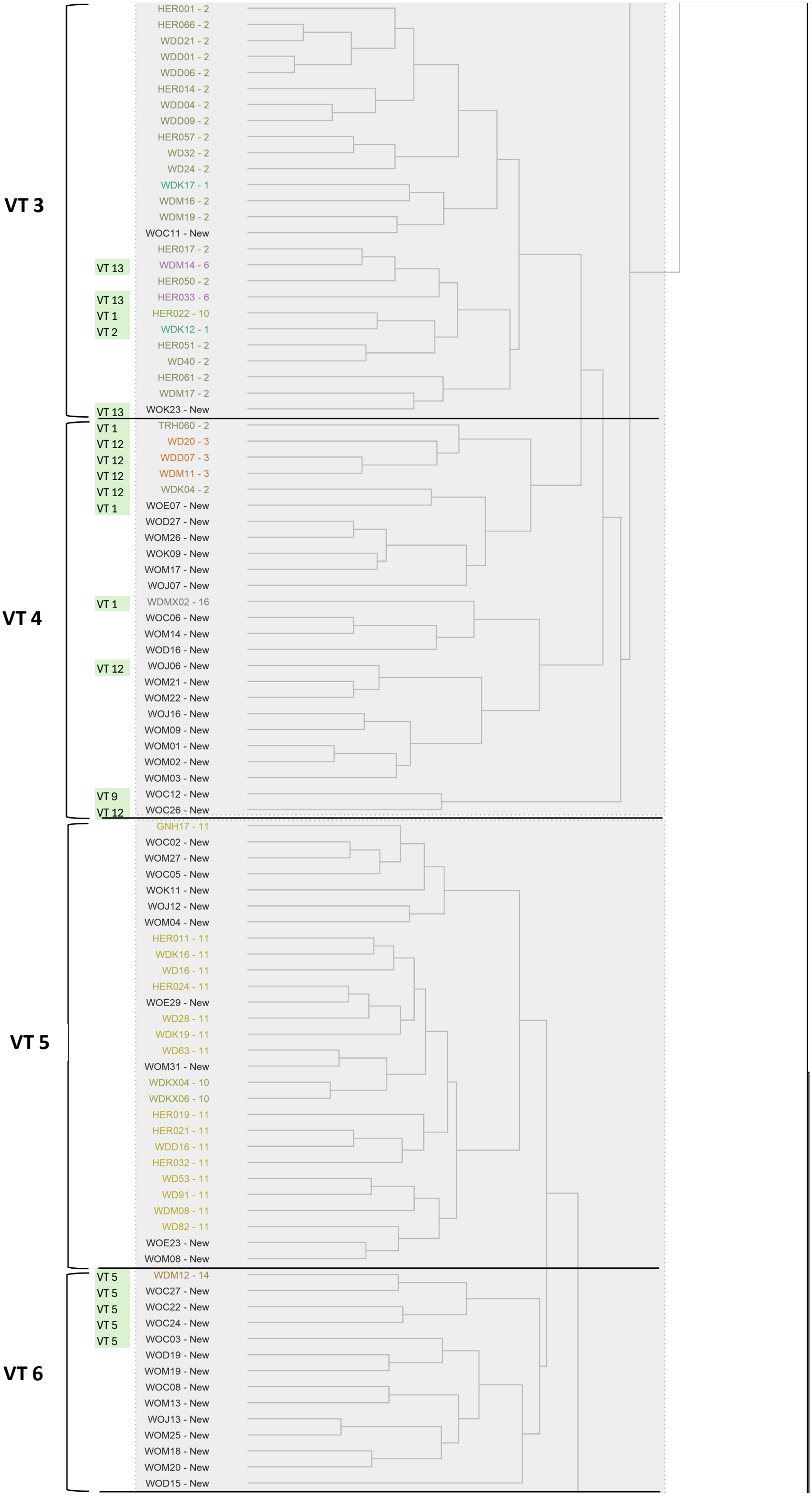
Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2023), DBCA (2024), Umwelt (2024), MRL (2024)

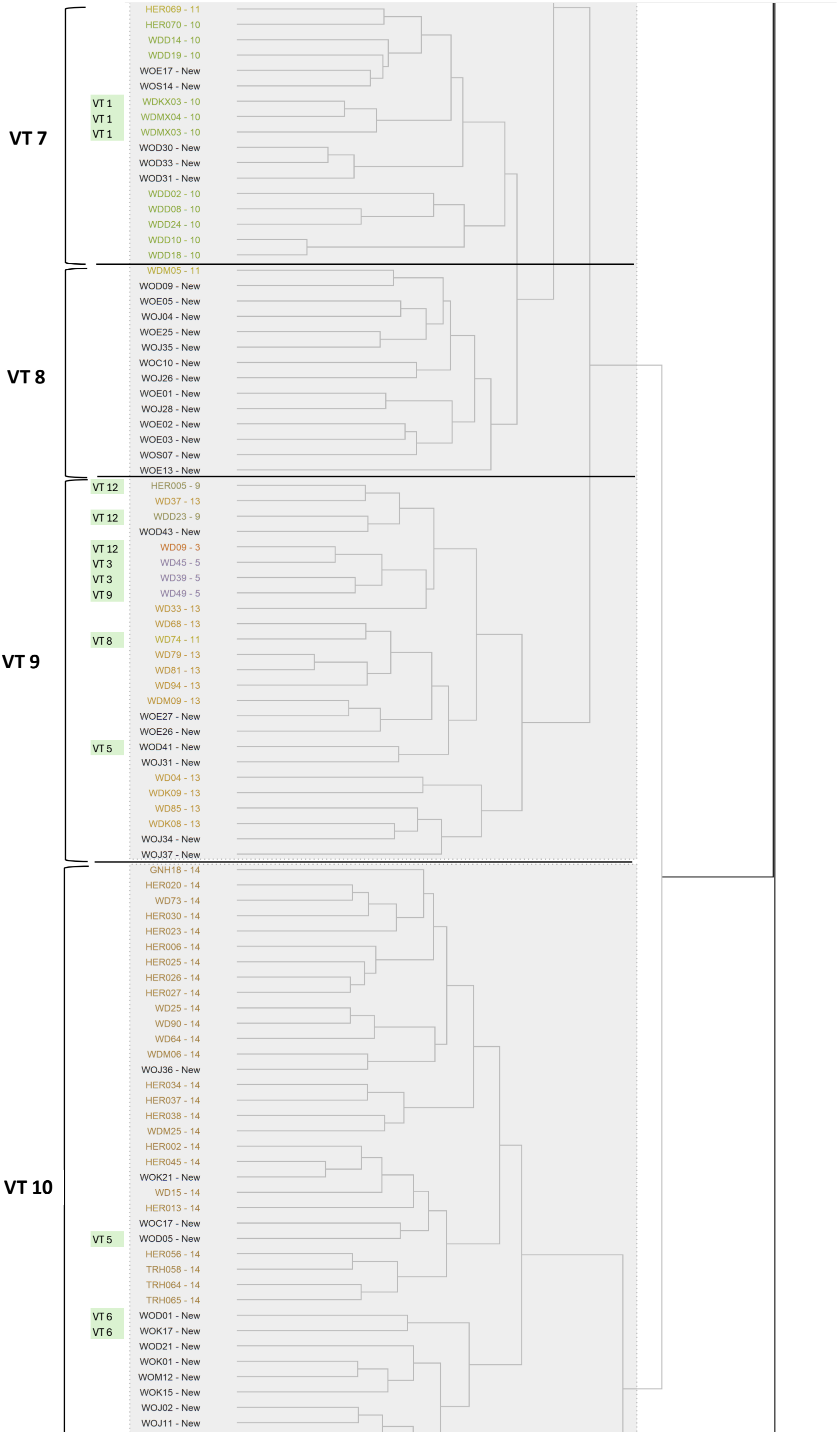
APPENDIX J

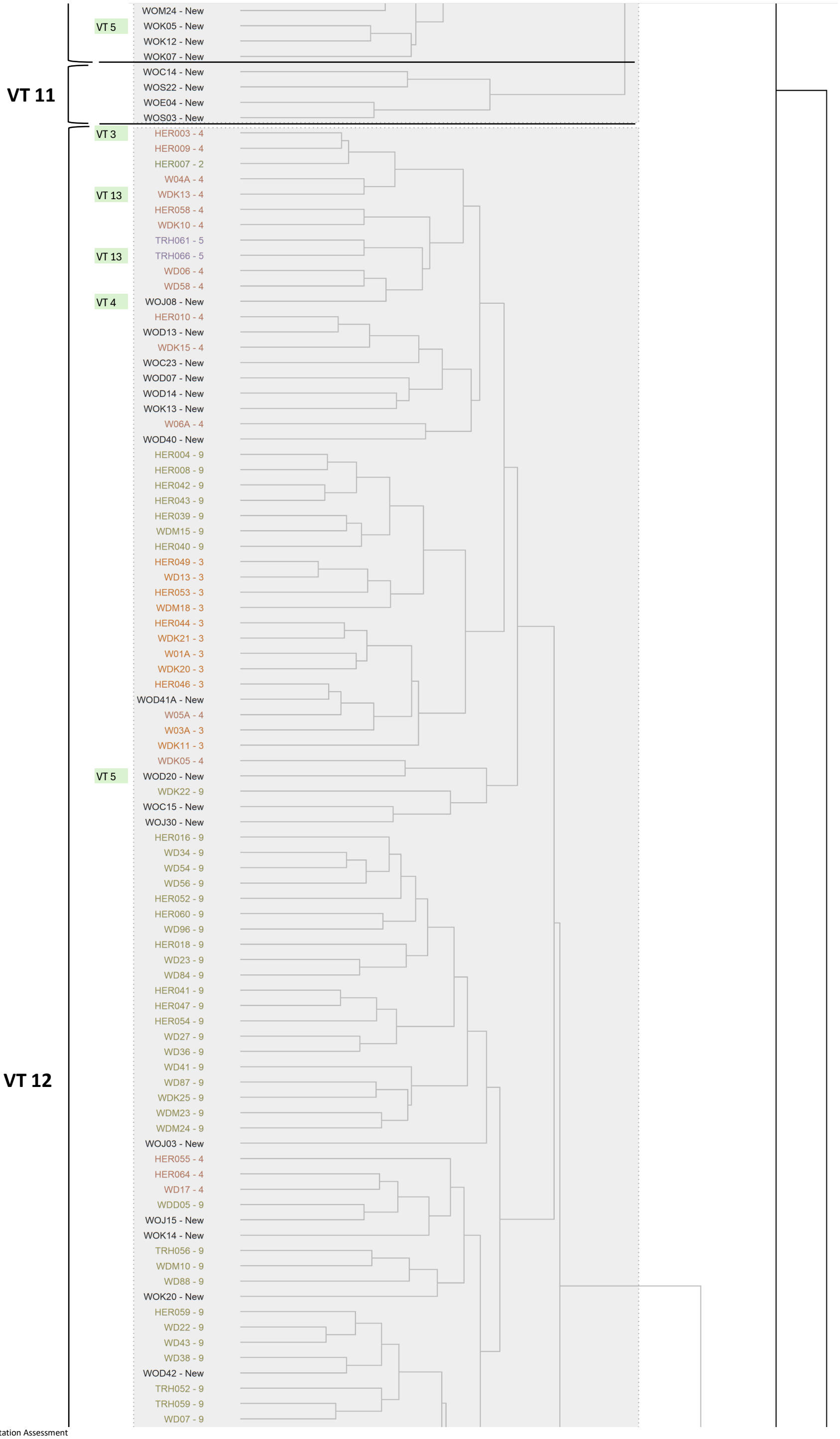
Classification Analysis Dendrogram of Quadrats Established in the Survey Area

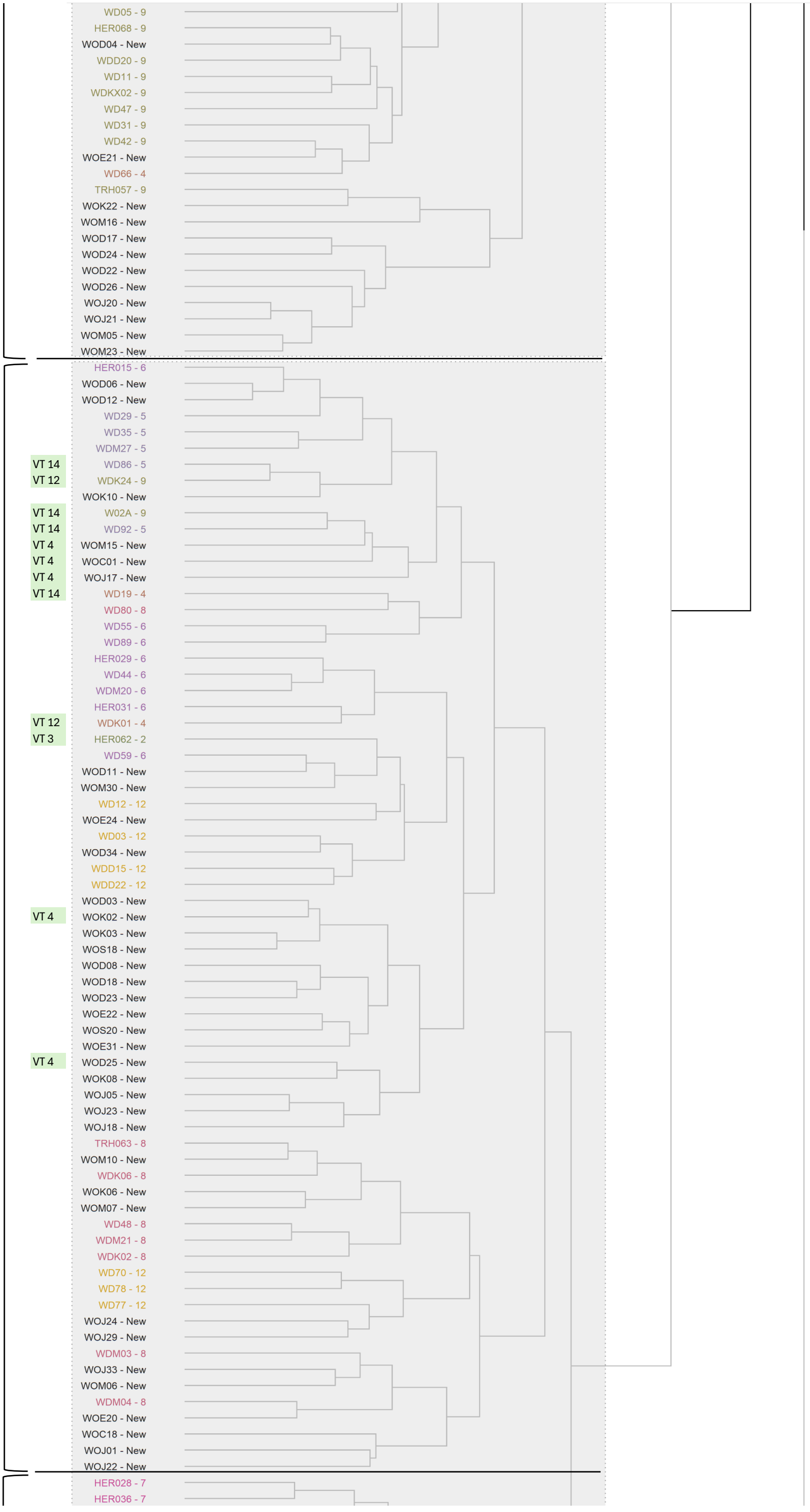
Indicates quadrat manually moved

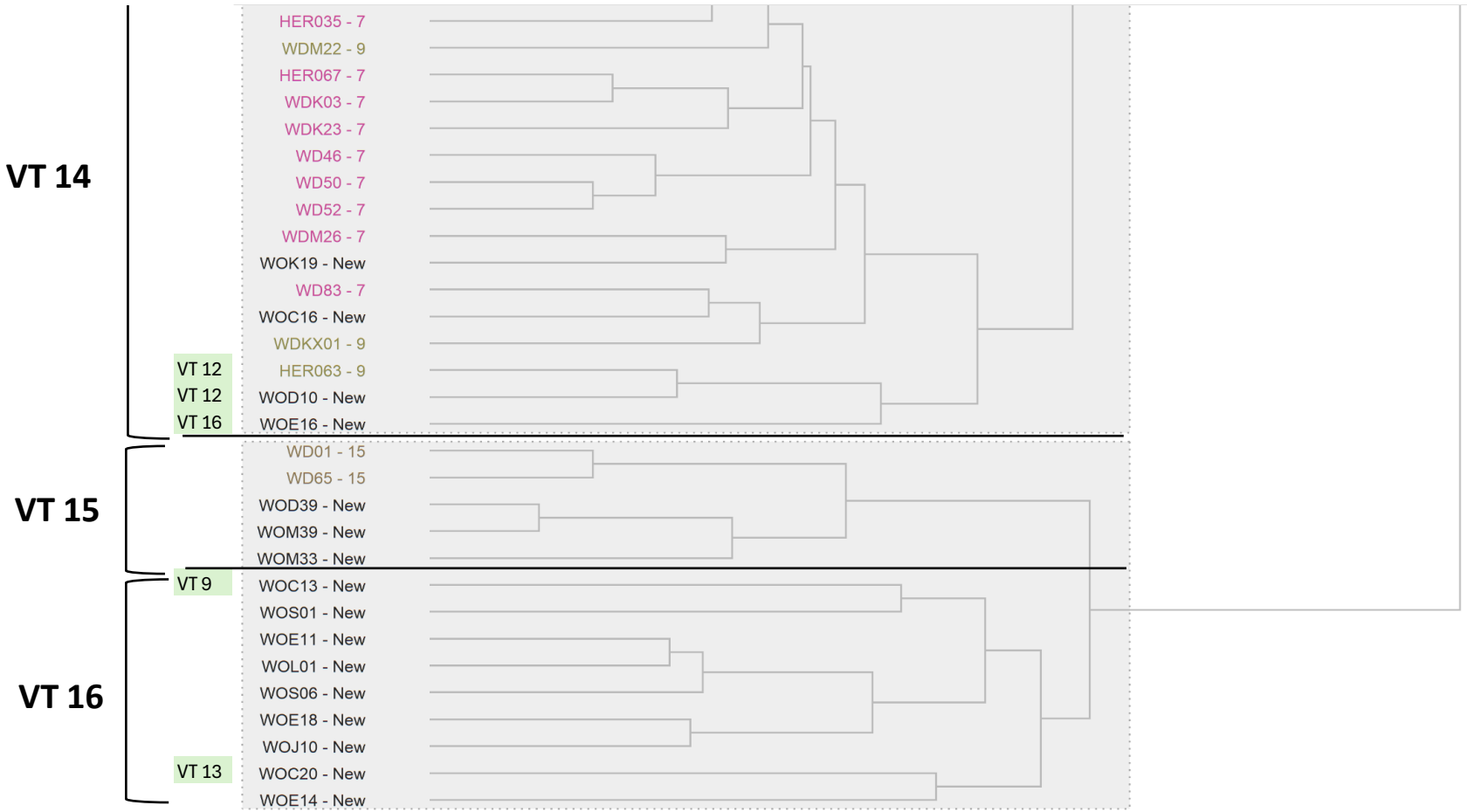



VT 3
VT 4
VT 5
VT 6
HER001 - 2
HER066 - 2
WDD21 - 2
WDD01 - 2
WDD06 - 2
HER014 - 2
WDD04 - 2
WDD09 - 2
HER057 - 2
WD32 - 2
WD24 - 2
WDK17 - 1
WDM16 - 2
WDM19 - 2
WOC11 - New
HER017 - 2
VT 13 WDM14 - 6
HER050 - 2
VT 13 HER033 - 6
VT 1 HER022 - 10
VT 2 WDK12 - 1
HER051 - 2
WD40 - 2
HER061 - 2
WDM17 - 2
VT 13 WOK23 - New
VT 1 TRH060 - 2
VT 12 WD20 - 3
VT 12 WDD07 - 3
VT 12 WDM11 - 3
VT 12 WDK04 - 2
VT 1 WOE07 - New
WOD27 - New
WOM26 - New
WOK09 - New
WOM17 - New
WOJ07 - New
VT 1 WDMX02 - 16
WOC06 - New
WOM14 - New
WOD16 - New
VT 12 WOJ06 - New
WOM21 - New
WOM22 - New
WOJ16 - New
WOM09 - New
WOM01 - New
WOM02 - New
WOM03 - New
VT 9 WOC12 - New
VT 12 WOC26 - New
GNH17 - 11
WOC02 - New
WOM27 - New
WOC05 - New
WOK11 - New
WOJ12 - New
WOM04 - New
HER011 - 11
WDK16 - 11
WD16 - 11
HER024 - 11
WOE29 - New
WD28 - 11
WDK19 - 11
WD63 - 11
WOM31 - New
WDKX04 - 10
WDKX06 - 10
HER019 - 11
HER021 - 11
WDD16 - 11
HER032 - 11
WD53 - 11
WD91 - 11
WDM08 - 11
WD82 - 11
WOE23 - New
WOM08 - New
VT 5 WDM12 - 14
VT 5 WOC27 - New
VT 5 WOC22 - New
VT 5 WOC24 - New
VT 5 WOC03 - New
WOD19 - New
WOM19 - New
WOC08 - New
WOM13 - New
WOJ13 - New
WOM25 - New
WOM18 - New
WOM20 - New
WOD15 - New


VT 7
VT 8
VT 9
VT 10
HER069 - 11
HER070 - 10
WDD14 - 10
WDD19 - 10
WOE17 - New
WOS14 - New
VT 1
WDKX03 - 10
VT 1
WDMX04 - 10
VT 1
WDMX03 - 10
WOD30 - New
WOD33 - New
WOD31 - New
WDD02 - 10
WDD08 - 10
WDD24 - 10
WDD10 - 10
WDD18 - 10
WDM05 - 11
WOD09 - New
WOE05 - New
WOJ04 - New
WOE25 - New
WOJ35 - New
WOC10 - New
WOJ26 - New
WOE01 - New
WOJ28 - New
WOE02 - New
WOE03 - New
WOS07 - New
WOE13 - New
VT 12
HER005 - 9
WD37 - 13
VT 12
WDD23 - 9
WOD43 - New
VT 12
WD09 - 3
VT 3
WD45 - 5
VT 3
WD39 - 5
VT 9
WD49 - 5
WD33 - 13
WD68 - 13
VT 8
WD74 - 11
WD79 - 13
WD81 - 13
WD94 - 13
WDM09 - 13
WOE27 - New
WOE26 - New
VT 5
WOD41 - New
WOJ31 - New
WD04 - 13
WDK09 - 13
WD85 - 13
WDK08 - 13
WOJ34 - New
WOJ37 - New
GNH18 - 14
HER020 - 14
WD73 - 14
HER030 - 14
HER023 - 14
HER006 - 14
HER025 - 14
HER026 - 14
HER027 - 14
WD25 - 14
WD90 - 14
WD64 - 14
WDM06 - 14
WOJ36 - New
HER034 - 14
HER037 - 14
HER038 - 14
WDM25 - 14
HER002 - 14
HER045 - 14
WOK21 - New
WD15 - 14
HER013 - 14
WOC17 - New
VT 5
WOD05 - New
HER056 - 14
TRH058 - 14
TRH064 - 14
TRH065 - 14
VT 6
WOD01 - New
VT 6
WOK17 - New
WOD21 - New
WOK01 - New
WOM12 - New
WOK15 - New
WOJ02 - New
WOJ11 - New

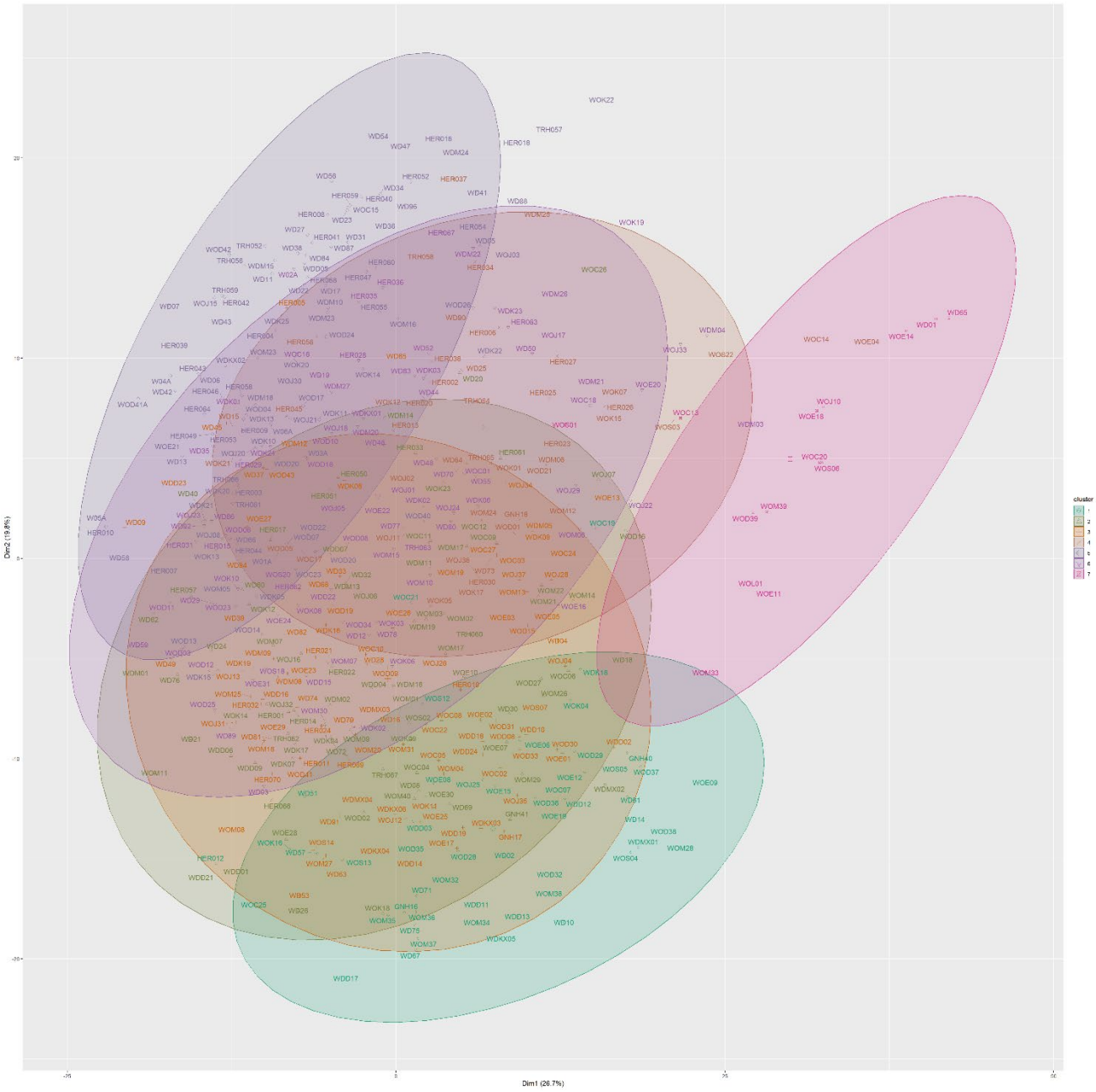

VT 11
VT 12
VT 5
VT 3
VT 13
VT 13
VT 4
VT 5
WOM24 - New
WOK05 - New
WOK12 - New
WOK07 - New
WOC14 - New
WOS22 - New
WOE04 - New
WOS03 - New
HER003 - 4
HER009 - 4
HER007 - 2
W04A - 4
WDK13 - 4
HER058 - 4
WDK10 - 4
TRH061 - 5
TRH066 - 5
WD06 - 4
WD58 - 4
WOJ08 - New
HER010 - 4
WOD13 - New
WDK15 - 4
WOC23 - New
WOD07 - New
WOD14 - New
WOK13 - New
W06A - 4
WOD40 - New
HER004 - 9
HER008 - 9
HER042 - 9
HER043 - 9
HER039 - 9
WDM15 - 9
HER040 - 9
HER049 - 3
WD13 - 3
HER053 - 3
WDM18 - 3
HER044 - 3
WDK21 - 3
W01A - 3
WDK20 - 3
HER046 - 3
WOD41A - New
W05A - 4
W03A - 3
WDK11 - 3
WDK05 - 4
WOD20 - New
WDK22 - 9
WOC15 - New
WOJ30 - New
HER016 - 9
WD34 - 9
WD54 - 9
WD56 - 9
HER052 - 9
HER060 - 9
WD96 - 9
HER018 - 9
WD23 - 9
WD84 - 9
HER041 - 9
HER047 - 9
HER054 - 9
WD27 - 9
WD36 - 9
WD41 - 9
WD87 - 9
WDK25 - 9
WDM23 - 9
WDM24 - 9
WOJ03 - New
HER055 - 4
HER064 - 4
WD17 - 4
WDD05 - 9
WOJ15 - New
WOK14 - New
TRH056 - 9
WDM10 - 9
WD88 - 9
WOK20 - New
HER059 - 9
WD22 - 9
WD43 - 9
WD38 - 9
WOD42 - New
TRH052 - 9
TRH059 - 9
WD07 - 9

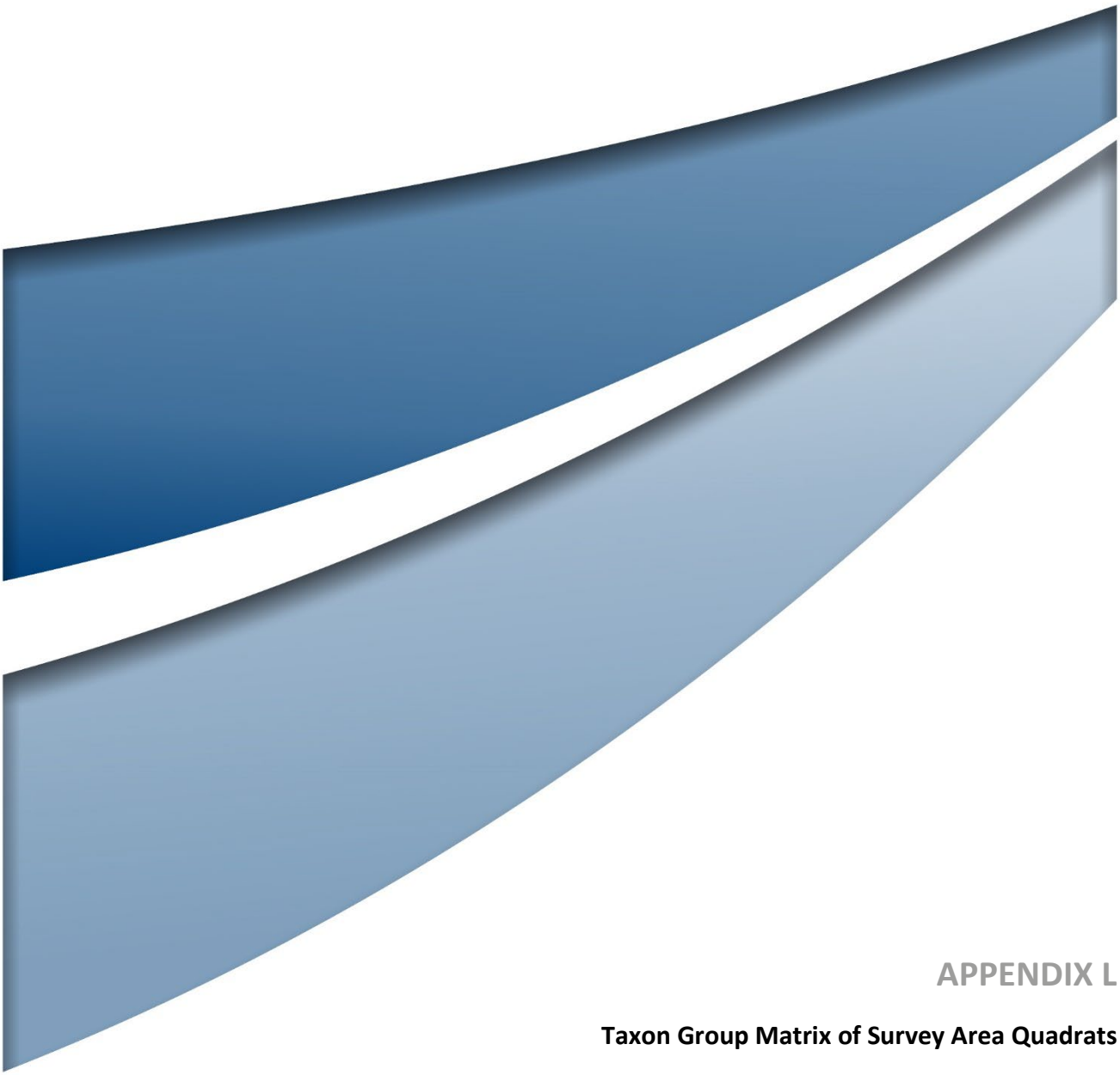

WD05 - 9
HER068 - 9
WOD04 - New
WDD20 - 9
WD11 - 9
WDKX02 - 9
WD47 - 9
WD31 - 9
WD42 - 9
WOE21 - New
WD66 - 4
TRH057 - 9
WOK22 - New
WOM16 - New
WOD17 - New
WOD24 - New
WOD22 - New
WOD26 - New
WOJ20 - New
WOJ21 - New
WOM05 - New
WOM23 - New
HER015 - 6
WOD06 - New
WOD12 - New
WD29 - 5
WD35 - 5
WDM27 - 5
VT 14 WD86 - 5
VT 12 WDK24 - 9
WOK10 - New
VT 14 W02A - 9
VT 14 WD92 - 5
VT 4 WOM15 - New
VT 4 WOC01 - New
VT 4 WOJ17 - New
VT 14 WD19 - 4
WD80 - 8
WD55 - 6
WD89 - 6
HER029 - 6
WD44 - 6
WDM20 - 6
HER031 - 6
VT 12 WDK01 - 4
VT 3 HER062 - 2
WD59 - 6
WOD11 - New
WOM30 - New
WD12 - 12
WOE24 - New
WD03 - 12
WOD34 - New
WDD15 - 12
WDD22 - 12
WOD03 - New
VT 4 WOK02 - New
WOK03 - New
WOS18 - New
WOD08 - New
WOD18 - New
WOD23 - New
WOE22 - New
WOS20 - New
WOE31 - New
VT 4 WOD25 - New
WOK08 - New
WOJ05 - New
WOJ23 - New
WOJ18 - New
TRH063 - 8
WOM10 - New
WDK06 - 8
WOK06 - New
WOM07 - New
WD48 - 8
WDM21 - 8
WDK02 - 8
WD70 - 12
WD78 - 12
WD77 - 12
WOJ24 - New
WOJ29 - New
WDM03 - 8
WOJ33 - New
WOM06 - New
WDM04 - 8
WOE20 - New
WOC18 - New
WOJ01 - New
WOJ22 - New
HER028 - 7
HER036 - 7
VT 13


VT 14
VT 15
VT 16
HER035 - 7
WDM22 - 9
HER067 - 7
WDK03 - 7
WDK23 - 7
WD46 - 7
WD50 - 7
WD52 - 7
WDM26 - 7
WOK19 - New
WD83 - 7
WOC16 - New
WDKX01 - 9
HER063 - 9
WOD10 - New
WOE16 - New
WD01 - 15
WD65 - 15
WOD39 - New
WOM39 - New
WOM33 - New
WOC13 - New
WOS01 - New
WOE11 - New
WOL01 - New
WOS06 - New
WOE18 - New
WOJ10 - New
WOC20 - New
WOE14 - New
VT 12
VT 12
VT 16
VT 9
VT 13

APPENDIX K

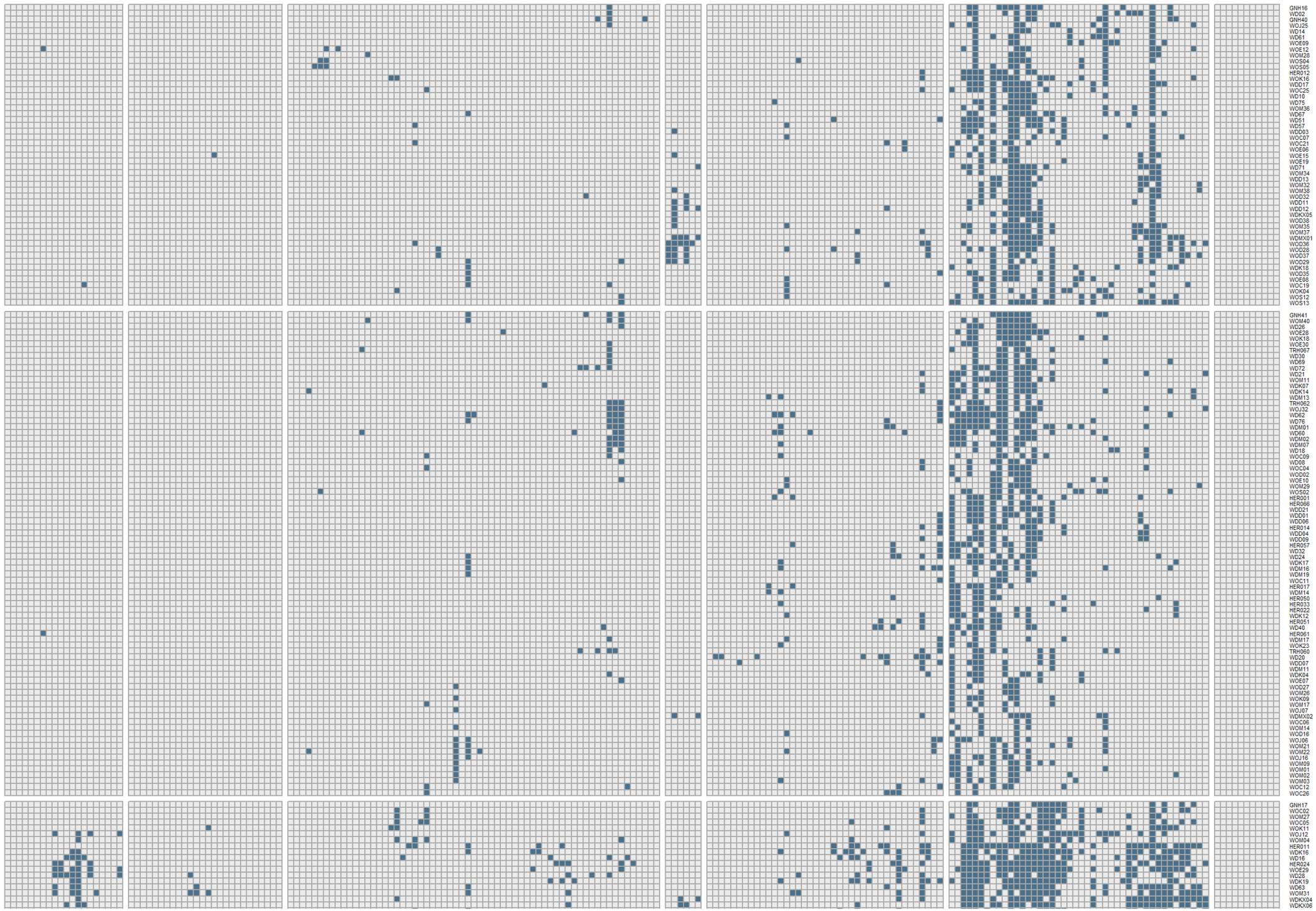
Cluster Plot of Survey Area Quadrats

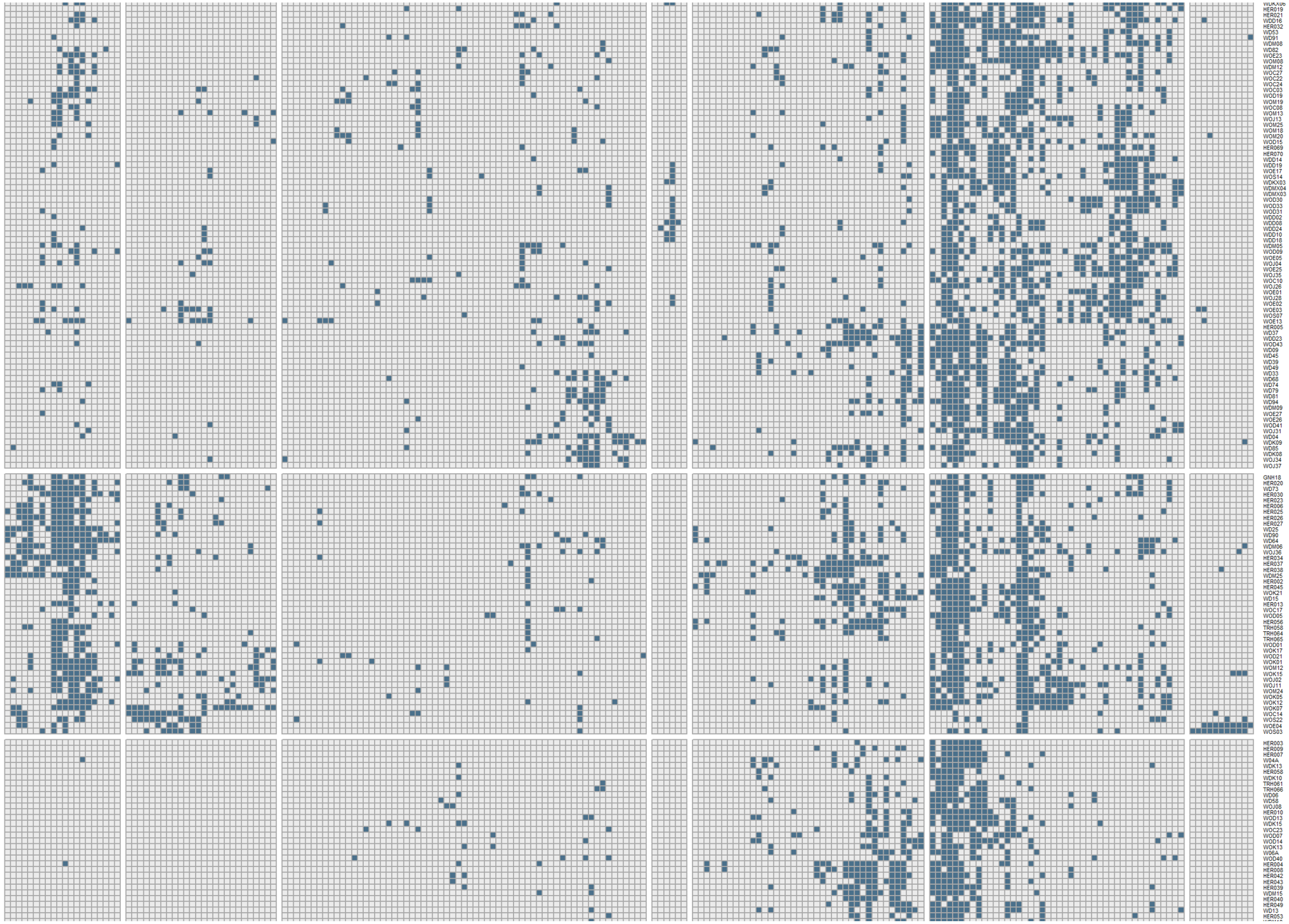

Dim1 (26.7%)
Dim2 (19.8%)
cluster

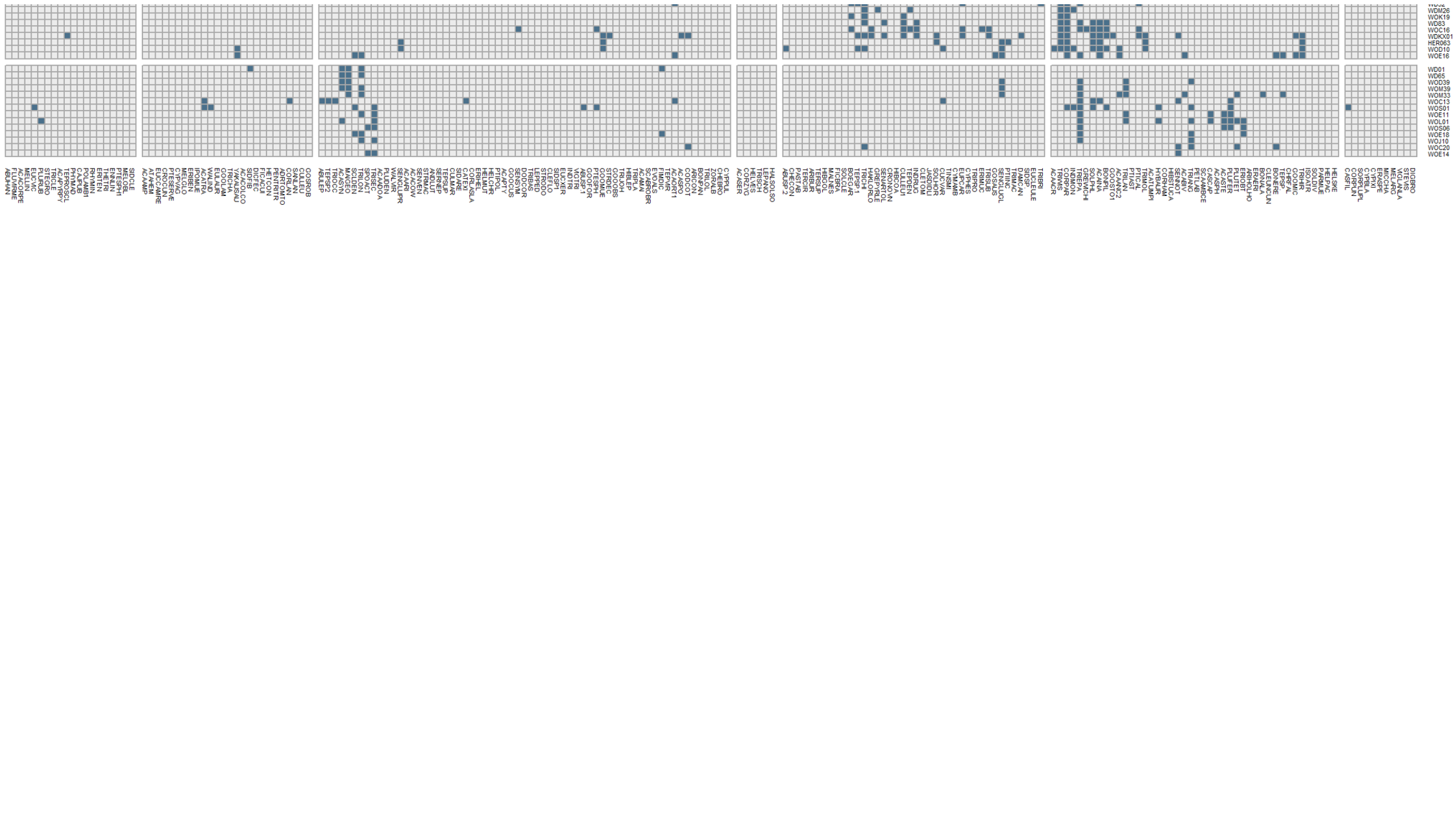


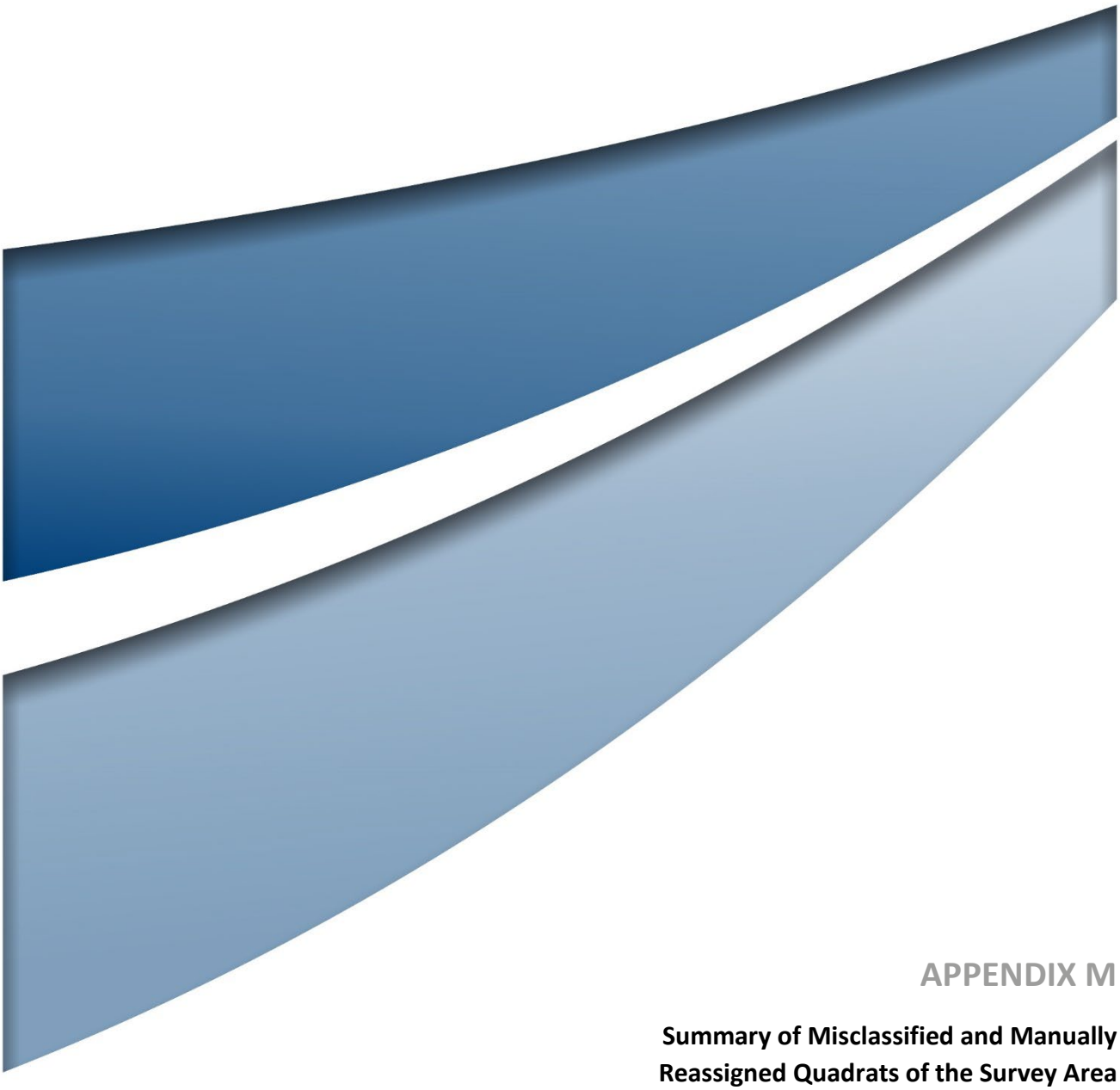
APPENDIX L

Taxon Group Matrix of Survey Area Quadrats


GNH16
WD02
GNH40
WOJ25
WD14
WD61
WOE09
WOE12
WOM28
WOS04
WOS05
HER012
WOK16
WDD17
WOC25
WD10
WD75
WOM36
WD67
WD51
WD57
WDD03
WOC07
WOC21
WOE06
WOE15
WOE19
WD71
WOM34
WDD13
WOM32
WOM38
WOD32
WDD11
WDD12
WDKX05
WOD38
WOM35
WOM37
WDMX01
WOD36
WOD28
WOD37
WOD29
WDK18
WOD35
WOE08
WOC19
WOK04
WOS12
WOS13
GNH41
WOM40
WD26
WOE28
WOK18
WOE30
TRH067
WD30
WD69
WD72
WD21
WOM11
WDK07
WDK14
WDM13
TRH062
WOJ32
WD62
WD76
WDM01
WD60
WDM02
WDM07
WD18
WOC09
WD08
WOC04
WOD02
WOE10
WOM29
WOS02
HER001
HER066
WDD21
WDD01
WDD06
HER014
WDD04
WDD09
HER057
WD32
WD24
WDK17
WDM16
WDM19
WOC11
HER017
WDM14
HER050
HER033
HER022
WDK12
HER051
WD40
HER061
WDM17
WOK23
TRH060
WD20
WDD07
WDM11
WDK04
WOE07
WOD27
WOM26
WOK09
WOM17
WOJ07
WDMX02
WOC06
WOM14
WOD16
WOJ06
WOM21
WOM22
WOJ16
WOM09
WOM01
WOM02
WOM03
WOC12
WOC26
GNH17
WOC02
WOM27
WOC05
WOK11
WOJ12
WOM04
HER011
WDK16
WD16
HER024
WOE29
WD28
WDK19
WD63
WOM31
WDKX04
WDKX06
Present
Absent


WDKX06
HER019
HER021
WDD16
HER032
WD53
WD91
WDM08
WD62
WOE23
WOM08
WDM12
WOC27
WOC22
WOC24
WOC03
WOD19
WOM19
WOC08
WOM13
WOJ13
WOM25
WOM18
WOM20
WOD15
HER069
HER070
WDD14
WDD19
WOE17
WOS14
WDKX03
WDMX04
WDMX03
WOD30
WOD33
WOD31
WDD02
WDD08
WDD24
WDD10
WDD18
WDM05
WOD09
WOE05
WOJ04
WOE25
WOJ35
WOC10
WOJ26
WOE01
WOJ28
WOE02
WOE03
WOS07
WOE13
HER005
WD37
WDD23
WOD43
WD09
WD45
WD39
WD49
WD33
WD68
WD74
WD79
WD81
WD94
WDM09
WOE27
WOE26
WOD41
WOJ31
WD04
WDK09
WD05
WDK08
WOJ34
WOJ37
GNH18
HER020
WD73
HER030
HER023
HER006
HER025
HER026
HER027
WD25
WD90
WD64
WDM06
WOJ36
HER034
HER037
HER038
WDM25
HER002
HER045
WOK21
WD15
HER013
WOC17
WOD05
HER056
TRH058
TRH064
TRH065
WOD01
WOK17
WOD21
WOK01
WOM12
WOK15
WOJ02
WOJ11
WOM24
WOK05
WOK12
WOK07
WOC14
WOS22
WOE04
WOS03
HER003
HER009
HER007
W04A
WDK13
HER058
WDK10
TRH061
TRH066
WD06
WD58
WOJ08
HER010
WOD13
WDK15
WOC23
WOD07
WOD14
WOK13
W06A
WOD40
HER004
HER008
HER042
HER043
HER039
WDM15
HER040
HER049
WD13
HER053


WDM26
WOK19
WD83
WOC16
WDKX01
HER063
WOD10
WOE16
WD01
WD65
WOD39
WOM39
WOM33
WOC13
WOS01
WOE11
WOL01
WOS06
WOE18
WOJ10
WOC20
WOE14
DIGBRO
STEVIS
WOLANLA
MELLANO
MICCHA
ERASPE
CYPRLA
SORPLUPL
CASFIL
HELDWE
HELPAC
PARMUE
BONERE
TEPSP1
CYPRLA
ISOLOTY
TRHAR
CYPRMIC
CYPRPAL
ERASPE
BONULA
CLEVISCOLAN
ERAER
ERIOPI
PLUTE1
ACASTE
ACASPH
SCAMARGE
PELLAB
ACAPAC
SENNOT
ACAPAC
CASSTUCA
ACATUMPI
HYBAUR
PTICAL
ACAANE2
GOODSTO1
BOMYRA
ACANAL
SOLPHL
GOMPHCH
TRIEPA
ACAPAC
CYPRES
CYPRES
CYPRES
TRIPRO
CYPRES
TRISUB
GOOSALS
ERIMAC
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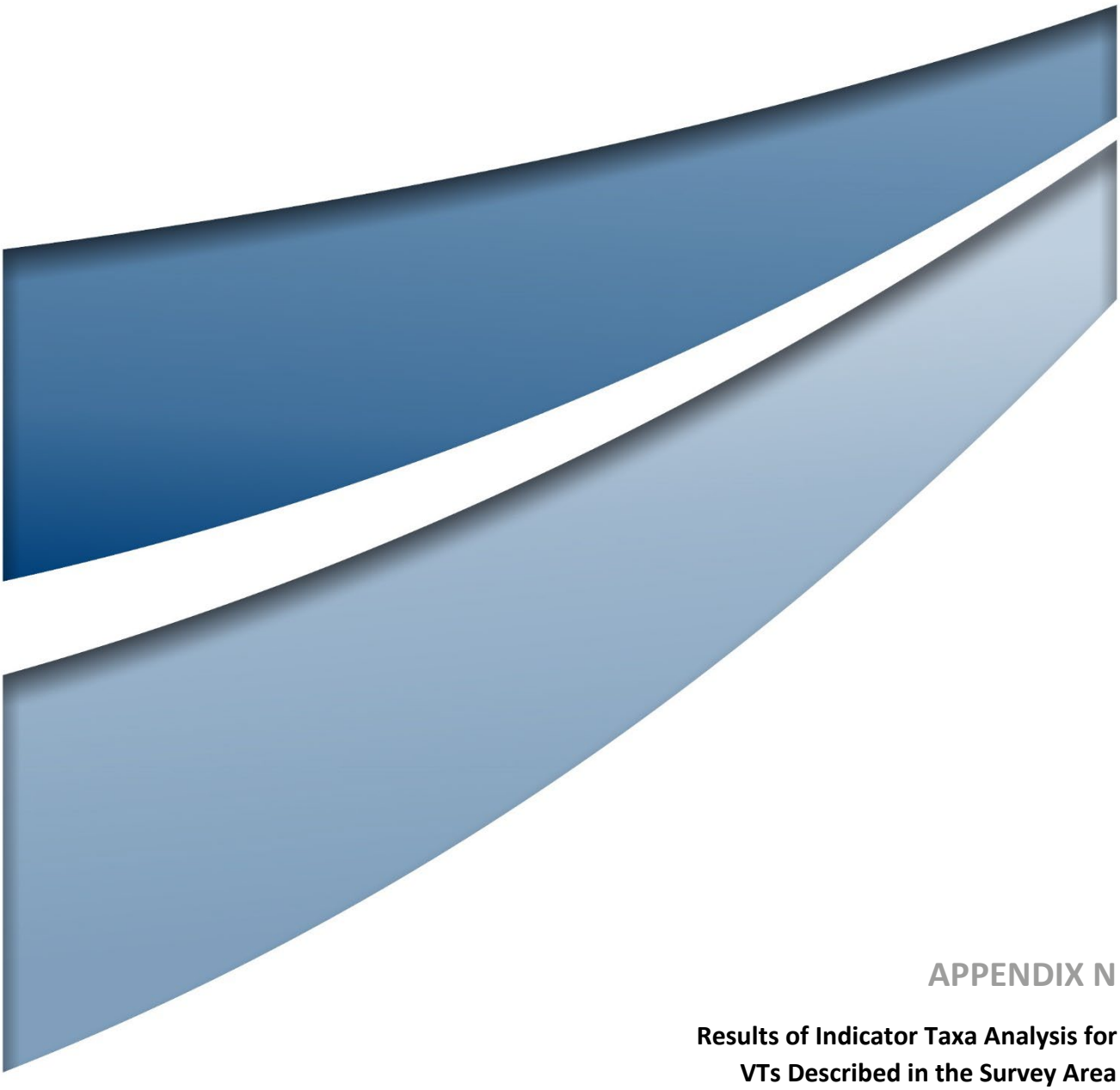
APPENDIX M

Summary of Misclassified and Manually Reassigned Quadrats of the Survey Area

Quadrat	Original Cluster*	Reassigned VT	Reasoning
WOK04	1	8	Species-poor damp area
WOK16	1	4	Captures minor flow line with sandy and wetter species
WOS04	1	16	Transitional vegetation
WOS05	1	16	Transitional vegetation
WOE12	1	16	Transitional vegetation
WOD35	1	12	Small area of vegetation, slightly transitional
WOJ25	1	8	Transitional vegetation
WOC19	1	8	Transitional vegetation
WD02	1	2	Transitional vegetation
GNH40	1	2	Transitional vegetation
GNH16	1	2	Transitional vegetation
WOM11	2	4	Transitional between VTs 4 and 5
WOD02	2	4	Relatively recently burnt
WOC04	2	4	Species poor
WOC09	2	13	Transitional vegetation
WOE10	2	1	Transitional vegetation
WOS02	2	13	Transitional vegetation
WDM13	2	3	Transitional vegetation
WD21	2	14	Transitional vegetation
WOK23	3	13	Mosaic vegetation
WDM14	3	13	Species poor
WDK12	3	2	Transitional vegetation
HER033	3	13	Transitional vegetation
HER022	3	1	Transitional vegetation
WOE07	4	1	Species poor
WDK04	4	12	Species poor
WDM11	4	12	Species poor
WD20	4	12	Not appropriate for this VT
WOC26	4	12	Not appropriate for this VT
TRH060	4	1	Transitional vegetation
WDMX02	4	1	Species poor
WDD07	4	12	Habitat not appropriate
WOJ06	4	12	Transitional between these VTs
WOC12	4	9	Transitional vegetation
WOC03	6	5	Transitional in size of drainage line
WOC24	6	5	Transitional vegetation
WOC22	6	5	Transitional vegetation
WOC27	6	5	Transitional vegetation
WDM12	6	5	Transitional vegetation
WDKX03	7	1	Transitional vegetation

Quadrat	Original Cluster*	Reassigned VT	Reasoning
WDMX04	7	1	Transitional vegetation
WDMX03	7	13	Transitional vegetation
WD39	9	3	Transitional vegetation
WD45	9	3	Transitional vegetation
WD09	9	12	Transitional vegetation
WD74	9	8	Not representative of VT 9
WOD41	9	5	Habitat not appropriate
HER005	9	12	Habitat not appropriate
WD49	9	3	Habitat not appropriate
WDD23	9	12	Habitat not appropriate
WOD01	10	6	Transitional vegetation
WOK17	10	6	Transitional vegetation
WOD05	10	5	Transitional in size of drainage line
WOK05	10	5	Transitional in size of drainage line
WOD20	12	5	Stony minor drainage line with numerous rocky species
WOJ08	12	4	Transitional between these VTs
HER003	12	3	Transitional vegetation
WDK13	12	13	Transitional vegetation
TRH066	12	13	Transitional vegetation
WOD25	13	4	Transitional between 4 and 12
WOM15	13	4	Transitional between 4 and 12
WOJ17	13	4	Species-poor, transitional position of quadrat
WOC01	13	4	Species poor
WDK24	13	12	Transitional vegetation
WD19	13	14	Transitional vegetation
W02A	13	14	Transitional vegetation
WD86	13	14	Transitional vegetation
WD92	13	14	Transitional vegetation
WDK01	13	12	Transitional vegetation
WDK24	13	12	Transitional vegetation
WOK02	13	4	Transitional vegetation
HER062	13	3	Habitat not appropriate
WOD10	14	12	Small area of vegetation, slightly transitional
WOE16	14	16	Transitional vegetation
HER063	14	12	Not appropriate for this VT
WOC13	16	9	Transitional vegetation
WOC20	16	13	Species poor, recently burnt

Original cluster as per classification analysis dendrogram (Appendix J**)*



APPENDIX N

Results of Indicator Taxa Analysis for VTs Described in the Survey Area

Note: INDVAL values are only shown for taxa that are significant at $p < 0.05$.

p values are indicated by:

* = $p < 0.05$
** = $p < 0.01$
*** = $p < 0.001$.

VT	Taxon	INDVAL (%)	*p* Value	Significance
1	*Acacia ancistrocarpa*	0.158	0.0138	*
	Corymbia zygophylla	0.246	0.0044	***
2	*Acacia spondylophylla*	0.096	0.0490	*
	Bonamia pilbarensis	0.152	0.0014	***
	Codonocarpus cotinifolius	0.153	0.0152	*
	Goodenia stobbsiana	0.115	0.0478	*
	Triodia lanigera	0.132	0.0186	*
3	*Acacia acradenia*	0.147	0.0002	***
	Triodia brizoides	0.114	0.0462	*
4	*Acacia ptychophylla*	0.355	0.0006	***
5	*Aristida holathera* var. *holathera*	0.217	0.0034	***
	Chrysopogon fallax	0.280	0.0002	***
	Corymbia hamersleyana	0.166	0.0002	***
	Hibiscus sturtii var. *campylochlamys*	0.142	0.0206	*
	Isotropis atropurpurea	0.145	0.0212	*
	Neurachne muelleri	0.133	0.0354	*
	Seringia nephrosperma	0.148	0.0116	*
6	*Acacia adoxa* var. *adoxa*	0.256	0.0022	***
	Corchorus laniflorus	0.140	0.0116	*
	Corchorus lasiocarpus subsp. *lasiocarpus*	0.217	0.0046	***
	Gossypium robinsonii	0.153	0.0116	*
	Grevillea wickhamii, *Grevillea wickhamii* subsp. *hispidula*, *Grevillea wickhamii* subsp. *macrodonta*	0.140	0.0002	***
	Indigofera monophylla	0.113	0.0002	***
	Pentalepis trichodesmoides subsp. *trichodesmoides*	0.158	0.0360	*
	Petalostylis labicheoides	0.148	0.0180	*
	Tephrosia rosea var. *clementii*	0.276	0.0004	***
	Trigastrotheca molluginea	0.121	0.0218	*
	Waltheria virgata	0.338	0.0010	***
7	*Arivela uncifera*	0.146	0.0176	*
	Euploca mutica (P3)	0.242	0.0056	**

VT	Taxon	INDVAL (%)	*p* Value	Significance
	Euploca vestita	0.138	0.0334	*
	Goodenia microptera	0.128	0.0264	*
	Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	0.187	0.0108	*
7 cont.	*Triodia schinzii*	0.551	0.0002	***
8	*Acacia sphaerostachya*	0.150	0.0156	*
	Acacia stellaticeps	0.129	0.0272	*
	Bonamia alatisemina	0.175	0.0140	*
	Bonamia erecta	0.186	0.0022	***
	Eragrostis eriopoda	0.278	0.0022	***
	Eriachne helmsii	0.111	0.0412	*
	Goodenia forrestii	0.175	0.0168	*
	Hakea lorea subsp. *lorea*	0.152	0.0196	*
	Panicum australiense var. *australiense*	0.109	0.0440	*
	Pluchea ferdinandi-muelleri	0.156	0.0250	*
	Pluchea tetranthera	0.151	0.0266	*
9	*Acacia maitlandii*	0.239	0.0074	**
	Acacia orthocarpa	0.270	0.0004	***
	Aristida contorta	0.218	0.0020	***
	Fimbristylis dichotoma	0.399	0.0004	***
	Scaevola browniana subsp. *browniana*	0.115	0.0200	*
	Tephrosia virens	0.315	0.0010	***
	Tripogonella loliiformis	0.368	0.0008	***
10	*Abutilon* aff. *hannii*	0.189	0.0034	***
	Acacia pyrifolia var. *pyrifolia*	0.211	0.0066	**
	Acacia tumida var. *pilbarensis*	0.160	0.0140	*
	Cajanus cinereus, Cajanus pubescens	0.478	0.0002	***
	Cymbopogon ambiguus	0.300	0.0002	***
	Enneapogon lindleyanus	0.150	0.0094	**
	Eriachne tenuiculmis	0.204	0.0046	***
	Eucalyptus victrix	0.379	0.0002	***
	Gossypium australe	0.120	0.0328	*
	Jasminum didymum subsp. *lineare*	0.247	0.0038	***
	Nellica maderaspatensis	0.374	0.0002	***
	Paspalidium tabulatum	0.115	0.0278	*
	Polymeria ambigua, Polymeria mollis	0.196	0.0086	**
	Pterocaulon sphacelatum	0.160	0.0212	*

VT	Taxon	INDVAL (%)	*p* Value	Significance
	Rhynchosia minima	0.216	0.0056	**
	Themeda triandra	0.293	0.0010	***
11	*Acacia ampliceps*	0.174	0.0250	*
	Acacia coriacea subsp. *pendens*	0.515	0.0002	***
	Acacia trachycarpa	0.330	0.0010	***
	Afrohybanthus aurantiacus	0.172	0.0124	*
	Atalaya hemiglauca	0.306	0.0006	***
11 cont.	*Cassytha filiformis*	0.188	0.0224	*
	Corynotheca pungens	0.205	0.0128	*
	Crotalaria cunninghamii	0.700	0.0002	***
	Cucumis variabilis	0.138	0.0242	*
	Cyperus blakeanus	0.423	0.0002	***
	Cyperus ixiocarpus	0.750	0.0002	***
	Cyperus vaginatus	0.494	0.0004	***
	Digitaria brownii	0.226	0.0088	**
	Eragrostis speciosa	0.474	0.0002	***
	Eriachne benthamii	0.599	0.0002	***
	Eriachne obtusa	0.123	0.0458	*
	Eucalyptus camaldulensis subsp. *refulgens*	0.430	0.0002	***
	Eulalia aurea	0.549	0.0002	***
	Evolvulus alsinoides, *Evolvulus alsinoides* var. *decumbens*, *Evolvulus alsinoides* var. *villosicalyx*	0.384	0.0006	***
	Flueggea virosa subsp. *melanthesoides*	0.111	0.0446	*
	Goodenia lamprosperma	0.471	0.0002	***
	Ipomoea muelleri	0.618	0.0004	***
	Melaleuca argentea	0.474	0.0002	***
	Melaleuca glomerata	0.598	0.0002	***
	Melaleuca linophylla	0.486	0.0002	***
	Microstachys chamaelea	0.750	0.0002	***
	Pterocaulon serrulatum var. *velutinum*	0.491	0.0004	***
	Sorghum plumosum var. *plumosum*	0.392	0.0006	***
	Stemodia viscosa	0.639	0.0004	***
	Tribulus occidentalis	0.159	0.0412	*
	Vigna lanceolata var. *lanceolata*	0.451	0.0004	***
12	*Cheilanthes contigua*	0.116	0.0200	*
	Cyperus hesperius	0.200	0.0064	**

VT	Taxon	INDVAL (%)	*p* Value	Significance
	Eriachne mucronata	0.217	0.0002	***
	Eucalyptus leucophloia subsp. *leucophloia*	0.154	0.0178	*
	Euphorbia careyi	0.186	0.0032	***
	Ptilotus incanus	0.154	0.0206	*
	Tribulus macrocarpus, Triumfetta maconochieana	0.162	0.0110	*
	Tribulus suberosus	0.181	0.0116	*
	Triumfetta propinqua	0.169	0.0122	*
13	*Acacia bivenosa*	0.131	0.0242	*
	Triodia chichesterensis (P3)	0.308	0.0002	***
14	*Boerhavia gardneri*	0.194	0.0110	*
	Corchorus parviflorus	0.115	0.0002	***
	Cullen leucochaites	0.135	0.0162	*
14 cont.	*Tephrosia* sp. NW *Eremaea*n (S. van Leeuwen et al. PBS 0356)	0.185	0.0066	**
	Triodia wiseana	0.180	0.0002	***
15	*Acacia synchronicia*	0.656	0.0002	***
	Maireana georgei, *Maireana* sp.	0.923	0.0002	***
	Senna glutinosa subsp. *glutinosa*	0.169	0.0092	**
	Triodia longiceps	0.414	0.0002	***
16	*Sclerolaena densiflora*	0.388	0.0008	***
	Triodia secunda	0.490	0.0002	***

APPENDIX O

Vegetation Mapping Note Raw Data

Site Name:	1503D
Site Type:	MAPPING_NOTE
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 697526.96E 7666325.36N
Habitat:	Disturbed area on the edge of rehab waste dump - dense Acacia acradenia but otherwise same as WOD06
Comments:	GPS26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696615	7665874	

PHOTOS



Site Name:	1504D
Site Type:	MAPPING_NOTE
Survey Date:	23/05/2024
GPS Location:	GDA94 Zone 50 697535.47E 7666419.71N
Vegetation Condition:	Northern Vegetation Condition - D - Degraded
Habitat:	Rehab waste dump, approx same as WOD06, condition degraded, very little triodia, very weedy (Aerva javanica, Cenchrus ciliaris)
Comments:	GPS26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697535	7666420	

PHOTOS



Site Name: 1505D

Site Type: MAPPING_NOTE

Survey Date: 23/05/2024

GPS Location: GDA94 Zone 50 697444.77E 7666595.43N

Habitat: Veg = WOD06, Triodia chichesterensis ~300 clumps

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697445	7666595	

Taxon Name	Avg. Height	Cover Alive
Triodia chichesterensis (P3)		

PHOTOS



Site Name:	1522D
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 696858.54E 7666508.07N
Habitat:	Veg = WOD02, mosaic with veg from WOD10, moving West from this point mainly Triodia wiseana dominated
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696859	7666508	

PHOTOS



Site Name:	1524D
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 696597.28E 7666446.84N
Habitat:	Veg = WOD06, Triodia chichesterensis dominant > Triodia wiseana, geology: mosaic of ironstone, shale, and calcrete
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696597	7666447	

PHOTOS



Site Name: 1525D

Site Type: MAPPING_NOTE

Survey Date: 24/05/2024

GPS Location: GDA94 Zone 50 696595.4E 7666612.85N

Habitat: Veg = WOD10, lower in landscape, more calcrete

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696595	7666613	

PHOTOS



Site Name: 1530D

Site Type: MAPPING_NOTE

Survey Date: 24/05/2024

GPS Location: GDA94 Zone 50 697044.46E 7666072.77N

Habitat: =WP1522, narrow band surrounded by WOD10 veg

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696859	7666508	

Site Name: 1535D

Site Type: MAPPING_NOTE

Survey Date: 24/05/2024

GPS Location: GDA94 Zone 50 697193.05E 7666167.56N

Habitat: =WP1524

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	697193	7666168	

Site Name:	1544D
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 696998.37E 7665466.6N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Habitat:	=WOD12 (dark shale), historical disturbance, VG
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	696998	7665467	

PHOTOS



Site Name: 1558D

Site Type: MAPPING_NOTE

Survey Date: 25/05/2024

GPS Location: GDA94 Zone 50 702266.95E 7654652.52N

Habitat: Veg = WOD17, but less Triodia brizoides

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	702267	7654653	

Site Name: 1588D

Site Type: MAPPING_NOTE

Survey Date: 26/05/2024

GPS Location: GDA94 Zone 50 701248.06E 7655194.8N

Habitat: South = strip that = WOD19

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	701248	7655195	

Site Name:	1598D
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 699388.49E 7656328.59N
Landform Type:	Drainage Line
Habitat:	Minor drainage line, A tumida var pilbarensis over Triodia epactia, Triodia lanigera. Too narrow for quadrat and too similar to surrounds
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699388	7656329	

Site Name: 1604D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 671777.82E 7671759.22N

Habitat: Triodia epactia community

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671778	7671759	

Site Name: 1607D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 670506.7103E 7670978.272N

Habitat: =WP1604

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670507	7670978	

Site Name: 1613D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 669881.11E 7671797.04N

Habitat: =WOD28 = Triodia lanigera dominant to Triodia schinzii rare, Euploca mutica x10

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669881	7671797	

PHOTOS



Site Name: 1619D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 669463.7371E 7672645.543N

Habitat: =WOD29

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669464	7672646	

Site Name: 1628D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 669595.7784E 7673380.47N

Habitat: =WOD28

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	669596	7673380	

PHOTOS



Site Name: 1629D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 670394.8382E 7673239.307N

Habitat: North of road = WOD31

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	670395	7673239	

Site Name: 1634D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 670394.84E 7673239.31N

Habitat: Veg = WOD32, almost all Triodia lanigera. Triodia schinzii rare.

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671409	7673613	

PHOTOS



Site Name: 1635D

Site Type: MAPPING_NOTE

Survey Date: 27/05/2024

GPS Location: GDA94 Zone 50 672201.9975E 7673750.987N

Habitat: =WP 1634

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	672202	7673751	

Site Name:	1636D
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 671741.63E 7672449.82N
Habitat:	Too small for quadrat. Broad flowline, stony. Primarily Corymbia hamersleyana, Acacia inaequilatera, Acacia bivenosa, Triodia epactia, Triodia lanigera. Condition very good, though historically disturbed. Map as Wodgina flowline community.
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	671742	7672450	

PHOTOS



Site Name: 1656D

Site Type: MAPPING_NOTE

Survey Date: 28/05/2024

GPS Location: GDA94 Zone 50 673090.3076E 7669644.313N

Habitat: = WOD36, more stones

Comments: GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673090	7669644	

Site Name:	1666D
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 676059.5107E 7663348.98N
Habitat:	Euphorbia clementii x3 skeletons found - NO LIVE PLANTS - too long since fire
Comments:	GPS 26

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676060	7663349	

Site Name:	668EL
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 683085.7373E 7663081.21N
Habitat:	Equals WOE15 minus Acacia acradenia (WOE06-01). Higher Triodia cover (45%). Same fire age. Excellent.
Comments:	GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	683086	7663081	

PHOTOS



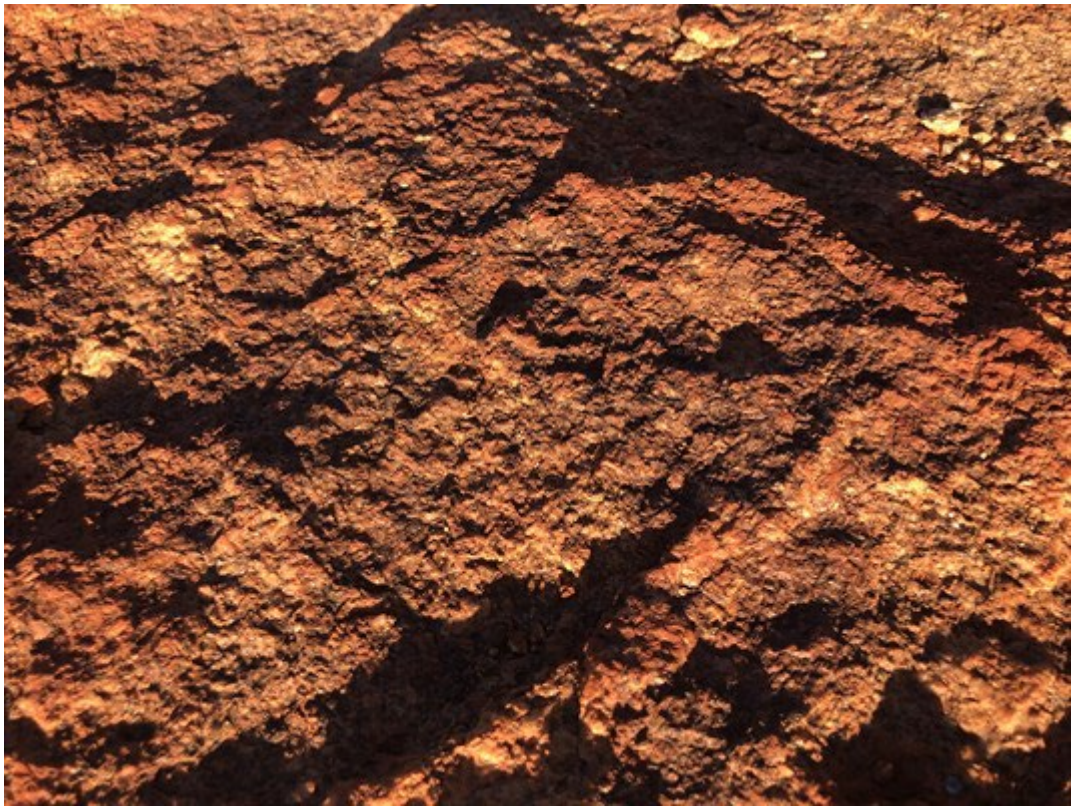
Site Name:	694EL
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 677648.82E 7660262.459N
Habitat:	Large, mainly bare, granite outcrop, surrounded Triodia epactia, Acacia orthocarpa, Acacia tumida (unburnt). Small depressions in rock include Boerhavia sp., Ptilotus fusi, Eriachne pulch pulch, Bulbostylis barbata.
Comments:	GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677649	7660262	

PHOTOS





Site Name:	707EL
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 678184.8338E 7657318.37N
Habitat:	Possibly old rehab/ripping - runs in a strip SW to NE ~35m wide. Young veg age/maybe more recent burn compared to WOE24. Triodia wiseana.
Comments:	GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	678185	7657318	

PHOTOS



Site Name:	721EL
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 676996.7469E 7658089.759N
Habitat:	Mid isolated clumps of Acacia orthocarpa over low open hummock grassland of Triodia epactia. Red-brown SCL, 90% surface stoniness (ironstone). Patchy fire age 5-10 years. Excellent condition.
Comments:	GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676997	7658090	

PHOTOS



Site Name: 722EL

Site Type: MAPPING_NOTE

Survey Date: 29/05/2024

GPS Location: GDA94 Zone 50 677210.6259E 7657958.133N

Habitat: Euphorbia clementii, 2pl.

Comments: GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677211	7657958	

PHOTOS







Site Name:	723EL
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677275.3881E 7657925.104N
Habitat:	Tall isolated clumps of Acacia ancistocarpa with occasional A.orthocarpa over low open hummock grassland. Red-brown SCL > 90% stoniness/ironstone. Excellent. Fire > 10 years.
Comments:	GPS32.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677275	7657925	

PHOTOS



Site Name:	724EL
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 677457.23E 7657866.34N
Habitat:	Low open woodland of Corymbia hamersleyana over tall isolated clumps of Acacia tumidia over low tussock grassland Cenchrus ciliaris and C.setiger. Brown loamy sand, < 10% stones, fire > 10 years, Excellent.
Comments:	GPS32

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677457	7657866	

PHOTOS



Site Name:	MNDBS01
Site Type:	MAPPING_NOTE
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 683747.9197E 7663106.849N

Site Name:	MNDBS02
Site Type:	MAPPING_NOTE
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 698510.9595E 7662301.933N

PHOTOS



Site Name:	MNDBS03
Site Type:	MAPPING_NOTE
Survey Date:	08/08/2024
GPS Location:	GDA94 Zone 50 698951.5201E 7664262.089N

PHOTOS





Site Name: MNDBS04

Site Type: MAPPING_NOTE

Survey Date: 09/08/2024

GPS Location: GDA94 Zone 50 681426.405E 7663376.237N

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	681426	7663376	

PHOTOS



Site Name:	MPVM01
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 700210.3E 7659332.24N
Habitat:	Same as WOM08 - Corymbia hamersleyana, Acacia tumida var. pilbarensis, Grevillea wickhamii, over Triodia epactia

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700210	7659332	

PHOTOS



Site Name:	MPVM02
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 699892.91E 7658584.62N
Landform Type:	Drainage Line
Habitat:	Drainage line with Eucalyptus leucophloia ssp leucophloia over Acacia tumida var. pilbarensis over Triodia epactia, Petalostylis labicheoides, WOM04-04 Seringia nephrosperma

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699893	7658585	

PHOTOS



Site Name:	MPVM03
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 699739.85E 7658665.55N
Landform Type:	Undulating Plain
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
CF Types:	Colluvium
Habitat:	Acacia tumida var. pilbarensis, Acacia ancistrocarpa, Acacia acradenia over Triodia lanigera on undulating plain on red brown clay loam + colluvium

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699740	7658666	

PHOTOS



Site Name:	MPVM04
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 699807.9633E 7658613.167N
Habitat:	Scattered eucalyptus leucophloia ssp. leucophloia ove Acacia inaequilatera over Triodia lanigera

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699808	7658613	

Site Name: MPVM05

Site Type: MAPPING_NOTE

Survey Date: 24/05/2024

GPS Location: GDA94 Zone 50 699482.7778E 7658701.879N

Habitat: Same as MPVM03

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699483	7658702	

PHOTOS



Site Name:	MPVM06
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 699901.3557E 7655175.572N
Landform Type:	Drainage Line
Slope Class:	Steep (23°)
Rock Outcrop:	Shale, 10-20% bedrock exposed
Habitat:	Rock wall in minor drainage line, calcareous shale.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699901	7655176	

PHOTOS



Site Name:	MPVM07
Site Type:	MAPPING_NOTE
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 699602.67E 7655761.08N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
CF Types:	Colluvium
Habitat:	Acacia acradenia over Triodia lanigera, Fimbristylis simulans, Eriachne pulchella. On colluvium, red-brown sandy clay loam

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699603	7655761	

PHOTOS





Site Name:	MPVM08
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 700958.0954E 7656012.263N
Landform Type:	Drainage Line
Habitat:	Eucalyptus victrix, no camaldulensis. Large channel with standing water

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700958	7656012	

PHOTOS





Site Name:	MPVM09
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 700611.4955E 7656399.624N
Landform Type:	Undulating Plain
Habitat:	Acacia ptychophylla, Acacia ancistrocarpa over Triodia lanigera, Ptilotus calostachyus, Fimbristylis simulans, WOJ06-01 Senna symonii, scattered Eucalyptus leucophloia ssp. leucophloia and Acacia inaequilatera.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	700611	7656400	

PHOTOS







Site Name:	MPVM10
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 699957.0103E 7657299.807N
Landform Type:	Drainage Line
Habitat:	Stony drainage line with Corymbia hamersleyana, Grevillea wickhamii, Acacia acradenia, Acacia tumdia var. pilbarensis over Triodia epactia

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	699957	7657300	

PHOTOS





Site Name:	MPVM11
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 674081.7077E 7666628.431N
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Quartz
Habitat:	Red-brow sandy patch over quartz. Acacia inaequilatera, Acacia stellaticeps over Triodia lanigera, Bonamia erecta, Goodenia stobbsiana, Ptilotus calostachyus, Ptilotus exaltatus, Tephrosia sp. Bungaroo creek, Indigofera monophylla, Euploca cunnighamii

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	674082	7666628	

PHOTOS







Site Name:	MPVM12
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 673869.1908E 7667474.581N
Habitat:	Acacia inaequilatera, Acacia ancistrocarpa, over Triodia lanigera. Bonamia erecta, Tephrosia sp. Bungaroo Creek, Ptilotus calostachyus, Ptilotus astrolasius, Indigofera monophylla. Acacia stellaticeps occurs across the track about 20m W.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	673869	7667475	

PHOTOS





Site Name:	MPVM13
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2024
GPS Location:	GDA94 Zone 50 676531.5946E 7664515.622N
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
CF Abundance:	0%
Habitat:	Change to Acacia inaequilatera, Acacia ancistrocarpa, Triodia epactia, on red-brown clay loam no stones

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	676532	7664516	

PHOTOS







Site Name: VMN001

Site Type: MAPPING_NOTE

Survey Date: 26/05/2023

GPS Location: GDA94 Zone 50 673471.49E 7668511.3N

Fire: ca. 2 years

Comments: Vegetation equal to releve WHDR02 except with the addition of fire opportunists that were recorded at releve WHDR01 and some additional species.

Taxon Name	Avg. Height	Cover Alive
Euploca skeleton		
Ptilotus fusiformis		

PHOTOS



Site Name:	VMN002
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 670890.732E 7671480.635N
Comments:	Vegetation equal to releve WHDR03 with one additional species.

Taxon Name	Avg. Height	Cover Alive
Senna symonii		

PHOTOS



Site Name:	VMN003
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 671526.55E 7672086.23N
Comments:	Vegetation equal to releve WHDR04 with one additional species.

Taxon Name	Avg. Height	Cover Alive
Senna symonii		

PHOTOS



Site Name:	VMN004
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 672063.61E 7672135.25N
Comments:	Vegetation equal to releve WHDR03 with one additional species.

Taxon Name	Avg. Height	Cover Alive
Streptoglossa decurrens		

PHOTOS



Site Name:	VMN005
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 672326.5982E 7671717.099N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	Mostly less than 5 years
Comments:	Vegetation equal to releve WHDR03.

No additional species recorded.

PHOTOS



Site Name:	VMN006
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 667130.13E 7668466.07N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Vegetation equal to releve WHDR06.

No additional species recorded.

Site Name:	VMN007
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 684522.3838E 7663315.568N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	River channel vegetation is equal to WHDR13 with a number of additional species.

Taxon Name	Avg. Height	Cover Alive
Bergia ammannioides		
Cyperus ixiocarpus		
Hibiscus austrinus		
Microstachys chamaelea		

PHOTOS



Site Name:	VMN008
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 684797.0205E 7663532.955N
Vegetation Condition:	Northern Vegetation Condition - G - Good
Comments:	River channel vegetation is equal to releve WHDR13 with a number of additional species.

Taxon Name	Avg. Height	Cover Alive
Ammannia baccifera		
Ammannia multiflora		
Cyperus conicus		
Dichanthium fecundum		
Diplachne fusca subsp. *fusca*		
Eragrostis cumingii		
Eragrostis tenellula		
Fimbristylis microcarya		
Flueggea virosa		
Fuirena ciliaris		
Marsilea hirsuta		
Sorghum plumosum var. *plumosum*		
Themeda triandra		

PHOTOS



Site Name:	VMN009
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 684983.1334E 7663619.564N
Vegetation Condition:	Northern Vegetation Condition - G - Good
Comments:	River channel vegetation is equal to releve WHDR13, minus *Melaleuca argentea*.

No additional species recorded.

PHOTOS



Site Name:	VMN010
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687450.8225E 7664189.227N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Vegetation is equal to releve WHDR19.

No additional species recorded.

Site Name:	VMN011
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694118.3188E 7664277.192N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Comments:	Vegetation is equal to releve WHDR20 with occasional additional species.

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa		
Acacia inaequilatera		
Grevillea wickhamii		

Site Name: VMN012

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 694207.2803E 7664278.693N

Vegetation Condition: Northern Vegetation Condition - VG - Very Good

Comments: Vegetation is equal to releve WHDR21 but within a larger drainage line with a defined channel with a higher tussock grass diversity, some additional shrubs and some drainage channel herbs.

Taxon Name	Avg. Height	Cover Alive
Bergia pedicellaris		
Cajanus cinereus		
Dichanthium fecundum		
Eragrostis tenellula		
Fimbristylis microcarya		
Goodenia lamprosperma		
Gossypium robinsonii		
Pluchea dentex		
Scleromitrion galioides		
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)		
Tephrosia rosea var. *clementii*		
Themeda triandra		

PHOTOS



Site Name:	VMN013
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694302.2468E 7664278.351N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Comments:	Vegetation equal to releve WHDR20

No additional species recorded.

Site Name: VMN014

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 696399.1186E 7665801.399N

Vegetation Condition: Northern Vegetation Condition - G - Good

Comments: Vegetation is similar to releve WHDR21 with some additional species. Significantly more *Cenchrus ciliaris* and isolated *Eucalyptus camaldulensis* subsp. *refulgens* in the narrow part of the drainage line, through on calcrete substrate.

Taxon Name	Avg. Height	Cover Alive
Abutilon aff. *hannii*		
**Cenchrus ciliaris*		
Eucalyptus camaldulensis subsp. *refulgens*		
Ficus aculeata var. *indecora*		

PHOTOS



Site Name:	VMN015
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 696098.5608E 7666464.723N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Comments:	Vegetation is equal to releve WHDR20 with some additional species.

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera		
Goodenia stobbsiana		

PHOTOS



Site Name:	VMN016
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 696115.8552E 7666319.456N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Comments:	Vegetation is similar to vegetation from WHDR22 though potentially transitional.

Site Name: VMN017

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 696133.6944E 7666386.571N

Vegetation Condition: Northern Vegetation Condition - G - Good

Comments: Vegetation is similar to releve WHDR21 although *Grevillea wickhamii*, *Acacia acradenia* and *Tephrosia rosea* var. *clementii* are more prominent. Some areas have been significantly disturbed by cattle and *Cenchrus ciliaris* cover is high. Some additional species have been recorded.

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Cajanus cinereus		
**Cenchrus ciliaris*		
Eriachne tenuiculmis		
Grevillea wickhamii		
Indigofera rugosa		
**Malvastrum americanum*		
Pterocaulon sphacelatum		
Tephrosia rosea var. *clementii*		
Trichodesma zeylanicum		
Triumfetta chaetocarpa		

PHOTOS



Site Name: VMN018

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 695991.0985E 7666148.522N

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Comments: Vegetation is equal to releve WHDR22 except that *Triodia chichesterensis* and *Triodia angusta* are apparently absent. *Triodia wiseana* is dominant.

Taxon Name	Avg. Height	Cover Alive
Triodia wiseana		

PHOTOS



Site Name:	VMN019
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 695777.6899E 7666336.309N
Vegetation Condition:	Northern Vegetation Condition - G - Good
Comments:	Vegetation is equal to releve WHDR21 with the addition of some species.

Taxon Name	Avg. Height	Cover Alive
**Cenchrus setiger*		
Cullen lachnostachys		

PHOTOS



Site Name:	VMN020
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 695195.3252E 7664287.088N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Vegetation is equal to releve WHDR21.

No additional species recorded.

PHOTOS



Site Name: VMN021

Site Type: MAPPING_NOTE

Survey Date: 26/05/2023

GPS Location: GDA94 Zone 50 670004.9787E 7671966.943N

Landform Type: Other, Clay pan (other)

Comments: Vegetation is equal to releve WHDR04 with some additional species, surrounded by vegetation that is equal to releve WHDR03 and the addition of *Triodia schinzii*.

Taxon Name	Avg. Height	Cover Alive
Sporobolus actinocladus		
Trianthema triquetrum		
Triodia epactia		
Triodia lanigera		
Triodia schinzii		

Site Name:	VMN022
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 673070.83E 7663001.14N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Vegetation condition here should be Very Good, there are many historical tracks.

Site Name:	VMN023
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 667189.52E 7668378.56N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Vegetation is equal to releve WHDR06.

No additional species recorded.

Site Name:	VMN024
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 670829.67E 7673554.04N
Comments:	Vegetation is equal to releve WHDR08.

No additional species recorded.

Site Name:	VMN025
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 683116.92E 7663129.7N
Vegetation Condition:	Northern Vegetation Condition - P - Poor
Comments:	Map vegetation the same as for releve WHDR10 but in Poor condition (regrowth).

No additional species recorded.

Site Name:	VMN026
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 685158.36E 7663754.349N
Vegetation Condition:	Northern Vegetation Condition – P – Poor
Comments:	Vegetation is equal to releve WHDR14 but in Poor condition due to clearing (regrowth) and with *Cenchrus ciliaris*.

Taxon Name	Avg. Height	Cover Alive
**Cenchrus ciliaris*		

Site Name:	VMN027
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 687509.421E 7664225.656N
Comments:	Vegetation is equal to releve WHDR19.

No additional species recorded.

Site Name:	VMN028
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694149.0888E 7664269.522N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Comments:	Thin strip of vegetation is equal to releve WHDR21.

No additional species recorded.

Site Name:	VMN029
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694176.5423E 7664271.414N
Comments:	Vegetation is equal to releve WHDR20.

No additional species recorded.

Site Name:	VMN030
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694200.4336E 7664270.801N
Comments:	Vegetation is equal to releve WHDR20.

No additional species recorded.

Site Name:	VMN031
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 694248.2109E 7664269.132N
Comments:	Vegetation is equal to releve WHDR21.

No additional species recorded.

Site Name: VMN032

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 696152.0945E 7666334.529N

Comments: Vegetation is equal to releve WHDR22, although only *Triodia wiseana* is present and no *Triodia angusta* or *Triodia chichesterensis*.

Taxon Name	Avg. Height	Cover Alive
Triodia wiseana		

Site Name:	VMN033
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2023
GPS Location:	GDA94 Zone 50 696062.7206E 7666062.74N
Comments:	Vegetation is equal to releve WHDR22 although with no *Triodia angusta*.

No additional species recorded.

Site Name: VMN034

Site Type: MAPPING_NOTE

Survey Date: 28/05/2023

GPS Location: GDA94 Zone 50 696015.6987E 7666093.528N

Comments: Very minor flow line with vegetation equal to releve WHDR21 but with more prominent *Petalostylis labicheoides* and *Grevillea wickhamii* and isolated *Acacia tumida* and *Chrysopogon fallax*.

Taxon Name	Avg. Height	Cover Alive
Acacia tumida		
Chrysopogon fallax		
Grevillea wickhamii		
Petalostylis labicheoides		

Site Name:	VMN035
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 696103.33E 7665325.43N
Comments:	Vegetation is equal to releve WHDR38 but with *Triodia wiseana* co-dominant. Vegetation type does not reach the drainage line to the east.

No additional species recorded.

Site Name:	VMN036
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698029.3236E 7662364.97N
Comments:	Vegetation type reaches the interface with the major drainage line. Dominated by *Eucalyptus camaldulensis*..

No additional species recorded.

Site Name:	VMN037
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698483.61E 7660529.81N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN038
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698460.52E 7660536.74N
Comments:	Vegetation is equal to releve WHDR42.

No additional species recorded.

Site Name:	VMN039
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698427.1744E 7660545.221N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN040
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 698026.1143E 7660764.982N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN041
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 697653.8371E 7660916.728N
Comments:	Vegetation is equal to releve WHDR41 with some additional species.

Taxon Name	Avg. Height	Cover Alive
Bonamia erecta		
Isotropis atropurpurea		

PHOTOS



Site Name: VMN042

Site Type: MAPPING_NOTE

Survey Date: 29/05/2023

GPS Location: GDA94 Zone 50 698752.0964E 7660430.46N

Comments: Vegetation is equal to releve WHDR40 except with isolated *Eucalyptus leucophloia* subsp. *leucophloia, Acacia ptychophylla* and *Acacia stellaticeps* low sparse shrubland (Eucalypts present due to proximity of hill).

Taxon Name	Avg. Height	Cover Alive
Acacia ptychophylla		
Acacia stellaticeps		
Eucalyptus leucophloia subsp. *leucophloia*		

PHOTOS



Site Name:	VMN043
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700041.3265E 7659737.817N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN044
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700298.4063E 7658846.799N
Comments:	Vegetation is equal to releve WHDR41.

No additional species recorded.

Site Name:	VMN045
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700294.1607E 7658822.266N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN046
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700291.4975E 7658731.383N
Comments:	Vegetation is equal to releve WHDR27.

No additional species recorded.

Site Name:	VMN047
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700144.54E 7658707.81N
Comments:	Vegetation is equal to releve WHDR27, with the addition of a secondary channel here.

No additional species recorded.

Site Name:	VMN048
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700124.6112E 7658709.16N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN049
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700097.4701E 7658706.721N
Comments:	Vegetation is equal to releve WHDR41.

No additional species recorded.

Site Name:	VMN050
Site Type:	MAPPING_NOTE
Survey Date:	29/06/2023
GPS Location:	GDA94 Zone 50 700049.49E 7658707.64N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN051
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 700021.8033E 7658711.516N
Comments:	Vegetation is equal to releve WHDR41.

No additional species recorded.

Site Name:	VMN052
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699931.5726E 7658697.44N
Comments:	Vegetation is equal to releve WHDR40.

No additional species recorded.

Site Name:	VMN053
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699810.6093E 7659301.209N
Comments:	Vegetation is equal to releve WHDR41.

No additional species recorded.

Site Name:	VMN054
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 699713.77E 7659521.64N
Comments:	Vegetation is equal to WHDR-42.

No additional species recorded.

PHOTOS



Site Name:	VMN055
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 699901.671E 7658510.324N
Comments:	Vegetation is equal to releve WHDR40 with isolated *Eucalyptus leucophloia* subsp. *leucophloia*.

Taxon Name	Avg. Height	Cover Alive
Eucalyptus leucophloia subsp. *leucophloia*		

Site Name: VMN056

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 700130.39E 7657731.94N

Landform Type: Other, Flood plain (other)

Vegetation Condition: Northern Vegetation Condition - VG - Very Good

Comments: Vegetation equal to releve WHDR28 with some additional species including *Acacia pyrifolia*, *Grevillea wickhamii* and *Acacia tumida* over *Tephrosia rosea*, *Indigophera monophylla* and *Corchorus parviflorus* over *Triodia epactia* and *Eriachne obtus*a.

Taxon Name	Avg. Height	Cover Alive
Acacia pyrifolia		
Acacia tumida		
Corchorus parviflorus		
Eriachne obtusa		
Grevillea wickhamii		
Indigofera monophylla		
Tephrosia rosea		
Triodia epactia		

Site Name: VMN057

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 700216.4067E 7657749.718N

Vegetation Condition: Northern Vegetation Condition - VG - Very Good

Comments: Vegetation is equal to releve WHDR27 although *Eucalyptus camaldulensis* is more common here and co-dominant with *Eucalyptus victrix*.

Taxon Name	Avg. Height	Cover Alive
Eucalyptus camaldulensis		
Eucalyptus victrix		

Site Name: VMN058

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 700245.8006E 7657792.327N

Comments: Vegetation is equal to releve WHDR40 with the addition of *Acacia stellaticeps* and *Acacia ptychophylla* low-sparse shrubland.

Taxon Name	Avg. Height	Cover Alive
Acacia ptychophylla		
Acacia stellaticeps		

Site Name: VMN059

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 700294.59E 7656475.17N

Fire: ca. 3 years

Comments: Vegetation is equal to releve WHDR29 although more recently burnt (ca. 3 years) but otherwise similar with the occasional *Senna symonii* and *Acacia bivenosa*.

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa		
Senna symonii		

Site Name: VMN060

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 699921.41E 7655158.93N

Comments: Here the drainage line vegetation is equal to releve WHDR27 although with *Eucalyptus victrix* only. South-east of this location the drainage line becomes minor and the vegetation is equal to releve WHDR241 including *Corymbia hamerslyana*, *Acacia tumida* and *Grevillea wickhamii* and some other additional species.

Taxon Name	Avg. Height	Cover Alive
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)		
Acacia tumida		
Bergia pedicellaris		
Cathetus exilis		
Corymbia hamersleyana		
Ehretia saligna		
Enneapogon lindleyanus		
Eucalyptus victrix		
Grevillea wickhamii		
Gymnema erectum		
Terminalia canescens		

Site Name:	VMN061
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 699376.2822E 7655466.758N
Comments:	Map the lower hillslope vegetation here the same as the plain (releve WHDR29).

No additional species recorded.

Site Name:	VMN062
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 701006.7662E 7656177.567N
Comments:	Vegetation the same as at releve WHDR29, although only *Triodia wiseana* was observed.

Site Name:	VMN063
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 701012.787E 7656117.805N
Comments:	Vegetation is equal to releve WHDR33 creek vegetation.

No additional species recorded.

Site Name: VMN064

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 700947.1755E 7656052.053N

Vegetation Condition: Northern Vegetation Condition - E - Excellent

Fire: >5 years

Comments: Small patch on ?calcrete of *Triodia angusta*/*Triodia wiseana* community with isolated *Acacia inaequilatera* and *Acacia bivenosa*..

Taxon Name	Avg. Height	Cover Alive
Acacia bivenosa		
Acacia inaequilatera		
Triodia angusta		
Triodia wiseana		

Site Name:	VMN065
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 699394.9946E 7656393.738N
Comments:	Vegetation is equal to releve WHDR41.

No additional species recorded.

Site Name: VMN066

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 700969.48E 7654655.7N

Fire: >5 years

Comments: Vegetation is equal to releve WHDR31 although lower slope/erosional. *Triodia wiseana* is dominant, *Triodia brizoides* is scarce but is more common higher up on the slope plus some additional species.

Taxon Name	Avg. Height	Cover Alive
Bonamia pilbarensis		
Goodenia cusackiana		
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)		
Triodia brizoides		
Triodia wiseana		

PHOTOS



Site Name: VMN067

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 701213.54E 7655208.62N

Comments: Vegetation is the same as releve WHDR40 with *Triodia wiseana* dominant, *Triodia lanigera* is scarce and some other additional species present.

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Corymbia hamersleyana		
Senna symonii		
Triodia lanigera		
Triodia wiseana		

Site Name: VMN068

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 701202.57E 7655101.34N

Comments: Vegetation is equal to releve WHDR33 with some additional species.

Taxon Name	Avg. Height	Cover Alive
Melaleuca glomerata		
Santalum lanceolatum		

Site Name:	VMN069
Site Type:	MAPPING_NOTE
Survey Date:	31/05/2023
GPS Location:	GDA94 Zone 50 701919.08E 7655069.634N
Comments:	Vegetation to the north is equal to releve WHDR40 and the vegetation to the south is equal to releve WHDR34.

No additional species recorded.

Site Name: VMN070

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 701834.0734E 7654760.607N

Comments: Vegetation is equal to releve WHDR40 including mixed *Triodia wiseana* and *Triodia lanigera*, *Acacia ptychophylla* low-sparse shrubland, *Acacia acradenia* dominant, *Acacia inaequilatera*, occasional *Acacia snychronicia*, isolated *Eucalyptus leucophloia* subsp. *leucophloia*, *Corymbia hamerslyana*, *Triodia bitextura* present; conglomerate (sandstone?) outcrops.

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Acacia ptychophylla		
Acacia synchronicia		
Corymbia hamersleyana		
Eucalyptus leucophloia subsp. *leucophloia*		
Triodia bitextura		
Triodia lanigera		
Triodia wiseana		

Site Name: VMN071

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 701618.5312E 7654807.325N

Comments: Vegetation is equal to releve WHDR36 but with the occasional *Eriachne tenuiculmis* in the channel, more *Acacia tumida*, occasional *Eucalyptus leucophloia* subsp. *leaucophloia* and only *Triodia epactia* here.

Taxon Name	Avg. Height	Cover Alive
Eriachne tenuiculmis		
Eucalyptus leucophloia subsp. *leucophloia*		
Triodia epactia		

Site Name: VMN072

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 701150.2343E 7654906.746N

Comments: Vegetation is equal to releve WHDR40 but is dominated by *Triodia wiseana* and is very eroded. *Triodia lanigera* is absent, occasional *Eucalyptus leucophloia* subsp*. leucophloia*, *Acacia inaequilatera*, *Acacia acradenia*, *Acacia ptychophylla* and occasional *Grevillea wickhamii*.

Taxon Name	Avg. Height	Cover Alive
Acacia acradenia		
Acacia inaequilatera		
Acacia ptychophylla		
Eucalyptus leucophloia subsp. *leucophloia*		
Grevillea wickhamii		
Triodia wiseana		

Site Name: VMN073

Site Type: MAPPING_NOTE

Survey Date: 25/05/2023

GPS Location: GDA94 Zone 50 674420E 7663140N

Fire: 1-2 years to the north and > 5 years to the south

Comments: Stony spur/sandplain mosaic through here. This line marks the transition to the east. North end of line goes back to sandplain and at the southern end only on low rocky spurs. *Triodia lanigera* (5%) and *Triodia chichesterensis* (95%) co-occur on stony rises (crests only).

Taxon Name	Avg. Height	Cover Alive
Triodia chichesterensis (P3)		
Triodia lanigera		

PHOTOS



Site Name:	VMN074
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2023
GPS Location:	GDA94 Zone 50 674811E 7662888N
Fire:	1-2 years
Comments:	Mosaic of stony plain and stony spur finer all through here, 20 m of low stony hill and 10 m of sandplain sandsheet type mosaic. Further north is sandplain again.

No additional species recorded.

PHOTOS



Site Name: VMN075

Site Type: MAPPING_NOTE

Survey Date: 26/05/2023

GPS Location: GDA94 Zone 50 675006E 7663093N

Fire: 1-2 years

Comments: Ironstone rocks present (see photos), other areas have fewer ironstone rocks. *Triodia lanigera* found on the ironstone (mosaic with sandplain through here).

Taxon Name	Avg. Height	Cover Alive
Triodia lanigera		

PHOTOS



Site Name: VMN076

Site Type: MAPPING_NOTE

Survey Date: 27/05/2023

GPS Location: GDA94 Zone 50 676123E 7663156N

Fire: 1-2 years

Comments: Low stony rise with *Triodia lanigera* dominant. Through here there are changes to the *Triodia* to the east. *Triodia longiceps* burnt 1 - 2 years.

Taxon Name	Avg. Height	Cover Alive
Triodia lanigera		
Triodia longiceps		

Site Name: VMN077

Site Type: MAPPING_NOTE

Survey Date: 27/05/2023

GPS Location: GDA94 Zone 50 676252E 7663057N

Fire: 1-2 years

Comments: Burnt within 1-2 years to the south. *Triodia longiceps* with occasional *Triodia epactia* in runnels. Burnt *Triodia longiceps* (and greener burnt *Triodia epactia* in background).

Taxon Name	Avg. Height	Cover Alive
Triodia epactia		
Triodia longiceps		

PHOTOS



Site Name:	VMN078
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 676261E 7662494N
Comments:	To the south the landform changes back to sandplain with *Triodia lanigera* and *Triodia epactia*.

Taxon Name	Avg. Height	Cover Alive
Triodia epactia		
Triodia lanigera		

Site Name:	VMN079
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 676200E 7662844N
Comments:	*Triodia longiceps* from this point north.

Site Name: VMN080

Site Type: MAPPING_NOTE

Survey Date: 27/05/2023

GPS Location: GDA94 Zone 50 674303E 7662098N

Fire: 1-2 years

Comments: *Triodia lanigera* and *Triodia wiseana* here.

Taxon Name	Avg. Height	Cover Alive
Triodia lanigera		
Triodia wiseana		

Site Name: VMN081

Site Type: MAPPING_NOTE

Survey Date: 27/05/2023

GPS Location: GDA94 Zone 50 674764E 7663454N

Comments: All *Triodia lanigera* here.

Taxon Name	Avg. Height	Cover Alive
Triodia lanigera		

Site Name: VMN082

Site Type: MAPPING_NOTE

Survey Date: 27/05/2023

GPS Location: GDA94 Zone 50 675349E 7664052N

CF Abundance: 50-90%

CF Types: Ironstone, Quartz

Fire: 1-2 years

Comments: Most eastern stony spur (running north to south) in this area is where the *Triodia chichesterensis* occurs. Quartz and ironstone pebbles (see photos 020-023). *Triodia epactia* and *Triodia lanigera* also present. Some other scattered species including *Acacia ancistrocarpa* which covers ca. 10-20%.

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa		
Acacia inaequilatera		
Codonocarpus cotinifolius		
Corymbia hamersleyana		
Grevillea wickhamii		
Triodia chichesterensis (P3)		
Triodia epactia		
Triodia lanigera		

PHOTOS



Site Name: VMN083

Site Type: MAPPING_NOTE

Survey Date: 29/05/2023

GPS Location: GDA94 Zone 50 672149E 7653342N

Comments: Seams to be *Triodia brizoides* at the northern third.

Taxon Name	Avg. Height	Cover Alive
Triodia brizoides		

Site Name: VMN084

Site Type: MAPPING_NOTE

Survey Date: 29/05/2023

GPS Location: GDA94 Zone 50 672597E 7653187N

Comments: Mostly *Triodia brizoides* at the northern end (200m).

Taxon Name	Avg. Height	Cover Alive
Triodia brizoides		

Site Name:	VMN085
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 673310E 7653296N
Comments:	Tall hills with *Triodia wiseana*, *Triodia brizoides*, little overstorey and occasional *Triodia chichesterensis*.

Taxon Name	Avg. Height	Cover Alive
Triodia brizoides		1.5
Triodia chichesterensis (P3)		
Triodia wiseana		25

PHOTOS



Site Name:	VMN086
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 673294E 7653683N
Fire:	1-2 years
Comments:	Only snappy gum hill seen, to the east and west of the hill as well.

Taxon Name	Avg. Height	Cover Alive
Acacia inaequilatera		0.5
Corchorus parviflorus	0.3	
Eucalyptus leucophloia		0.5
Senna glutinosa subsp. *glutinosa*	0.2	
Triodia brizoides		0.3
Triodia wiseana		25

PHOTOS



Site Name:	VMN087
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 673412E 7653648N
Comments:	*Eucalyptus victrix* creek.

Taxon Name	Avg. Height	Cover Alive
Eucalyptus victrix		

PHOTOS



Site Name: VMN088

Site Type: MAPPING_NOTE

Survey Date: 30/05/2023

GPS Location: GDA94 Zone 50 674803E 7665035N

Fire: 5 years - >10 years

Comments: Unburnt *Corymbia zygophylla*, *Acacia ancistrocarpa*, *Triodia lanigera* and patches of *Acacia tumida*. Unburnt > 10 years west of the track and burnt ca. 5 years ago to the east of the track.

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa	1.5	25
Acacia tumida	2	0.1
Corymbia zygophylla	5	1
Triodia lanigera		50

Site Name: VMN089

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 674068E 7653081N

Comments: Mainly *Triodia brizoides* through these hills with patches of *Triodia wiseana* , *Triodia epactia* and scattered *Triodia chichesterensis*.

Taxon Name	Avg. Height	Cover Alive
Triodia brizoides		
Triodia chichesterensis (P3)		
Triodia epactia		
Triodia wiseana		

Site Name: VMN090

Site Type: MAPPING_NOTE

Survey Date: 31/05/2023

GPS Location: GDA94 Zone 50 674108E 7653291N

Comments: *Eucalyptus leucophloia* over *Triodia wiseana on* the crest of the hill only.

Taxon Name	Avg. Height	Cover Alive
Eucalyptus leucophloia		1
Triodia wiseana		55

PHOTOS



Site Name:	VMN091
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2023
GPS Location:	GDA94 Zone 50 674224E 7665639N
Fire:	>10 years
Comments:	Vegetation is equal to releve WDMX01 with some additional species.

Taxon Name	Avg. Height	Cover Alive
Acacia ancistrocarpa		
Acacia tumida		
Bonamia erecta		
Corymbia zygophylla		
Leptosema chambersii		
Ptilotus astrolasius		
Triodia lanigera		

PHOTOS



Site Name:	VMN092
Site Type:	MAPPING_NOTE
Survey Date:	27/05/2023
GPS Location:	GDA94 Zone 50 675332E 7664466N
Comments:	Same *Triodia lanigera* and *Triodia chichesterensis* hummock grassland (WDMX03 and WDMX04) with very few shrubs.

No additional species recorded.

Site Name:	VMN093
Site Type:	MAPPING_NOTE
Survey Date:	01/06/2023
GPS Location:	GDA94 Zone 50 674176.1722E 7657132.742N
Comments:	Not habitat for any significant flora. Observed from vehicle.

No additional species recorded.

Site Name:	VMN094
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2023
GPS Location:	GDA94 Zone 50 673021.9452E 7653939.725N
Comments:	New drill pad ca. 50 m south of waypoint.

No additional species recorded.

Site Name:	WKRMN01
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 698287.61E 7662797.51N
Landform Type:	Undulating Plain
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Fire:	<6months
Habitat:	Isolated low trees of Corymbia hamersleyana over mid open shrubland of Acacia inaequilater, Acacia ancistrocarpa, and Acacia acradenia over Triodia lanigera over Bonamia pilbarensis, Eriachne pulchella, Senna notabilis, Indigofera monophylla

PHOTOS





Site Name:	WKRMN02
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 698255.39E 7662752.93N
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<6 months
Habitat:	Minor drainage line - Corymbia hamersleyana with Acacia tumdia var. pilbarensis and Acacia ancistrocarpa. Lots of Senna notabilis, Triodia epactia
Comments:	No photo supplied

Site Name:	WKRMN03
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 699048.8956E 7663297.729N
Landform Type:	Mid Slope
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Quartz, Calcrete (other), 2-10% bedrock exposed
CF Abundance:	>90%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Fire:	<6 months
Habitat:	Acacia inaequilatera, Corymbia hamersleyana over Triodia angusta and Triodia wiseana. No Triodia chichesternsis (possibly burnt in fire?) Similar to WOK06

PHOTOS





Site Name:	WKRMN04
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA94 Zone 50 698396.83E 7664416.04N
Vegetation Condition:	Northern Vegetation Condition - D - Degraded
Fire:	>20 years
Habitat:	Disturbed, former waste dump. *Calotropis procera, *Aerva javanica, Aristida contorta, Enneapogon caerulescens, Arivela visocsa, Triodia epactia, Gomphrena cunninghamii, *Cenchrus setiger

PHOTOS





Site Name:	WKRMN06
Site Type:	MAPPING_NOTE
Survey Date:	25/05/2020
GPS Location:	GDA94 Zone 50 698282.3234E 7665550.354N
Landform Type:	Mid Slope
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	Sparse Acacia inaequilatera over sparse-open mid shrubland of Acacia acradenia over Triodia wiseana, Triodia lanigera. Triodia brizoides on upper slope. Ptilotus auriculifolious, Arivela viscosa. Same as WOK10

PHOTOS





Site Name:	WKRMN07
Site Type:	MAPPING_NOTE
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 697515.6086E 7665192.559N
Landform Type:	Lower Slope
CF Abundance:	>90%
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	<5 years
Habitat:	Sparse tall shrubland of Acacia inaequilatera over mid-sparse shrubland of Acacia acradenia and Acacia ancistrocarpa with Indigofera monophylla over low hummock grassland of Triodia lanigera and occasional Triodia wiseana

PHOTOS





Site Name:	WKRMN08
Site Type:	MAPPING_NOTE
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 697463.79E 7665177.68N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	Triodia change to Triodia chichesterensis and Triodia wisea
Comments:	No photo supplied

SPECIES LIST

No species recorded.

Site Name:	WKRMN09
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 695953.14E 7664805.54N
Landform Type:	Low Rise
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	Corymbia hamersleyana, Acacia inaequilatera over Triodia chichesterensis (1000+) and Triodia wiseana

PHOTOS



Site Name:	WKRMN10
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 670160.4259E 7651882.176N
Landform Type:	Low Rise
CF Types:	Ironstone, Chert (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	1-5 years
Habitat:	Isolated trees of Eucalyptus leucophloia ssp. leucophloia over Hakea lorea ssp. lorea over Triodia brizoides with Ptilotus calostachyus

PHOTOS



Site Name:	WKRMN11
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 669843.947E 7655382.572N
Landform Type:	Drainage Line, Minor (other)
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	=WOK21 - Acacia tumida var. pilbarensis, Corymbia hamersleyana, Grevillea wickhamii over Gossypium australe, over Triodia epactia and Triodia brizoides

PHOTOS



Site Name:	WKRMN12
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 669808.3434E 7655514.475N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	=WOK23 except on lower slope (not ridge). Acacia inaequilatera over Triodia brizoides, occasional Grevillea wickhamii

PHOTOS



Site Name:	WKRMN13
Site Type:	MAPPING_NOTE
Survey Date:	29/05/2024
GPS Location:	GDA94 Zone 50 670654.8459E 7660456.925N
Landform Type:	Undulating Plain
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Fire:	>2 years
Habitat:	Isolated trees of Corymbia hamersleyana over isolated to sparse shrubland of Acacia inaequilatera and Acacia ancistrocarpa over open forbland of Ptilotus calostachyus and Goodenia stobbsiana plus Codonocarpus cotinifolius over low open hummock grassland of Triodia brizoides. Plus Bonamia pilbarensis, Grevillea wickhamii
Comments:	High mortality from dry season

PHOTOS



Site Name:	WOCVM-01
Site Type:	MAPPING_NOTE
Survey Date:	22/05/2024
GPS Location:	GDA94 Zone 50 695636.55E 7664052.87N
Landform Type:	Drainage Line, minor (other)
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Loam
Soil Colour:	Red-Brown
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Habitat:	Acacia tumida to 3m at 20% and Corymbia hamersleyana to 4m at 1% over
Comments:	No photo provided. Lots of old dead Acacia ?tumida, not much evidence of animals, Acacia ancistrocarpa along edges

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	695637	7664053	

Site Name: WOCVM-02

Site Type: MAPPING_NOTE

Survey Date: 23/05/2024

GPS Location: GDA94 Zone 50 693591.01E 7664234.33N

Habitat: = WOCVM-01

Comments: No photo supplied

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	693591	7664234	

Site Name:	WOCVM-03
Site Type:	MAPPING_NOTE
Survey Date:	25/05/2024
GPS Location:	GDA94 Zone 50 685182.82E 7663952.39N
Habitat:	Acacia ancistrocarpa to 2.5m (15%), Triodia hummock grassland
Comments:	No photo supplied. Minor drainage line heading NNW, rocky

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685183	7663952	

Site Name:	WOCVM-04
Site Type:	MAPPING_NOTE
Survey Date:	26/05/2024
GPS Location:	GDA94 Zone 50 685004.43E 7663804.46N
Rock Outcrop:	Granite
Habitat:	Cenchrus ciliaris
Comments:	Extensive granite outcrop

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	685004	7663804	

PHOTOS







Site Name:	WOCVM-05
Site Type:	MAPPING_NOTE
Survey Date:	28/05/2024
GPS Location:	GDA94 Zone 50 677413.14E 7655357.25N
Habitat:	Eucalyptus victrix, Indigofera monophylla, ciliaris (dominant), Acacia inaequilatera
Comments:	Creekline

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677413	7655357	

PHOTOS



Site Name:	WOCVM-06
Site Type:	MAPPING_NOTE
Survey Date:	30/05/2024
GPS Location:	GDA94 Zone 50 677794.6E 7659275.22N
Soil Type:	Sandy Loam
Soil Colour:	red (other)
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Habitat:	Acaca inaequilatera, Ptilotus calostachyus coll, occasional Corymbia hamersleyana
Comments:	Nearby area is more recently burnt, small drainage line w same species

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677795	7659275	

PHOTOS





Site Name: WOCVM-07

Site Type: MAPPING_NOTE

Survey Date: 30/05/2024

GPS Location: GDA94 Zone 50 677852.64E 7659215.91N

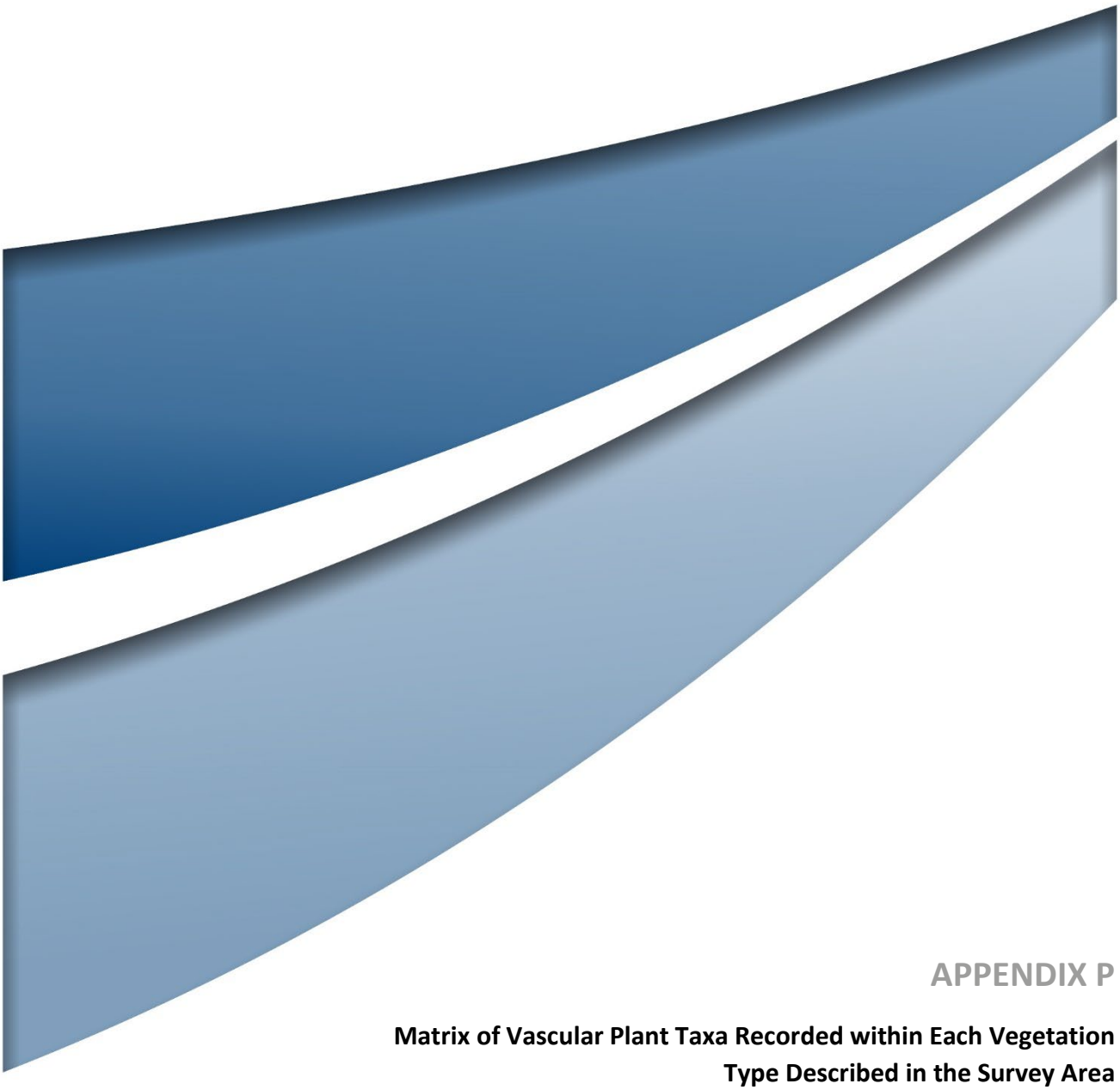
Habitat:

Comments: No photo supplied. Nearer to drainage line, upper reaches of drainage

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	677853	7659216	

Site Name:	WOJVM01
Site Type:	MAPPING_NOTE
Survey Date:	24/05/2024
GPS Location:	GDA2020 Zone 50 701331.06E 7659710.64N
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Habitat:	Minor drainage line incised amongst chert hills with minor dolomite outcropping. Cor ham and euc leuc over aca inaequilatera, aca bivenosa and aca acradenia over triodia ? angusta Appears to be long unburnt. [Proposed quadrat #255. No species list or photo. - TJ]



APPENDIX P

Matrix of Vascular Plant Taxa Recorded within Each Vegetation Type Described in the Survey Area

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Abutilon aff. *Hannii*						X				X						
Abutilon lepidum								X	X							
Abutilon otocarpum					X											
Abutilon sp. Pilbara (W.R. Barker 2025)					X			X								X
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)									X	X		X	X			
Acacia acradenia	X	X	X	X	X	X	X	X	X	X		X	X	X		
Acacia adoxa var. *adoxa*						X						X				
Acacia ampliceps								X		X	X					
Acacia ancistrocarpa	X	X	X	X	X	X	X	X	X	X		X	X		X	X
Acacia arida	X	X														
Acacia bivenosa	X	X		X	X	X		X		X		X	X		X	X
Acacia colei var. *colei*										X						
Acacia coriacea subsp. *pendens*								X		X	X	X				
Acacia cowleana					X							X				
Acacia inaequilatera	X	X	X	X	X		X	X	X	X		X	X	X		X
Acacia maitlandii	X	X							X	X			X			
Acacia orthocarpa	X	X	X		X	X		X	X	X		X	X	X		X
Acacia pruinocarpa												X				
Acacia ptychophylla				X						X		X	X			
Acacia pyrifolia var. *pyrifolia*				X	X	X	X	X		X	X	X	X			
Acacia sclerosperma subsp. *sclerosperma*								X								
Acacia sericophylla	X															
Acacia sphaerostachya	X	X			X			X		X			X			
Acacia spondylophylla	X	X			X	X		X	X	X		X	X	X		
Acacia stellaticeps	X	X	X	X	X	X	X	X		X			X			X
Acacia synchronicia		X		X								X			X	X
Acacia trachycarpa					X	X		X	X	X	X					X
Acacia tumida var. *pilbarensis*	X	X	X	X	X	X	X	X	X	X	X	X	X			
Adriana tomentosa var. *tomentosa*								X		X						
**Aerva javanica*					X	X		X	X	X	X	X	X			
Alysicarpus muelleri										X						

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Amaranthus interruptus												X				
Amaranthus undulatus			X		X				X	X		X				
Ammannia baccifera										X						
Ammannia multiflora											X					
Androcalva luteiflora				X	X											
Aristida burbidgeae										X		X				
Aristida contorta					X				X	X						
Aristida holathera var. *holathera*	X	X			X		X	X	X	X		X				
Atalaya hemiglauca						X				X	X					
Bergia pedicellaris										X	X					
Boerhavia burbidgeana						X				X		X				
Boerhavia coccinea		X	X		X	X	X	X	X	X		X	X			X
Boerhavia gardneri			X		X	X		X	X	X		X	X	X		
Boerhavia repleta										X						
Boerhavia schomburgkiana					X			X		X		X				
Bonamia alatisemina	X	X	X		X	X	X	X	X	X	X				X	
Bonamia erecta	X	X		X	X	X	X	X		X		X	X			X
Bonamia pannosa					X				X							
Bonamia pilbarensis	X	X	X	X	X	X		X	X	X	X	X	X	X		X
Bulbostylis barbata	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bulbostylis turbinata						X			X							X
Byblis pilbarana									X	X						
Cajanus pubescens, Cajanus cinereus					X	X		X		X		X	X	X		
Calandrinia pentavalvis								X								
**Calotropis procera*										X	X					
Calandrinia pumila									X							
Calandrinia stagnensis										X						X
Calandrinia tepperiana											X					
Carissa lanceolata								X								
Cassytha capillaris	X	X	X	X	X	X	X	X	X	X		X	X	X		X
Cassytha filiformis											X					X
Cathetus exilis					X	X		X	X		X					

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
**Cenchrus ciliaris*					X	X		X	X	X	X	X	X		X	X
**Cenchrus setiger*					X	X		X		X	X	X				X
Cheilanthes brownii									X			X				
Cheilanthes contigua										X		X				
Cheilanthes sieberi subsp. *sieberi*									X							
Chloris pumilio																X
Chrysopogon fallax	X				X	X	X	X		X			X			
Clerodendrum floribundum var. *angustifolium*					X							X	X			
Clerodendrum tomentosum var. *tomentosum*	X				X					X		X	X	X		
Arivela uncifera	X	X	X	X	X	X	X	X	X				X	X		
Arivela viscosa	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Codonocarpus cotinifolius	X	X			X		X	X	X			X	X	X		
Corymbia hamersleyana	X	X	X	X	X	X	X	X	X	X		X	X	X		
Corchorus aff. incanus (Potentially undescribed)								X			X					
Corchorus laniflorus					X	X			X	X			X			
Corchorus lasiocarpus subsp. *lasiocarpus*	X			X	X	X		X	X	X	X	X	X			
Corchorus parviflorus	X	X	X	X	X	X	X	X	X	X		X	X	X		X
Corynotheca pungens								X			X					
Corchorus tridens						X		X		X						
Corymbia zygophylla	X						X									
Crotalaria cunninghamii										X	X					
Crotalaria medicaginea var. *neglecta*								X	X	X				X		
Crotalaria novae-hollandiae subsp. *novae-hollandiae*									X	X		X		X		
Cucumis melo					X	X		X				X	X			
Cucumis variabilis					X		X	X	X	X	X	X	X			
Cullen leucanthum						X				X						
Cullen leucochaites			X						X	X		X		X		
Cullen martinii					X		X									

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cullen stipulaceum					X											
Cymbopogon ambiguus					X			X	X	X	X	X	X	X		
Cynodon convergens					X			X	X	X						X
**Cynodon dactylon*										X						
Cynodon prostratus		X					X						X		X	X
Cyperus blakeanus						X					X					
Cyperus difformis											X					
Cyperus hesperius			X						X	X		X	X	X		
Cyperus iria										X						
Cyperus ixiocarpus											X					
Cyperus leptocarpus									X	X	X					
Cyperus pulchellus									X	X						
Cyperus squarrosus						X			X	X	X					X
Cyperus vaginatus						X				X	X					
Dactyloctenium radulans							X	X		X						X
Dampiera candicans	X	X	X	X	X	X	X	X	X	X		X	X	X		
Dentella asperata								X								
Desmodium filiforme									X							
Dichanthium fecundum										X						
Dichanthium sericeum subsp. *humilius*										X						
Digitaria brownii					X						X					
**Digitaria ciliaris*																X
Dodonaea coriacea		X			X			X				X	X			
Dolichandrone occidentalis										X						
Drosera finlaysoniana											X					
Dysphania plantaginella													X			X
Dysphania rhadinostachya subsp. *Rhadinostachya*	X	X	X		X	X	X	X	X	X		X	X	X		
Dysphania sphaerosperma			X							X			X			
Enneapogon caerulescens					X				X	X		X	X	X		
Enneapogon lindleyanus										X		X	X			
Enneapogon robustissimus										X						

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Eragrostis crateriformis									X							
Eragrostis cumingii					X	X		X	X	X	X					X
Eragrostis desertorum					X											
Eragrostis dielsii							X	X	X							
Eragrostis eriopoda	X	X			X		X	X				X	X			
**Eragrostis minor*					X											
Eragrostis speciosa										X	X					
Eragrostis tenellula										X	X					
Eriachne aristidea							X		X			X	X			
Eriachne benthamii										X	X					
Eriachne ciliata									X							
Eriachne helmsii								X								
Eriachne mucronata	X	X		X	X	X		X	X	X		X	X	X		
Eriachne obtusa		X	X		X	X	X	X	X	X	X	X	X			X
Eriachne pulchella subsp. *Dominii*	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Eriachne sp. Dugald River (B.K. Simon+ 3007)			X	X					X			X	X			
Eriachne tenuiculmis					X	X		X	X	X			X			
Eucalyptus camaldulensis subsp. *refulgens*										X	X					
Eucalyptus leucophloia subsp. *leucophloia*			X	X					X	X		X				
Eucalyptus victrix						X		X		X						X
Eucalyptus xerothermica													X			
Eulalia aurea					X			X		X	X					
Euphorbia australis var. *subtomentosa*	X	X	X		X	X	X	X	X	X	X	X	X	X		X
Euphorbia biconvexa					X	X		X		X	X					X
Euphorbia careyi			X		X				X	X		X		X		
Euphorbia clementii (P3)			X		X		X		X	X			X			
Euphorbia tannensis subsp. *eremophila*		X	X		X	X	X	X	X	X	X	X	X	X		
Euphorbia trigonosperma		X			X	X	X	X		X	X	X				X
Euphorbia vaccaria var. *vaccaria*	X		X		X		X	X	X	X	X		X			X

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Evolvulus alsinoides var. *decumbens*, *Evolvulus alsinoides* var. *villosicalyx*					X		X	X	X	X	X	X				
Ficus aculeata var. *indecora*										X						
Ficus brachypoda												X				
Fimbristylis dichotoma	X	X				X	X	X	X	X		X	X		X	X
Fimbristylis elegans										X		X				
Fimbristylis microcarya					X					X	X					
Fimbristylis rara										X						
Fimbristylis simulans	X	X	X	X	X	X		X	X	X		X	X	X		
**Flaveria trinervia*								X		X		X				
Flueggea virosa subsp. *melanthesoides*									X	X	X	X				
Fuirena ciliaris											X					
Gomphrena cunninghamii			X		X				X	X		X	X	X		
Gomphrena leptoclada subsp. *leptoclada*									X							X
Gonocarpus ephemerus									X							
Goodenia cusackiana				X								X	X			
Goodenia forrestii			X		X		X	X		X			X			
Goodenia lamprosperma					X	X		X	X	X	X					
Goodenia microptera	X	X	X		X	X	X	X	X	X		X	X	X		X
Goodenia muelleriana		X		X	X	X	X	X	X	X		X	X	X		
Goodenia obscurata (P3), *Velleia connata*					X											
Goodenia stobbsiana	X	X	X	X	X	X		X	X	X	X	X	X	X		
Goodenia triodiophila										X						
Gossypium australe			X		X	X	X	X	X	X		X		X		X
Gossypium robinsonii					X	X				X				X		
Grevillea pyramidalis subsp. *leucadendron*		X	X	X	X			X	X	X		X	X	X		
Grevillea wickhamii subsp. *hispidula*, *Grevillea wickhamii* subsp. *Macrodonta*	X	X	X	X	X	X	X	X	X	X		X	X	X		
Hakea lorea subsp. *Lorea*	X	X	X	X	X		X	X	X	X		X	X	X		
Haloragis gossei var. *gossei*					X					X			X			
Halgania solanacea	X	X			X											

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Euploca chrysocarpa													X			
Heliotropium crispatum	X							X					X			
Euploca cunninghamii	X		X		X	X	X		X	X	X	X	X	X		X
Euploca mutica (P3)	X						X	X					X			
Euploca pachyphylla	X	X			X		X	X	X	X		X	X			
Euploca skeleton	X	X			X				X			X	X	X		
Euploca tenuifolia				X	X	X	X		X	X			X			X
Euploca vestita	X				X		X									
Heteropogon contortus					X					X						
Hibiscus austrinus var. *austrinus*											X					
Hibiscus coatesii		X							X	X		X	X	X		
Hibiscus goldsworthii												X				
Hibiscus leptocladus					X			X	X	X		X				
Hibiscus sturtii var. *campylochlamys*	X				X	X	X	X	X	X		X	X			
Afrohybanthus aurantiacus	X	X		X	X	X	X	X	X	X	X	X	X			X
Indigofera colutea							X	X	X	X	X					
Indigofera linifolia										X				X		
Indigofera monophylla	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Indigofera rugosa									X	X		X	X	X		
Indigofera trita										X		X				
Ipomoea coptica																X
Ipomoea muelleri									X	X	X					
Ipomoea polymorpha											X					
Isotropis atropurpurea	X				X		X	X	X	X	X	X	X			
Jasminum didymum subsp. *lineare*					X	X	X			X		X	X			
Kennedia prorepens								X								
Leptosema anomalum	X						X									
Lepidium pedicellosum													X			
Lepidium pholidogynum												X				
Maireana georgei, *Maireana* sp.															X	X
**Malvastrum americanum*										X						
Mallotus nesophilus												X				

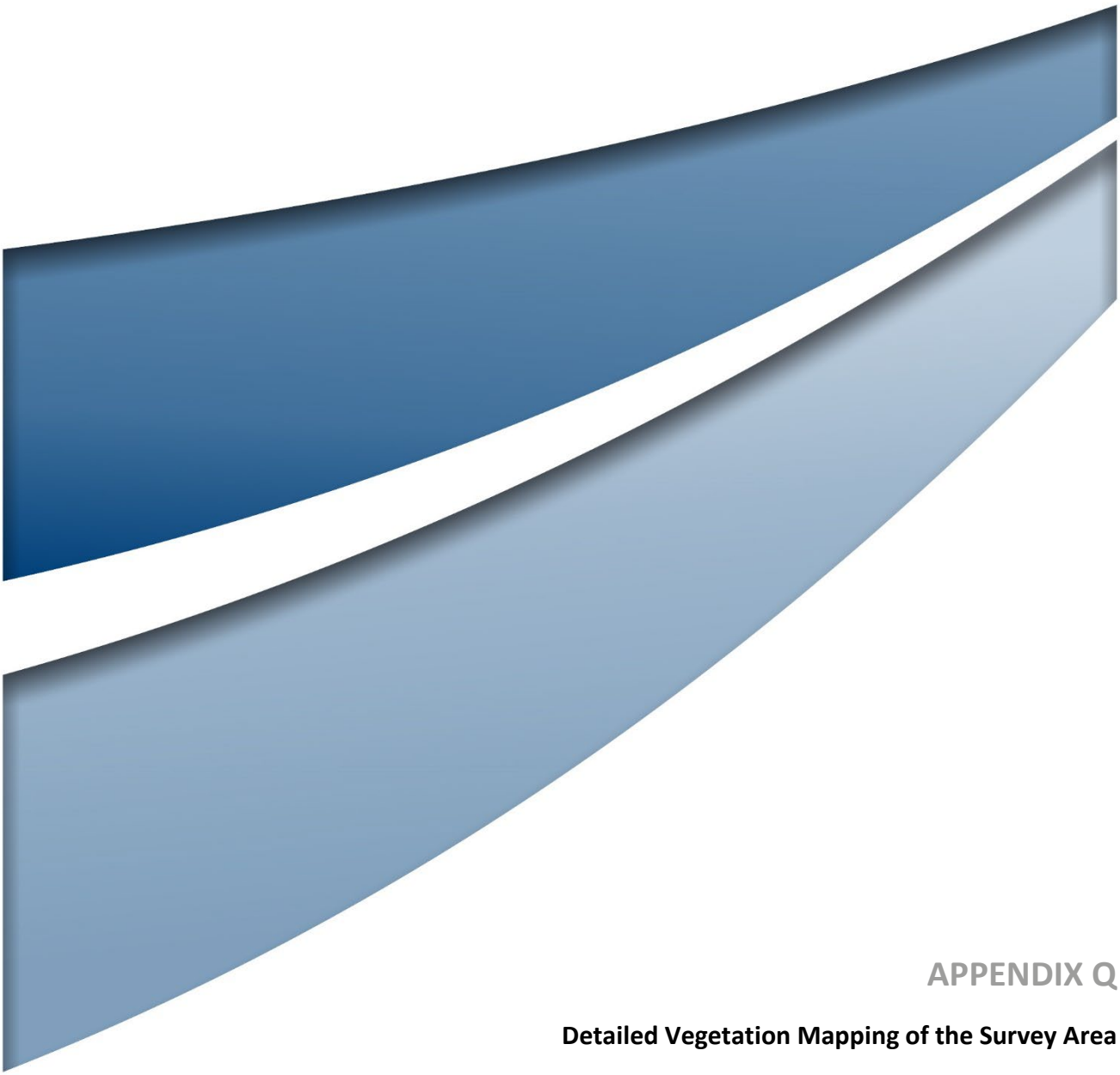
Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Marsilea mutica											X					
Melaleuca argentea										X	X					
Melaleuca glomerata								X		X	X					
Melaleuca lasiandra					X											
Melaleuca linophylla								X		X	X					
Melhania oblongifolia					X					X			X			
Microstachys chamaelea											X					
Mitrasacme connata							X		X		X					
Nicotiana benthamiana									X	X		X				
Nicotiana occidentalis										X						
Notoleptopus decaisnei					X	X	X	X		X		X	X			
Dolichocarpa crouchiana	X		X	X	X	X			X	X		X	X	X		
Operculina aequisepala										X						
**Opuntia* sp.											X					
Panicum decompositum								X								
Neurachne muelleri	X	X	X	X	X			X	X	X		X	X			X
Paspalidium clementii	X		X		X	X	X	X	X	X	X	X		X		
**Passiflora foetida* var. *hispida*										X		X				
Paspalidium rarum					X	X		X	X	X						X
Paspalidium reflexum											X					
Paspalidium tabulatum										X		X				
Pentalepis trichodesmoides subsp. *trichodesmoides*						X				X						
Perotis rara					X			X		X						
Peripleura virgata												X				
Petalostylis labicheoides	X	X		X	X	X	X	X	X	X		X	X			X
Nellica maderaspatensis					X	X		X		X	X	X	X			
Pluchea dentex					X	X		X		X		X				
Pluchea ferdinandi-muelleri	X	X			X		X	X	X	X		X	X			X
Pluchea rubelliflora								X		X						X
Pluchea tetranthera	X	X			X	X	X	X	X	X		X	X		X	X
Polymeria mollis, Polymeria ambigua					X	X		X	X	X	X		X			

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Polycarpaea corymbosa var. *corymbosa*	X		X		X	X	X	X	X	X	X	X	X	X		X
Polygala galeocephala							X									X
Polygala glaucifolia	X	X	X	X	X	X	X		X	X		X	X	X		
Polycarpaea holtzei	X	X	X		X		X	X	X	X		X	X	X		
Polycarpaea longiflora			X		X				X	X	X	X				X
Polygala aff. *saccopetala*					X											
Polymeria sp. (Potentially undescribed)					X	X										
Portulaca conspicua							X									
Portulaca cyclophylla	X															X
Portulaca oleracea	X	X			X	X	X	X	X	X	X	X	X		X	X
Pterocaulon serrulatum var. *velutinum*											X	X				
Pterocaulon sphacelatum					X	X		X	X	X		X		X		X
Pterocaulon sphaeranthoides					X					X		X				
Ptilotus astrolasius	X	X	X	X	X	X	X	X	X	X		X	X	X		X
Ptilotus auriculifolius		X	X	X	X		X	X	X	X		X	X	X		
Ptilotus axillaris	X				X	X	X	X	X	X		X	X	X		X
Ptilotus calostachyus	X	X	X	X	X	X	X	X	X	X		X	X	X		X
Ptilotus clementii		X			X							X	X			
Ptilotus exaltatus		X	X	X	X			X	X	X		X	X		X	
Ptilotus fusiformis	X				X	X	X	X	X	X	X	X				
Ptilotus helipteroides							X									
Ptilotus incanus									X	X		X				
Ptilotus mollis (P4)													X			
Ptilotus polystachyus												X	X			
Rhodanthe margarethae									X			X				
Rhynchosia minima					X	X	X	X	X	X	X	X	X	X		
Salsola australis					X			X		X		X	X			
Santalum lanceolatum										X			X			
Scaevola amblyanthera var. *centralis*				X	X	X		X		X			X			
Scaevola browniana subsp. *Browniana*	X	X				X		X	X				X			X
Scaevola spinescens										X						
Schizachyrium fragile							X		X			X				

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Sclerolaena densiflora													X			X
Scleromitrion galioides						X					X					
Sclerolaena hostilis																X
Senna artemisioides subsp. *oligophylla*					X	X	X	X		X		X	X	X		X
Senna glutinosa subsp. *glutinosa*	X	X		X	X	X			X	X		X	X	X	X	X
Senna glutinosa subsp. *pruinosa*		X										X				
Senna notabilis	X		X	X	X	X	X	X	X	X		X	X	X		X
Senna symonii	X	X	X	X	X			X				X	X	X		
Senna venusta										X		X				
Seringia nephrosperma				X	X			X	X			X				
Sesbania cannabina										X						
Sida arenicola	X				X				X			X				
Sida clementii					X	X	X	X		X						
Sida fibulifera										X			X		X	
Sida sp. Pilbara (A.A. Mitchell PRP 1543), *Sida cardiophylla*	X		X		X		X	X	X	X		X	X			
Sida sp. Articulation below (A.A. Mitchell PRP 1605)		X			X							X				
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)					X											
Solanum cleistogamum										X		X				
Solanum diversiflorum	X			X	X	X	X	X	X	X	X	X	X			
Solanum horridum			X		X				X	X		X		X		
Solanum phlomoides		X	X	X	X	X	X	X	X	X	X	X	X	X		X
Sorghum plumosum var. *plumosum*					X			X			X					
Sporobolus actinocladus							X	X								X
Sporobolus australasicus	X	X	X		X	X	X	X	X	X		X	X	X	X	X
Stackhousia intermedia													X			X
Stackhousia muricata		X										X	X	X		X
Stemodia grossa			X				X	X	X	X	X	X	X			X
Stemodia viscosa, *Stemoda viscosa*									X	X	X	X	X			
Striga curviflora								X			X					

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Streptoglossa decurrens	X				X			X	X	X		X	X	X		
Streptoglossa macrocephala								X				X				
Streptoglossa odora							X						X			
Striga squamigera					X					X		X				
Swainsona formosa					X			X	X	X		X	X			
Swainsona stenodonta													X			
Synaptantha tillaeacea var. *tillaeacea*	X	X	X		X	X	X	X	X	X	X		X	X		X
Tephrosia clementii	X	X	X	X	X							X	X			
Tephrosia densa										X		X		X		
Tephrosia rosea var. *clementii*					X	X		X	X	X	X	X	X	X		
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	X		X		X	X	X	X	X	X		X	X		X	X
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	X	X	X	X	X			X	X			X	X	X		
Tephrosia sp. B Kimberley Flora (C.A. Gardner 7300)									X			X				
Tephrosia supina					X											
Tephrosia virens			X		X				X	X		X	X			
Terminalia circumalata									X	X		X				
Terminalia supranitifolia (P3)										X		X				
Themeda triandra					X			X		X		X				
Tinospora smilacina	X				X		X	X	X	X		X	X			
Trachymene oleracea subsp. *oleracea*	X		X		X	X	X		X	X		X		X		
Triodia angusta	X			X	X	X		X		X		X	X		X	X
Tribulopis angustifolia					X								X			
Triodia basitricha (P3)				X								X				
Triodia brizoides	X	X	X	X	X				X	X		X	X	X		
Triumfetta chaetocarpa					X	X	X	X		X	X	X				
Triodia chichesterensis (P3)	X	X	X	X	X					X		X	X	X		
Triumfetta clementii									X	X		X				
Trichosanthes cucumerina var. *cucumerina*										X		X				

Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Triodia epactia	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tribulus hirsutus	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Triumfetta johnstonii					X				X	X						
Triodia lanigera	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
Tripogonella loliiformis									X							
Triodia longiceps								X		X					X	X
Tribulus macrocarpus								X								
Trigastrotheca molluginea	X	X	X	X	X	X	X	X	X	X		X	X	X		
Tribulus occidentalis						X			X		X					
Trianthema pilosum					X	X	X	X		X		X				
Tribulus platypterus		X			X			X	X	X		X	X			
**Trianthema portulacastrum*										X						
Triumfetta maconochieana									X	X				X		
Triumfetta propinqua			X		X			X	X	X		X				
Triodia schinzii	X				X		X	X								
Triodia secunda								X								X
Tribulus suberosus		X	X		X			X	X	X		X	X	X		
**Tribulus terrestris*						X										
Trianthema triquetrum	X	X		X	X		X	X		X			X		X	X
Triodia wiseana	X	X	X	X	X	X		X	X	X		X	X	X		
Trichodesma zeylanicum var. *zeylanicum*					X	X	X	X	X	X	X	X				
Vigna lanceolata var. *lanceolata*										X	X					
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)											X					
Vigna triodiophila (P3)										X		X				
Wahlenbergia tumidifructa							X				X					X
Waltheria indica					X			X		X	X					X
Waltheria virgata						X				X						
Panicum australiense var. *australiense*	X	X			X	X	X	X	X	X		X	X			X
Zornia albiflora		X							X							



APPENDIX Q

Detailed Vegetation Mapping of the Survey Area

APPENDIX Q

Vegetation Types of the Survey Area – Sheet 1

669000 669600 670200 670800 671400 672000 672600 673200

7674000 7673400 7672800 7672200 7671600 7671000 7670400

1635D
VMN024
WHDR07 WOD32
WHDR08
1628D
1634D 1629D
WOD35
WOD34
1619D
WOD30
1636D WOD33
WHDR04
VMN004
WOD29
VMN003
VMN021
1613D
1604D
WOD37 VMN005
WHDR03
WOD31
VMN002
1607D
WOD28
WOD36 WHDR09

GREAT NORTHERN HWY

Legend

- 2024 Survey Area
- Road

2024 Survey

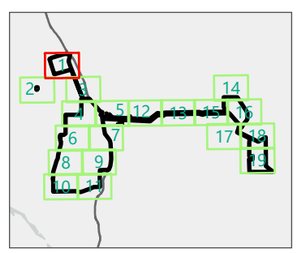
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 1
- 7
- 12
- 13
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 2



Legend

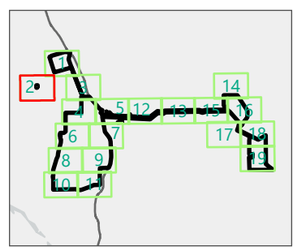
- 2024 Survey Area
- Road

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 1
- 13
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 3

672000 672600 673200 673800 674400 675000 675600 676200 676800

7669800 7669200 7668600 7668000 7667400 7666800 7666200

WOD36 WHDR09 1656D WOD38 VMN001 WHDR02 WOM37 MPVM12 MPVM11 WOM34 WOM36 WOM35 WOM38 WHDR01

GREAT NORTHERN HWY

Legend

- 2024 Survey Area
- Road

2024 Survey

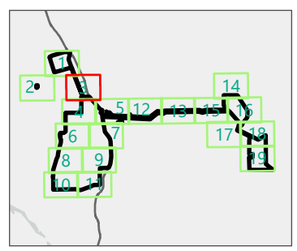
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 1
- C



0 300 600

Metres

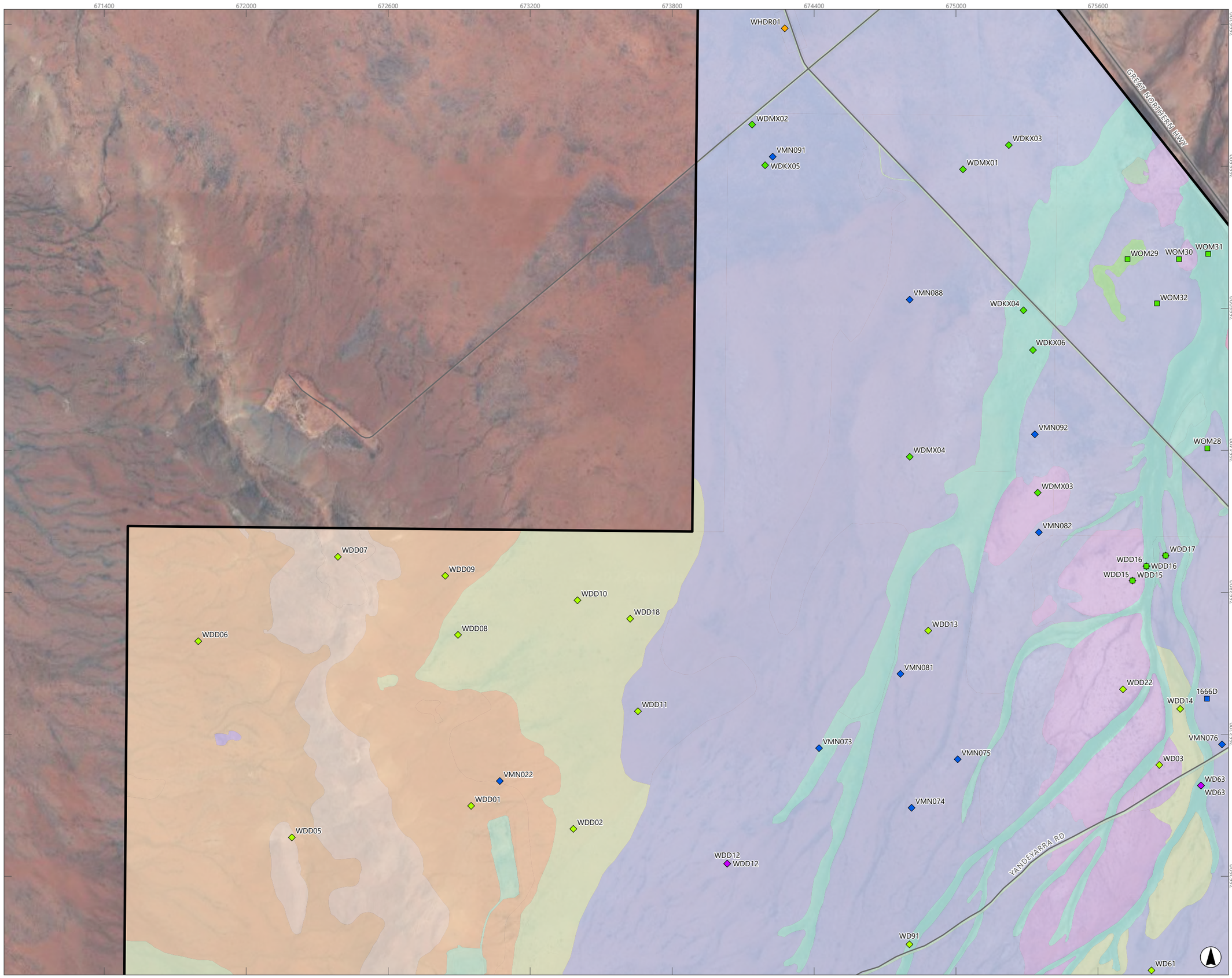
Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 4



Legend

- 2024 Survey Area
- Road

2024 Survey

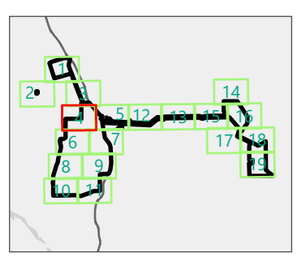
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Quadrat
- 2023 Reassessed Quadrat
- 2023 Relevé
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 1
- 2
- 3
- 5
- 7
- 10
- 12
- 13
- 15
- C



0 300 600

Metres

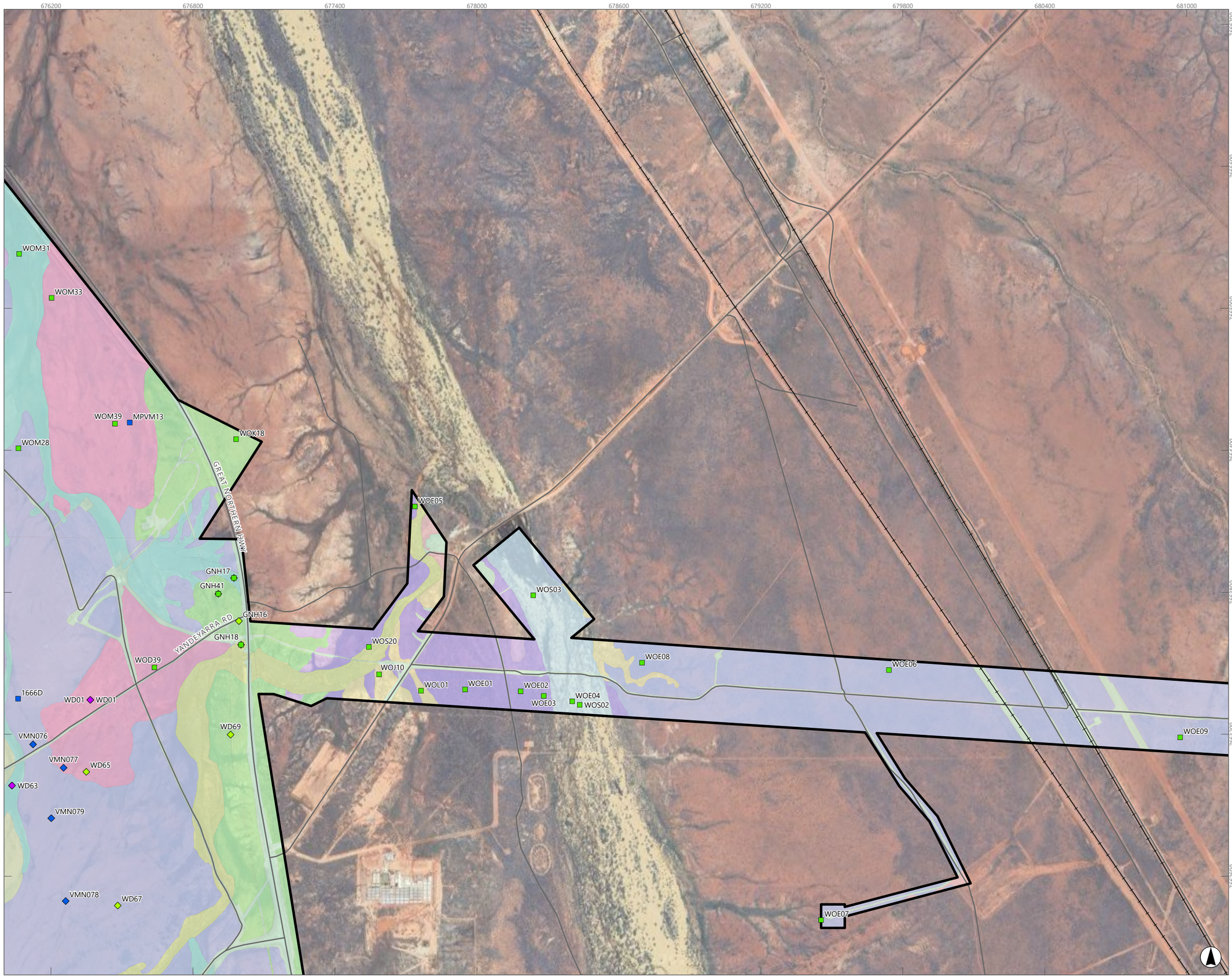
Scale: 1:15,000 at A3
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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 5



Legend

- 2024 Survey Area
- Railway
- Road

2024 Survey

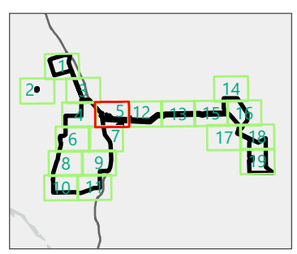
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Reassessed Quadrat
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 1
- 2
- 5
- 7
- 8
- 10
- 11
- 13
- 15
- 16
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 6

670200 670800 671400 672000 672600 673200 673800 674400 675000

7662000 7661400 7660800 7660200 7659600 7659000 7658400

KANGAN RD
YANDEYARRA RD

WDD21 WDD19 WDD20 WDD03 WDD23 WDD24 WDD04
WD91 VMN080 WD57 WD57 WD51 WD53 WD55 WD89
WOD40 HER001 HER001 HER011 HER012 HER010
WKRMN13 HER009 HER008 HER002 HER007 HER066
HER019 HER019 HER070 HER070 HER021 HER021 HER022 HER022 HER068 HER032 HER032 HER020
WOD41 HER064 HER015 HER013 HER014 HER069 HER069 HER033 HER033 HER024
HER006 HER016 HER025
HER003 HER051 HER017 HER018 HER018 HER030 HER029 WD32
HER026
HER005 HER031
HER004 HER027 HER028 WD46
HER034
HER040 HER039 WD44
HER050 WD50
HER062 HER061 WD52

Legend

- 2024 Survey Area
- Road

2024 Survey

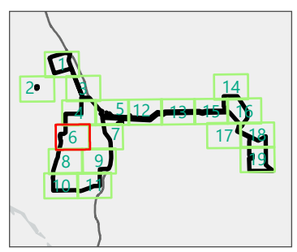
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Reassessed Quadrat
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 1
- 2
- 3
- 5
- 7
- 10
- 11
- 12
- 13
- 14
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 7

675600 676200 676800 677400 678000 678600 679200 679800

7662000 7661400 7660800 7660200 7659600 7659000 7658400

WD61 WD57 WD59 WD12 WD12 WD14 WD75 WD73 WD71 WD16 WD10 WD02 GNH40 WD18 WD28 WD30 WD89 WD08 WOE21 WD04 HER023 WD06 WDK17 WOJ37 694EL WD26 WD26 WDK18 WOE23 WOE22 WDK19 WD24 WD22 WD20 WOM40 WDM16 WOC26 WDM15 WOCVM-06 WOCVM-07 WDM14 WDM13 WOC27 WDM11 WDM12 WDM10 WDM17 WOE30 WOE31 WDM22 WDM21 WDM19 WDM18

GREAT NORTHERN HWY

Legend

- 2024 Survey Area
- Road

2024 Survey

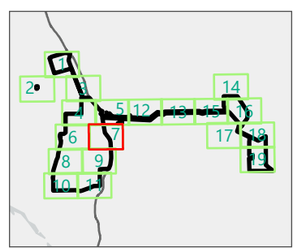
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Reassessed Quadrat
- Previous Survey Quadrat

Vegetation Type

- 1
- 2
- 3
- 5
- 7
- 9
- 10
- 12
- 13
- 14
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 8

669000 669600 670200 670800 671400 672000 672600 673200 673800

7658400 7657800 7657200 7656600 7656000 7655400 7654800

HER062 HER061 HER060 HER041 HER037 HER035 HER042 HER047 HER043 HER049 HER036 W05A HER058 HER059 HER067 HER067 HER052 W06A HER038 HER038 HER053 HER056 HER044 HER046 HER055 HER054 HER057 HER063 HER045 WD34 WD47 WD45 WD43 WD05 WD11 WD11 WDK20 WD49 WD09 WD07 WDK21 WD39 WD13 WKRMN12 WDK22 WKRMN11 WD15 WDK24 WD41 WDK25 WDK23 W01A WOK23 W03A WD37 WDM23 WDM24 WDM25 WDM26

Legend

- 2024 Survey Area
- Road

2024 Survey

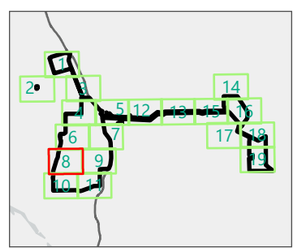
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Reassessed Quadrat
- Previous Survey Quadrat

Vegetation Type

- 3
- 9
- 10
- 12
- 13
- 14
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 9

674400 675000 675600 676200 676800 677400 678000 678600

7658400 7657800 7657200 7656600 7656000 7655400 7654800

WD52 WDM19 WDM18 WDM20 WOE27 721EL 722EL 723EL 724EL WOE28 WOE29 WD48 WD38 WD38 WDK10 WD40 WDK11 WOE24 707EL WOER01 VMN093 WDK12 WOE25 WD42 WDK13 WDK13 WOE26 WOS01 WOJ04 WDK01 WOC25 WDM09 WD54 WDK02 WD34 WDK08 WDK08 WDK09 WOC23 WOCR06 WD56 WOCR05 WD36 WDK03 WDK03 WOC22 WOC24 WDK07 WDK07 TRH067 TRH067 WDK06 WDK06 WOJ35 WD58 WDK16 WOJ36 WOC18 WOC21 TRH066 TRH065 WDK15 WOC19 WDK05 WDK05 WOCVM-05 WDK04 WDK04 TRH063 WOC20 WDK14 TRH064 WD60 WDM04 WDM05 WD82 WDM06 WD80 TRH061 TRH062 WDM07 WD78

GREAT NORTHERN HWY

Legend

- 2024 Survey Area
- Road

2024 Survey

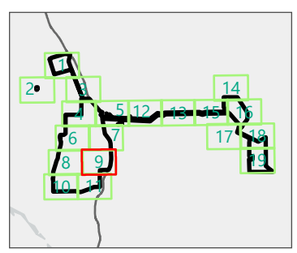
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Reassessed Quadrat
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 1
- 2
- 3
- 5
- 8
- 9
- 10
- 12
- 13
- 14
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 10

668400 669000 669600 670200 670800 671400 672000 672600 673200

7654200 7653600 7653000 7652400 7651800 7651200 7650600

WDM25 WDM26 WD17 WD35 WDM27 WD19 WD19 WD23 VMN094 W04A WD33 WD27 W02A VMN086 WD31 WD31 WD29 WD25 TRH052 VMN083 TRH056 VMN084 WOD43 WDKX01 WDKX02 WOK21 WOK20 WOKR04 WOC16 WOK22 WOK19 WOD41A WOD42 WOC15 WOC17 WOJ30 WKRMN10

Legend

- 2024 Survey Area

2024 Survey

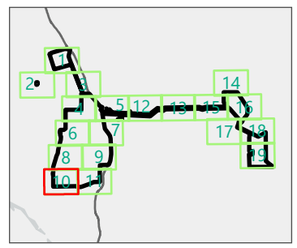
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Quadrat
- 2023 Reassessed Quadrat
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 9
- 10
- 12
- 13
- 14
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 11

673200 673800 674400 675000 675600 676200 676800 677400 678000

7654200 7653600 7653000 7652400 7651800 7651200 7650600

WD78 WD78 WD74 WD62 WD76 TRH059 TRH060 TRH060 WDM07 WDM08 WDM03 WDM01 WD21 WD21 WD64 WDM02 TRH057 WD72 WOJ25 VMN086 VMN087 TRH058 TRH058 WD66 WD66 WD68 WD68 WD70 WD70 WOJ26 WOJ24 TRH056 VMN085 VMN090 WD84 WD84 WOJ31 WOJ27R WD86 VMN089 WD88 WOJ28 WD90 WOJ29 WD92 WD94 WOJ32 WOJ33 WOJ34 WD96 WD96 WD79 WD79 WD77 WD77 WOC17 WD81 WD81 WD87 WD83 WD83 WD85

GREAT NORTHERN HWY

Legend

- 2024 Survey Area
- Road

2024 Survey

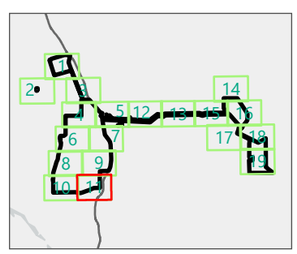
- 2024 Quadrat
- 2024 Relevé

2023 Survey

- 2023 Reassessed Quadrat
- 2023 Vegetation Mapping Note
- Previous Survey Quadrat

Vegetation Type

- 2
- 5
- 8
- 9
- 10
- 12
- 13
- 14
- C



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 12

681600 682200 682800 683400 684000 684600 685200 685800

7666200 7665600 7665000 7664400 7663800 7663200 7662600

WOE12 MNDBS04 WOS18 WOE13 WOE10 WOE11 MNDBS02 WOE14 MNDBS03 MNDBS01 WOS14 WOS13 WOE15 WOS05 WOS04 WHDR10 VMN025 668EL WOE16 WOE17 WOE18 WOE19 WOE20 WOCR03 WOCR04 WHDR11 VMN007 WHDR12 WOS07 WHDR13 VMN008 VMN009 WOS22 WOC14 WOCVM-03 WOC11 WOCVM-04 WHDR14 WOC13 VMN026 WHDR15 WOC12 WOCR02

Legend

- 2024 Survey Area
- Railway
- Road

2024 Survey

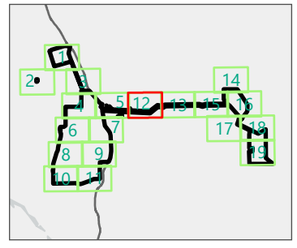
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 1
- 3
- 4
- 7
- 8
- 9
- 11
- 13
- 16
- C



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 13

686400 687000 687600 688200 688800 689400 690000 690600 691200

7666200 7665600 7665000 7664400 7663800 7663200 7662600

WOC10 WOC09 WOCR01 VMN027 WHDR17 WHDR16 WOC08 WHDR19 WOC07 WHDR18 WOC06

Legend

- 2024 Survey Area
- Railway
- Road

2024 Survey

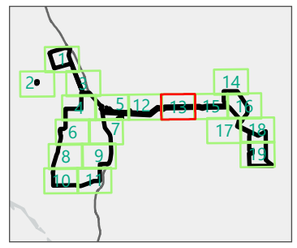
- 2024 Quadrat
- 2024 Relevé

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 1
- 4
- 5
- 6
- 8
- 10
- 13
- C



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 14

694200 694800 695400 696000 696600 697200 697800 698400 699000

7669800 7669200 7668600 7668000 7667400 7666800 7666200

WOD03 1525D WOD10 1505D WOD11 VMN015 1522D 1524D WOD07 1504D WOD06 VMN017 VMN019 VMN016 VMN032 1503D WHDR37 WOD09 WOD12 1535D WOD13 VMN018

Legend

- 2024 Survey Area
- Road

2024 Survey

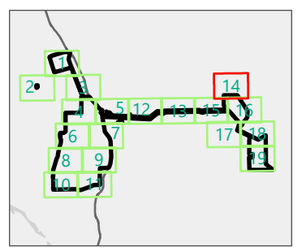
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 4
- 5
- 8
- 12
- 13
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 15

691200 691800 692400 693000 693600 694200 694800 695400 696000

7666200 7665600 7665000 7664400 7663800 7663200 7662600

WOD09 VMN018 VMN034 VMN033 WOD02 WOD01 VMN035 WHDR38 WKRMN09

WHDR20 WHDR21 WOC05 WOC04 WOCVM-02 VMN011 VMN012 VMN013 VMN028 VMN031 WOC03 VMN020 WHDR23 WOC02 WOC01 WOCVM-01

Legend

- 2024 Survey Area
- Road

2024 Survey

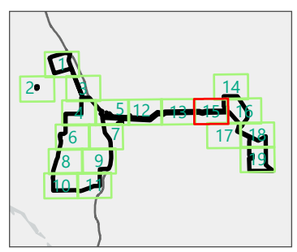
- 2024 Quadrat
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 4
- 5
- 6
- 8
- 10
- 13
- C



0 300 600

Metres

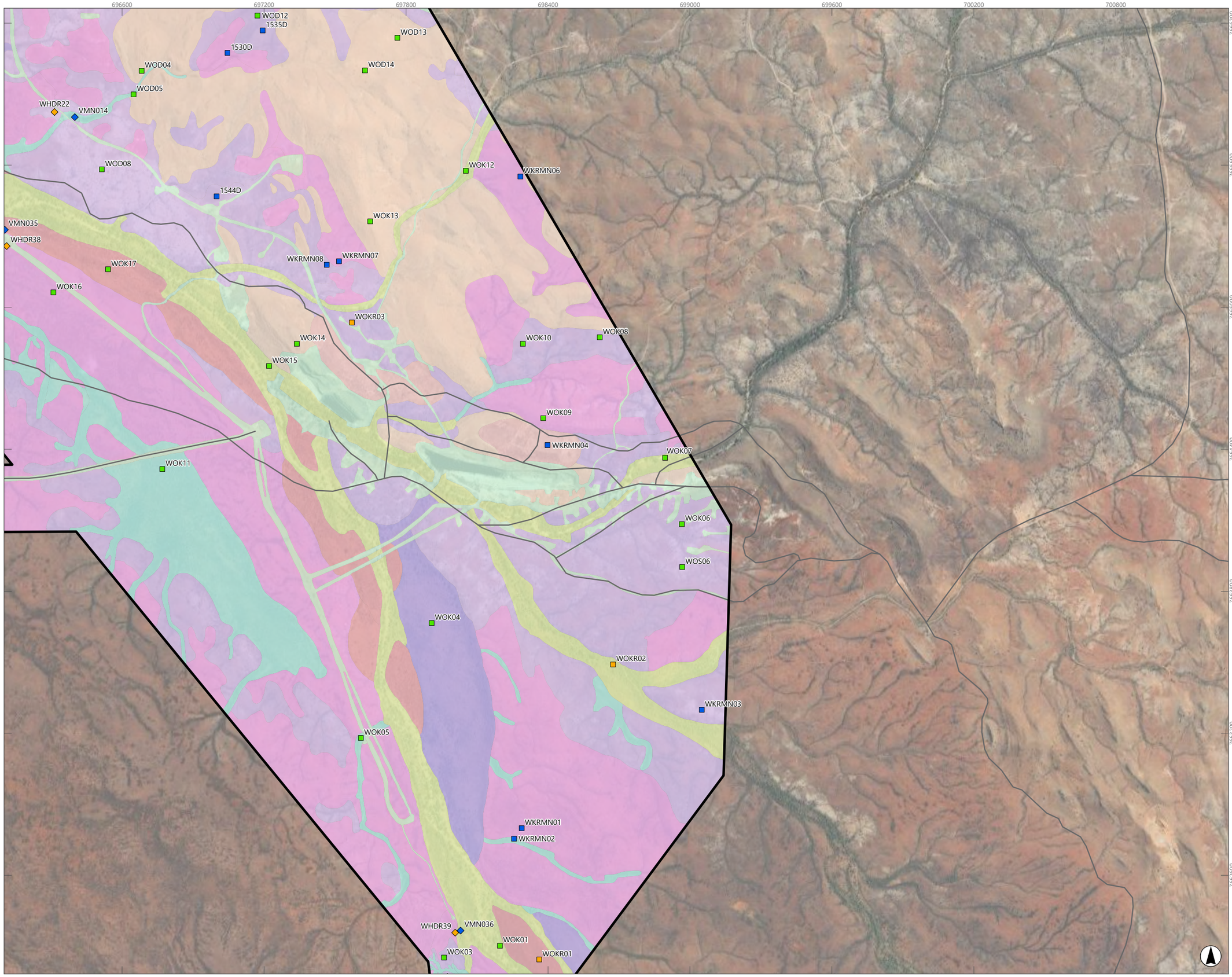
Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 16



Legend

- 2024 Survey Area
- Road

2024 Survey

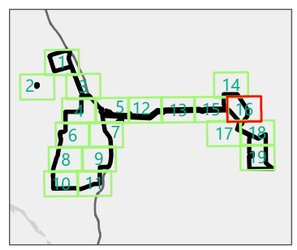
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 4
- 5
- 6
- 8
- 10
- 12
- 13
- C
- R



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 17

693600 694200 694800 695400 696000 696600 697200 697800

7662000 7661400 7660800 7660200 7659600 7659000 7658400

WOK03
WHDR24
WHDR25
WOK02
WHDR26
WOM03
WOM04
VMN041
WOM01
VMN040
WOM02
WHDR45

Legend

- 2024 Survey Area
- Road

2024 Survey

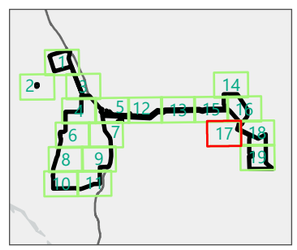
- 2024 Quadrat

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 4
- 5
- 10
- 13
- C



0 300 600

Metres

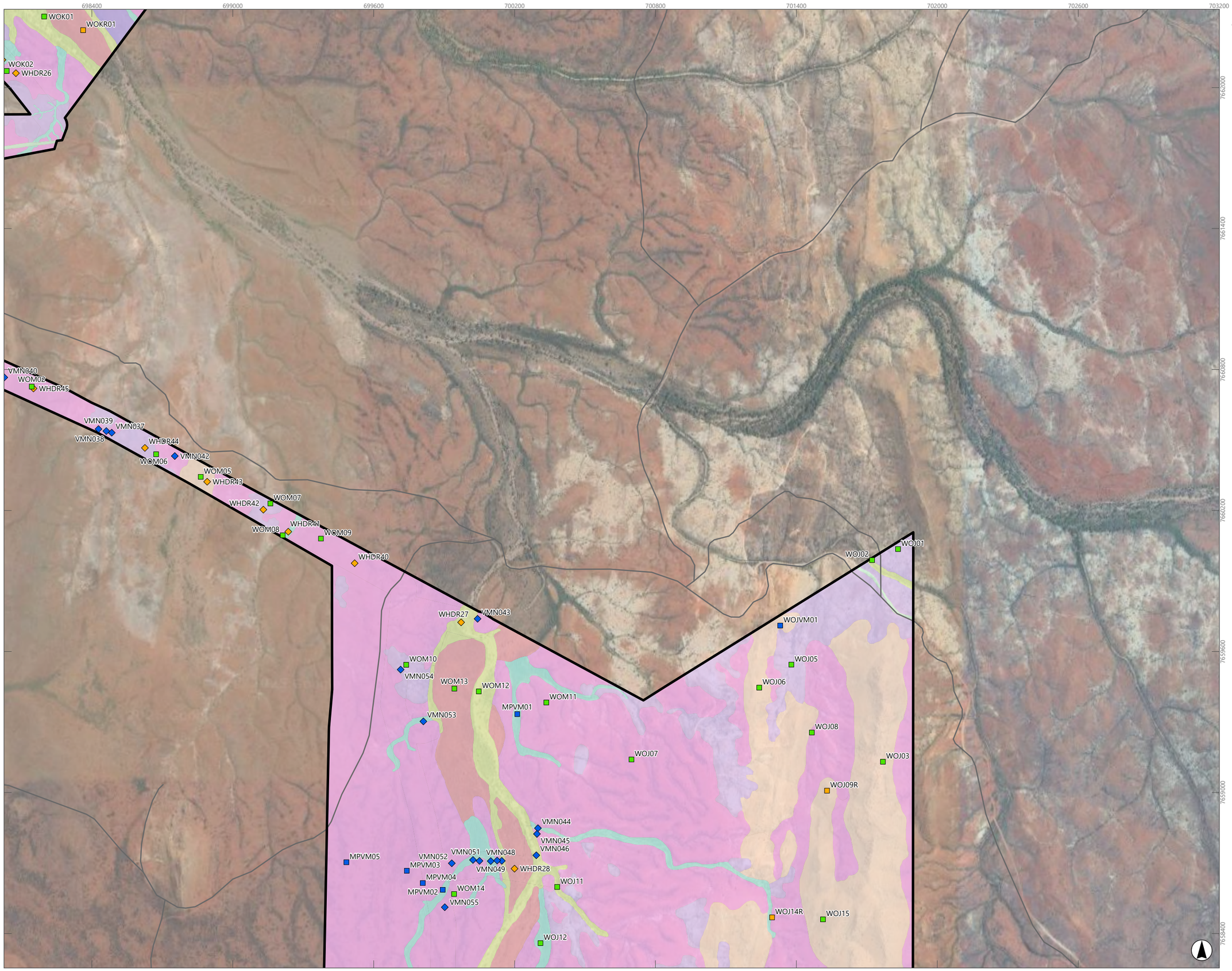
Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 18



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APPENDIX Q

Vegetation Types of the Survey Area – Sheet 19

698400 699000 699600 700200 700800 701400 702000 702600 703200

7657800 7657200 7656600 7656000 7655400 7654800

WOJ12 WOJ13 WOJ16 WOJ23 WOJ17 WOJ19R WOJ20 WOJ21 WOJ22 WOJ18
VMN058 VMN056 VMN057
WOM27 WHDR29 MPVM10 WOM26
WOS12 WOM23 VMN059 VMN065 1598D WHDR47 WOD27 MPVM09 WOM24
WOM25 VMN062 VMN063 VMN064 WHDR33 MPVM08 WOM22
WOM21 WOM20 MPVM07 WOD22 WHDR30 WOD26
VMN061 WOM19 WHDR46 WOD23
MPVM06 VMN060 WHDR31 WOM18 WHDR32 VMN067 WOD25 1588D VMN068
WHDR50 WOD21 VMN069 WHDR34 WOD19 WHDR36
WOM17 VMN072 WOD20 WOD18 WHDR49 VMN071 WHDR35 VMN070
WOM16 WOM15 VMN066 WOD24 1558D WHDR48 WOD16 WOD15 WOD17

Legend

- 2024 Survey Area
- Road

2024 Survey

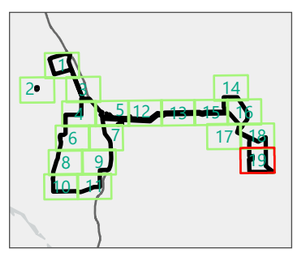
- 2024 Quadrat
- 2024 Relevé
- 2024 Vegetation Mapping Note

2023 Survey

- 2023 Relevé
- 2023 Vegetation Mapping Note

Vegetation Type

- 4
- 5
- 6
- 10
- 12
- 13



0 300 600

Metres

Scale: 1:15,000 at A3
GDA2020 MGA Zone 50

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APPENDIX Q

LEGEND: Vegetation Types of the Survey Area

Vegetation Type

1 Mid sparse to open shrubland dominated by *Acacia ancistrocarpa* over low sparse shrubland dominated by *Bonamia erecta*, *Ptilotus astrolasius* and *Ptilotus calostachyus* over mid hummock grassland of *Triodia lanigera* on red-brown sandy loam or sandy clay, often with quartz or ironstone stones, on plains

2 Tall open to sparse shrubland dominated by *Acacia orthocarpa*, *Acacia ancistrocarpa* and *Acacia acradenia* over low sparse shrubland of mixed species including *Goodenia stobbsiana* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia epactia* on red-brown clay loam with granite, quartz or ironstone stones on colluvial stony plains and low flat-topped rises

3 Tall to mid sparse shrubland of mixed species dominated by *Acacia acradenia*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Indigofera monophylla* and *Goodenia stobbsiana* over low hummock grassland dominated by *Triodia epactia* and/or *Triodia brizoides* on red, brown or red-brown clay loam with metamorphic, ironstone, quartz and occasionally granite stones, occasionally with metamorphosed granite or granite outcropping, on lower slopes and colluvial outwashes of ranges

4 Tall to mid sparse shrubland dominated by *Acacia acradenia* and *Acacia ancistrocarpa* over low sparse shrubland dominated by *Acacia ptychophylla* and/or *Acacia stellaticeps* over low hummock grassland dominated by *Triodia lanigera* and *Triodia wiseana*, often with *Triodia epactia* on red-brown clay loam on stony undulating plains and outwashes of ranges

5 Low isolated trees of *Corymbia hamersleyana* over tall open to sparse shrubland dominated by *Acacia tumida* var. *pilbarensis*, *Acacia ancistrocarpa* and *Acacia acradenia* over low open to sparse shrubland of mixed species including *Bonamia erecta*, *Corchorus parviflorus* and *Indigofera monophylla* over low hummock and tussock grassland dominated by *Chrysopogon fallax*, *Triodia epactia* and occasionally *Triodia lanigera* on red, brown or red-brown sandy or clay loam with colluvial stones in minor drainage features including on flats and in small creeks

6 Low isolated trees of *Corymbia hamersleyana* over tall sparse to open shrubland of *Acacia tumida* var. *pilbarensis*, *Acacia acradenia*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia pyrifolia* var. *pyrifolia* over low sparse shrubland of mixed species including *Tephrosia rosea* var. *clementii*, *Indigofera monophylla* and *Corchorus lasiocarpus* subsp. *lasiocarpus* over mid sparse to open hummock grassland of *Triodia epactia* on brown or red-brown sandy loam or clay loam in stony drainage lines and on flood plains

7 Tall to mid open to sparse shrubland dominated by *Acacia ancistrocarpa* and occasionally *Acacia tumida* var. *pilbarensis*, *Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including by *Bonamia erecta*, *Indigofera monophylla* and *Ptilotus astrolasius* over low hummock grassland dominated by *Triodia lanigera* and occasionally *Triodia schinzii* and/or *Triodia epactia* on red, brown or red-brown sandy or clay loam, often with quartz or ironstone stones, on plains

8 Low isolated trees of *Corymbia hamersleyana* over tall isolated shrubs to sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea wickhamii* subsp. *hispidula* and *Acacia trachycarpa* low sparse to open shrubland of *Acacia stellaticeps* over low open hummock grassland to hummock grassland dominated by *Triodia epactia* and occasionally *Triodia lanigera* on red-brown or orange sandy clay loam in minor drainage lines, on drainage line edges and on floodplains

9 Isolated low trees dominated by *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia orthocarpa, Grevillea wickhamii* subsp. *hispidula* and often *Acacia maitlandii* and *Acacia tumida* var. *pilbarensis* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Dampiera candicans*, *Goodenia stobbsiana*, *Indigofera monophylla* and *Scaevola browniana* subsp. *browniana* over low hummock grassland dominated by *Triodia epactia* and occasionally *Triodia brizoides* or *Triodia lanigera* on orange, brown or red-brown sandy or clay loam with granite and quartz stones over granite outcropping on undulating plains or low rises

10 Low open woodland to isolated trees dominated by *Eucalyptus victrix* and/or *Corymbia hamersleyana* over tall open to sparse shrubland of mixed species dominated by *Acacia pyrifolia* var. *pyrifolia*, *Acacia tumida* var. *pilbarensis* and *Melaleuca linophylla* over mid to low open to sparse shrubland of mixed species including *Cajanus pubescens*, *Indigofera monophylla*, *Tephrosia rosea* var. *clementii*, *Corchorus parviflorus* and *Jasminum didymum* subsp. *lineare* over low tussock and hummock grassland to open tussock and hummock grassland of mixed species dominated by *Triodia epactia*, *Cenchrus ciliaris*, *Chrysopogon fallax*, *Cymbopogon ambiguus* and *Eriachne tenuiculmis* on red or brown clay or sandy loam, usually with colluvial stones, in major creeks

11 Mid to low open woodland of *Eucalyptus camaldulensis* subsp. *refulgens* and *Melaleuca argentea* over tall open shrubland of *Melaleuca glomerata*, *Melaleuca linophylla*, *Acacia trachycarpa* and*Acacia ampliceps* over mid to low open to sparse shrubland, forbland and sedgeland of mixed species including *Crotalaria cunninghamii*, *Cyperus ixiocarpus*, *Afrohybanthus aurantiacus* and *Nellica maderaspatensis* over low sparse hummock grassland of *Triodia epactia* over low tussock grassland of *Cenchrus ciliaris* on orange / light brown sand with colluvial stones in major drainage channels in the Turner River

12 Low isolated trees of *Eucalyptus leucophloia* subsp. *leucophloia* and/or *Corymbia hamersleyana* over mid sparse shrubland to isolated shrubs dominated by *Acacia acradenia, Acacia inaequilatera* and *Grevillea wickhamii* subsp. *hispidula* over low sparse shrubland of mixed species including *Corchorus parviflorus*, *Indigofera monophyla* and *Tribulus suberosus* over low hummock grassland dominated by *Triodia wiseana*, *Triodia epactia* and occasionally *Triodia brizoides* on red, brown or red-brown clay loam with ironstone, metamorphosed granite or occasionally dolerite or quartz stones over ironstone or metamorphosed granite outcropping on cliffs, ridges and crests and upper to mid slopes of ranges

13 Low open woodland to isolated trees of *Corymbia hamersleyana* over tall to mid sparse shrubland dominated by *Acacia inaequilatera, Acacia bivenosa* and Acacia *acradenia* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* and occasionally *Triodia angusta* on red, red-brown or light brown clay loam with calcrete, quartz and metamorphosed granite stones, occasionally over calcrete outcropping, on colluvial outwashes of ranges and colluvial stony plains

14 Tall to mid sparse shrubland of mixed species including *Acacia inaequilatera*, *Grevillea pyramidalis* subsp. *leucadendron* and *Acacia orthocarpa* over low hummock grassland dominated by *Triodia chichesterensis* and/or *Triodia wiseana* on brown, red or red-brown clay loam with dolerite, calcrete and quartz stones, often with dolerite or granite outcropping, on low hills

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APPENDIX Q

LEGEND: Vegetation Types of the Survey Area

Vegetation Type

15 Mid isolated shrubs of *Acacia synchronicia* over low isolated chenopod shrubs of *Maireana georgei* over mid hummock grassland of *Triodia longiceps* over low sparse forbland, tussock grassland and sedgeland of mixed species including *Portulaca oleracea*, *Ptilotus exaltatus*, *Cynodon prostratus*, *Sporobolus australasicus* and *Fimbristylis dichotoma* on red clay loam with colluvial stones on slightly saline plains and flats

16 Low isolated shrubs to sparse shrubland of *Acacia stellaticeps* and *Pluchea ferdinandi-muelleri* over low open hummock grassland to hummock grassland dominated by *Triodia angusta*, *Triodia secunda* and/or *Triodia longiceps* over low sparse forbland and tussock grassland of mixed species including *Trianthema triquetrum*, *Sporobolus australasicus*, *Eriachne obtusa* and *Calandrinia stagnensis* on red-brown or brown sandy clay on low lying, slightly saline plains

C Cleared land

R Rehabilitated land

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