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KARARA
MINING LTD

2023 AND 2024 DETAILED AND TARGETED FLORA AND VEGETATION ASSESSMENT

Karara Iron Ore Project Mine Life Extension

FINAL

September 2025

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Karara Iron Ore Project Mine Life Extension

FINAL

Prepared by
Umwelt (Australia) Pty Limited
on behalf of
Karara Mining Limited

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Report No. 23712/R04
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umwelt
Environmental & Social Consultants

ISO 9001 Quality

This report was prepared using Umwelt's ISO 9001 certified Quality Management System.

Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Document Status

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	Name	Date	Name	Date
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Executive Summary

Karara Mining Limited (KML) operates the Karara Project mine, located at Karara, approximately 200 km east of Geraldton in the Midwest region of Western Australia (WA). The mine includes a large open-cut magnetite pit, a processing plant to produce magnetite concentrate and all associated infrastructure, as well as hematite pits and associated infrastructure at surrounding deposits. KML are seeking approval for the Karara Iron Ore Project Mine Life Extension (KIOP MLE, or 'the Project'). The existing KIOP project was approved under Ministerial Statement (MS) MS805 on 8 September 2009, with a number of Section 45C amendments made to the project since that time. KML are proposing to revise the existing proposal to support the ongoing magnetite mining and processing operations, and are therefore undertaking a new referral to the WA Environmental Protection Authority (EPA) for the Project.

KML commissioned Umwelt (Australia) Pty Limited (Umwelt) to undertake a Detailed and Targeted flora and vegetation assessment of the 'Survey Area' and 'Targeted Survey Area' in 2023 and 2024:

- **Survey Area:** the area subject to Detailed flora and vegetation survey. The Survey Area is approximately 13,557 hectares (ha) in size, spanning approximately 143 km and comprising four major areas:
    - Karara Area: from east of Mungada Ridge National Park; encompassing the Karara mine site, airstrip and camp
    - Yandanooka Pipeline: linear corridor extending west along Mungada Road to Koolanooka Hills
    - Tilley Siding: small, disjunct area north of Morawa near Tilley Station
    - Borefield Corridor: linear corridor extending west from Bowgarder Nature Reserve to Yandanooka.
- **Targeted Survey Area:** the area subject to Targeted flora and vegetation survey. The Targeted Survey Area is approximately 1,522 ha and is entirely contained within the Survey Area. The Targeted Survey Area is comprised of two disjunct areas:
    - Mine Area: comprises multiple separate parts including infrastructure corridors, pit, tailings storage facility, and waste rock dumps, and is entirely contained within the Karara Area
    - Wheatbelt Area: small linear area along the western end of the Borefield Corridor.

The flora and vegetation field survey involved sampling via quadrats, relevés and vegetation mapping notes within the Survey Area, and systematic targeted survey in the Targeted Survey Area within areas of potentially suitable habitat. The 2023 and 2024 flora and vegetation field assessment was undertaken over multiple site visits as outlined below:

- **Detailed Survey:**
    - 2 to 7 October 2023 (6 team days)
    - 6 to 12 August 2024 (14 team days)
    - 21 to 27 August 2024 (7 team days)
    - 16 to 22 September 2024 (7 team days).

- **Targeted Survey:**
    - 21 to 28 August 2024 (16 team days)
    - 16 to 20 September 2024 (10 team days).

A significant number of sample sites have been assessed within the Survey Area, by the 2023 and 2024 survey, as well as by relevant previous flora and vegetation assessments:

- 259 quadrats (measuring 20 m × 20 m), 100 of which were assessed during the 2023 and 2024 field survey.
- 349 relevés, 28 of which were assessed during the 2023 and 2024 field survey.
- 80 vegetation mapping notes, 68 of which were assessed during the 2023 and 2024 field survey.

When including data from all historical sample sites across the Survey Area (after being reviewed for taxonomic and nomenclatural accuracy), a total of 748 discrete vascular flora taxa, two named hybrids (as per WA Herbarium (1998-)), three putative hybrids and one informal taxon variant have been recorded in the Survey Area. Of the 748 flora entities recorded, 64 taxa are introduced (as per WA Herbarium (1998-). A total of 463 of the 748 flora entities are perennial (including ephemeral perennial and geophytic taxa), and 285 are annual.

Forty (41) significant flora taxa have been recorded in the Survey Area, comprising:

- Four (4) Threatened taxa listed under the WA *Biodiversity Conservation Act 2016* (BC Act) and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- Thirty-three (33) Department of Biodiversity, Conservation and Attractions (DBCA) Priority flora taxa.
- Four (4) taxa that are considered significant as per WA Environmental Protection Authority (EPA) definitions, as they represent potentially undescribed taxa.

Of the 41 significant flora taxa of the Survey Area, 14 have been recorded in the Targeted Survey Area (Mine Area only; no significant flora taxa have been recorded in the Wheatbelt Area). These 14 taxa are all DBCA Priority flora taxa.

A total of thirty-eight (38) vegetation categories were mapped in the Survey Area, comprising:

- Twenty (20) vegetation types (VTs) defined via floristic analysis of quadrat data (VTs A to T).
- Eight (8) VTs defined structurally using data recorded at quadrats and relevés (VTs U to AA, and VT CP).
- Seven (7) highly modified vegetation types (HMVTs) defined structurally using data recorded at quadrats and relevés, within areas with a long history of disturbance where the vegetation still possessed tree or large shrub taxa but were highly modified otherwise (HMVTs A to G).
- One (1) VT representing planted non-native or non-endemic tree or shrub taxa (VT PL).
- Water in salt lakes and clay pans.
- Cleared land.

Four listed significant vegetation communities were considered to be present in the Survey Area, as below. All listed communities were mapped at known locations within DBCA buffers. No other formally listed TECs or PECs are considered to be present in the Survey Area.

- Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation) (WA: P1). Occurs in the Karara Area only.
- Eucalypt woodlands of the Western Australian Wheatbelt (WA: P3; EPBC: CR). Occurs in the far western end of the Borefield Corridor only.
- Koolanooka System as originally described in Beard (1976) (WA: CR). Occurs in the western end of the Yandanooka Pipeline only.
- Plant assemblages of the Billeranga System as originally described in Beard (1976) (WA: CR). Occurs within the central part of the Borefield Corridor.

In addition to the TECs and PECs of the Survey Area, 16 Survey Area VTs were considered potentially significant for reasons other than formal listing. This was determined following an assessment of the Survey Area VTs against the definitions of significant vegetation from EPA. The reasoning for VTs potentially representing significant vegetation included:

- Occurring across a restricted distribution or habitat: applied to 15 VTs.
- Playing a role as a refuge or refugium: applied to 10 VTs.
- Providing an important ecological function: applied to 11 VTs.
- Other reasons: applied to 4 VTs (providing preferred habitat for significant flora taxa with restricted distributions in the case of VTs B and Q, and having a degree of historical impact from threatening processes in the case of VTs M and N).

Ten VTs mapped in the Survey Area were considered to represent riparian vegetation and be reliant on ephemeral surface water to some extent. Additionally, seven VTs were likely to be at least partially dependent on surface water in the form of sheet flow originating from higher ground. Three VTs were potentially groundwater dependent: VTs M and N due to forming part of the Yarra Yarra salt lake system which has been determined to be a net discharge point for groundwater; and HMVT D due to the presence of the obligate phreatophyte *Eucalyptus camaldulensis*. Information on the groundwater dependency of taxa recorded in the Survey Area as well as depth to groundwater information is required to confirm this.

The majority of the vegetation in the Survey Area (94.7 %) was rated and mapped as being in Excellent condition, with little to no human or animal disturbance and an absence or low levels of introduced flora taxa. The vegetation in the Karara Area was overwhelmingly mapped as Excellent condition, as well as the eastern part of the Yandanooka Pipeline. There was a general trend of declining vegetation condition east of Weelhamby Lake (and the boundary between the Avon Wheatbelt and Yalgoo IBRA regions), likely associated with a change in the dominant land use to agriculture, and a corresponding increase in weed presence. The vegetation in this part of the Yandanooka Pipeline was generally Very Good to Good, while that of the Borefield Corridor was Good to Degraded, due to proximity to agriculture, high weed loads, and fragmentation. This is typical of vegetation within that area, which has experienced historically high levels of clearing and weed invasion, primarily for agriculture.

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1.0 Introduction

1.1 Project Overview

Karara Mining Limited (KML) operates the Karara Project mine, located at Karara, approximately 200 km east of Geraldton in the Midwest region of Western Australia (WA). The mine includes a large open-cut magnetite pit, a processing plant to produce magnetite concentrate and all associated infrastructure, as well as hematite pits and associated infrastructure at surrounding deposits.

KML are seeking approval for the Karara Iron Ore Project Mine Life Extension (KIOP MLE, or 'the Project'). The existing KIOP project was approved under Ministerial Statement (MS) MS805 on 8 September 2009, with a number of Section 45C amendments made to the project since that time. KML are proposing to revise the existing proposal to support the ongoing magnetite mining and processing operations, and are therefore undertaking a new referral to the WA Environmental Protection Authority (EPA) for the Project.

The eastern part of the area assessed for the flora and vegetation assessment (the 'Survey Area') incorporates areas that have been previously assessed for flora and vegetation by Umwelt (Australia) Pty Limited (Umwelt), as below:

- Karara-Mungada Project, undertaken between 2005 and 2008 (as Woodman Environmental Consulting Pty Limited (Woodman Environmental, 2008d)).
- Regional Flora and Vegetation survey of the Karara to Minjar Block, undertaken between 2009 and 2012 (as Woodman Environmental (2012)).
- Karara Project Expansion project, incorporating Detailed and Targeted assessments, undertaken in 2020 (Umwelt, 2021).

The results of the 2020 flora and vegetation survey were used to prepare an impact assessment for the original Karara Project Expansion footprint (Umwelt, 2022). However, since this impact assessment was conducted, the extent of both the Development Envelope (Survey Area) and Disturbance Footprint (Targeted Survey Area) (which were the areas of focus for the 2020 assessment) have been revised, and therefore additional survey is required in areas that have not received recent survey effort. Furthermore, the 2020 survey recorded a small number of significant flora taxa in the Targeted Survey Area that were only identified as significant post-survey; therefore, they were not specifically searched for during the Targeted survey within the Targeted Survey Area. Additional Targeted searching in the revised Targeted Survey Area (the 'Targeted Survey Area') is therefore required for these taxa.

The western part of the Survey Area has also received historical survey effort from multiple projects undertaken by Umwelt (as Woodman Environmental) from 2007 to 2010; however, the age of this data is now beyond what the EPA will accept in support of an environmental impact assessment (EIA). In addition, changes to EPA survey and reporting standards were introduced in 2016 that require the information in these historical reports to be updated in line with new Technical Guidance for flora and vegetation surveys for EIA (EPA, 2016b). Changes have also occurred with respect to plant taxonomy and conservation status for many taxa since these studies were last reviewed, and further revision is required to reflect these changes.

Therefore, while significant contextual information is available for the Survey Area and Targeted Survey Area, additional data needs to be collected to provide adequate and updated information to inform EIA for the Project.

To inform the EIA for the Project, and to address data deficiencies and issues related to age of data, KML commissioned Umwelt to undertake a Detailed and Targeted flora and vegetation assessment of the Survey Area and Targeted Survey Area in 2023 and 2024. This baseline report documents all methods from the survey and presents the desktop assessment for the Survey Area, and results of field surveys.

1.2 Project Location and Assessment Areas

KML supplied relevant boundaries for the Project (provided by Michael Chen, 26 July 2023), which are herein referred to as the 'Survey Area' (the area subject to Detailed flora and vegetation survey) and 'Targeted Survey Area' (the area subject to Targeted flora and vegetation survey). The Survey Area is approximately 13,557 hectares (ha) in size, spanning approximately 143 km and comprising four major areas (**Figure 1.1**), which are hereafter named:

- Karara Area: from east of Mungada Ridge National Park; encompassing the Karara mine site, airstrip and camp.
- Yandanooka Pipeline: linear corridor extending west along Mungada Road to Koolanooka Hills.
- Tilley Siding: small, disjunct area north of Morawa near Tilley Station.
- Borefield Corridor: linear corridor extending west from near Bowgarder Nature Reserve to near Yandanooka.

The Targeted Survey Area is approximately 1,522 ha and is entirely contained within the Survey Area. The Targeted Survey Area is comprised of two disjunct areas (**Figure 1.1**), which are hereafter named:

- Mine Area: comprises multiple separate parts including infrastructure corridors, pit, tailings storage facility (TSF), and waste rock dumps (WRD). The Mine Area is entirely contained within the Karara Area of the Survey Area.
- Wheatbelt Area: small linear area along the western end of the Borefield Corridor.

A Desktop Study Area was defined for the purpose of the desktop assessment, including interrogation of databases and searches for relevant literature; this encompasses the Survey Area with a 50 km buffer (**Figure 1.1**).

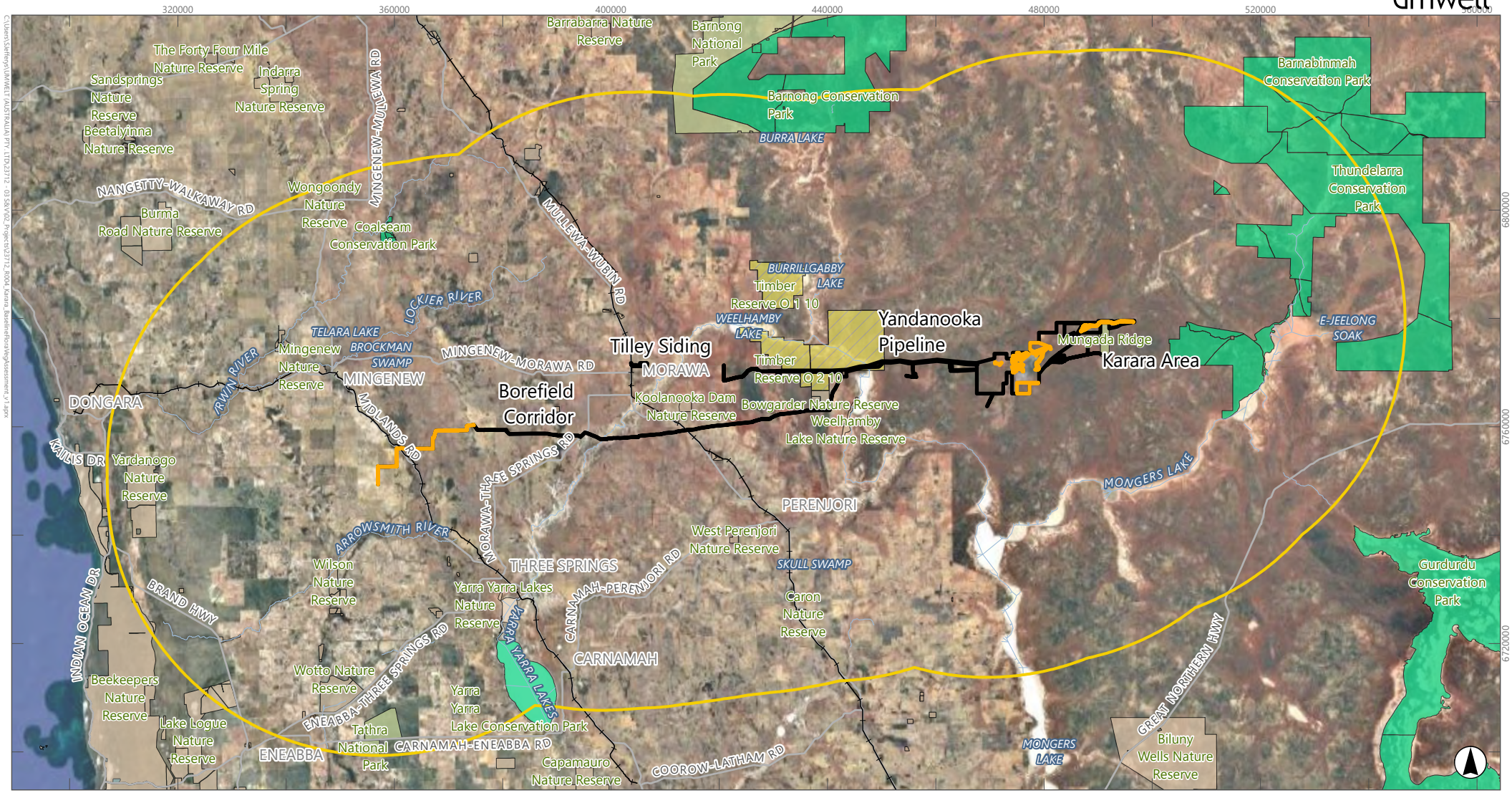
The Survey Area is located within the Department of Biodiversity, Conservation and Attractions (DBCA) Midwest region. Approximately 10.8 km of the western part of the Borefield Corridor part of the Survey Area extends into the Turquoise Coast DBCA District, with the remainder being within the Geraldton District. In terms of Interim Biogeographic Regionalisation for Australia (IBRA) areas, the Survey Area occurs across three regions and subregions as summarised in **Table 1.1**.

Table 1.1 IBRA Regions and Subregions of the Survey Area

IBRA Region	IBRA Subregion	Location	Region of Survey Area	Area (ha) of Survey Area
Avon Wheatbelt	**Merredin**	Central part of the Survey Area; between Weelhamby Lake and Midlands Road	Tilley Siding, western half of Yandanooka Pipeline and majority of Borefield Corridor	980
Geraldton Sandplains	**Lesueur Sandplain**	Western part of the Survey Area; west of Midlands Road	Western end of Borefield Corridor (approx. 9.0 km)	28
Yalgoo	**Tallering**	Eastern part of the Survey Area; east of Weelhamby Lake	Entirety of Karara Area and eastern half of Yandanooka Pipeline	12,549

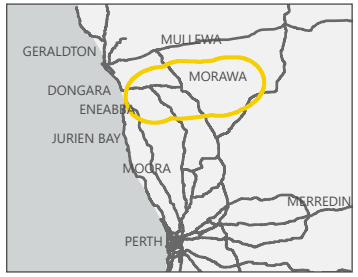
The Survey Area occurs within or is adjacent to a number of conservation areas as per below and as presented on **Figure 1.1** (DBCA, 2025a):

- Mungada Ridge National Park: adjacent to eastern part of the Karara Area part of the Survey Area.
- DBCA Timber Reserve O 2 10: intersected by central part of the Yandanooka Pipeline.
- Bowgarder Nature Reserve: adjacent to the eastern end of the Borefield Corridor.



Legend

- Desktop Study Area
- Targeted Survey Area
- Survey Area
- Road
- Railway
- Major Watercourse
- Conservation Park
- National Park
- Nature Reserve
- Section 5(1)(h) Reserve
- Timber Reserve



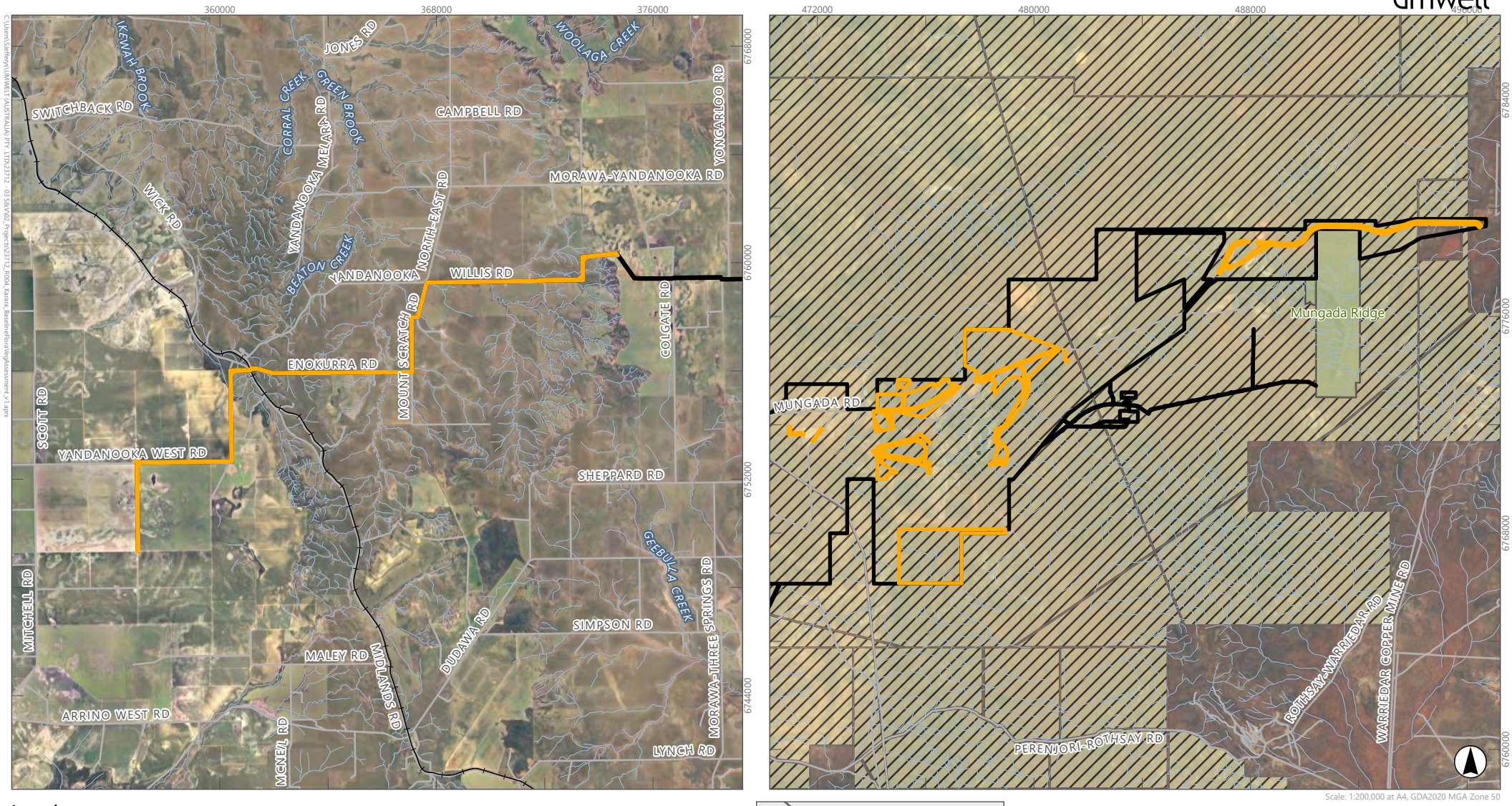
Scale: 1:1,000,000 at A4, GDA2020 MGA Zone 50

FIGURE 1.1

Project Location

0 20 40 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2025), Umwelt (2025), KML (2023)



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

Legend

- Targeted Survey Area
- Survey Area
- Road
- Railway
- Watercourse
- UCL - Dept Interest
- National Park

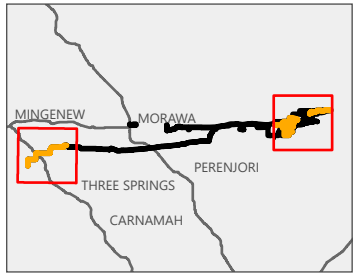


FIGURE 1.2

Targeted Survey Area Location

(left: Wheatbelt Area; right: Mine Area)

0 4 8 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2025), Umwelt (2025), KML (2023)

1.3 Aims and Objectives

The primary aim of this assessment was to characterise the flora and vegetation values of the Survey Area and Targeted Survey Area by conducting a Detailed and Targeted flora and vegetation assessment in accordance with current EPA Technical Guidance (EPA, 2016b).

The specific objectives of the assessment were to:

- Review and consolidate findings of previous flora and vegetation assessments conducted within the Survey Area, including by:
    - Updating the taxonomy of previous quadrats, relevés and reporting to current nomenclature
    - Revisiting a selection of previous quadrats and relevés to verify that historical vegetation data is still current.
- Compile an inventory of vascular flora taxa that occur in the Survey Area.
- Systematically search for significant flora taxa identified as occurring or potentially occurring within the Targeted Survey Area, as well as opportunistically within the wider Survey Area. Significant flora taxa includes:
    - Threatened flora taxa (T) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Commonwealth) (DCCEEW, 2025; TSSC, 2021)
    - Threatened flora taxa (T) listed under the *Biodiversity Conservation Act 2016* (BC Act) (WA) (DBCA, 2023b)
    - Priority flora taxa (P) as classified by DBCA (2023b)
    - Other significant flora taxa as defined by 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) within the Survey Area.
- Identify potential groundwater dependent vegetation (GDV), groundwater dependent ecosystems (GDEs), surface-water dependent vegetation (SDV) and riparian vegetation in the Survey Area.
- Identify, map and describe significant vegetation that occurs within the Survey Area. Significant vegetation includes:
    - Threatened Ecological Communities (TECs) listed under the EPBC Act (Commonwealth) (DCCEEW, 2025; TSSC, 2017)
    - TECs listed under the BC Act (WA) (DBCA, 2023a)
    - Priority Ecological Communities (PECs) as classified by DBCA (2023a)
    - Other significant vegetation as defined by EPA (2016a, 2016b).
- Map the condition of the vegetation in accordance with EPA (2016b).

1.4 Level of Assessment

The flora and vegetation survey of the Survey Area involved a Targeted and Detailed survey as defined in Sections 4.2 and 4.3 of the *Technical Guidance for Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b). This is considered appropriate for the Survey Area, as it is likely to support a high diversity of flora and vegetation, may comprise restricted landforms or vegetation types, and is known to support significant flora and vegetation.

As discussed in **Section 1.1**, this survey builds on considerable previous work conducted in the Survey Area and surrounds. Due to the level of existing information available on the flora and vegetation of the Survey Area, a Reconnaissance survey as per Section 4.1 of EPA Technical Guidance (EPA, 2016b) was not considered necessary prior to the Detailed and Targeted surveys.

The survey and reporting works comply with the following documents:

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

2.0 Climate

The Survey Area traverses three IBRA subregions, and two botanical provinces as defined by Beard (1980). The Borefield Corridor, Tilley Siding and western half of the Yandanooka Pipeline is situated within the South-West botanical province, while the eastern half of the Yandanooka Pipeline and the entirety of the Karara Area is within the South-West Interzone botanical province. Given the Survey Area's large size, particularly east-west, it is expected to experience slightly different climates in terms of both precipitation and temperature across its extent. As per **Table 2.1**, this varies from Mediterranean in the west (i.e. warm dry summers and cool wet winters), to arid to semi-arid in the east.

Table 2.1 Typical Climates Across the Survey Area in terms of IBRA Subregions

Region of Survey Area	IBRA Region	IBRA Subregion	Climate
Western end of Borefield Corridor (approx. 9.0 km)	Geraldton Sandplains	Lesueur Sandplain	Mediterranean
Tilley Siding, western half of Yandanooka Pipeline and majority of Borefield Corridor	Avon Wheatbelt	Merredin	Semi-arid (dry) warm Mediterranean
Entirety of Karara Area and eastern half of Yandanooka Pipeline	Yalgoo	Tallering	Arid to semi-arid, warm, Mediterranean

Source: 'A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002' (CALM, 2003).

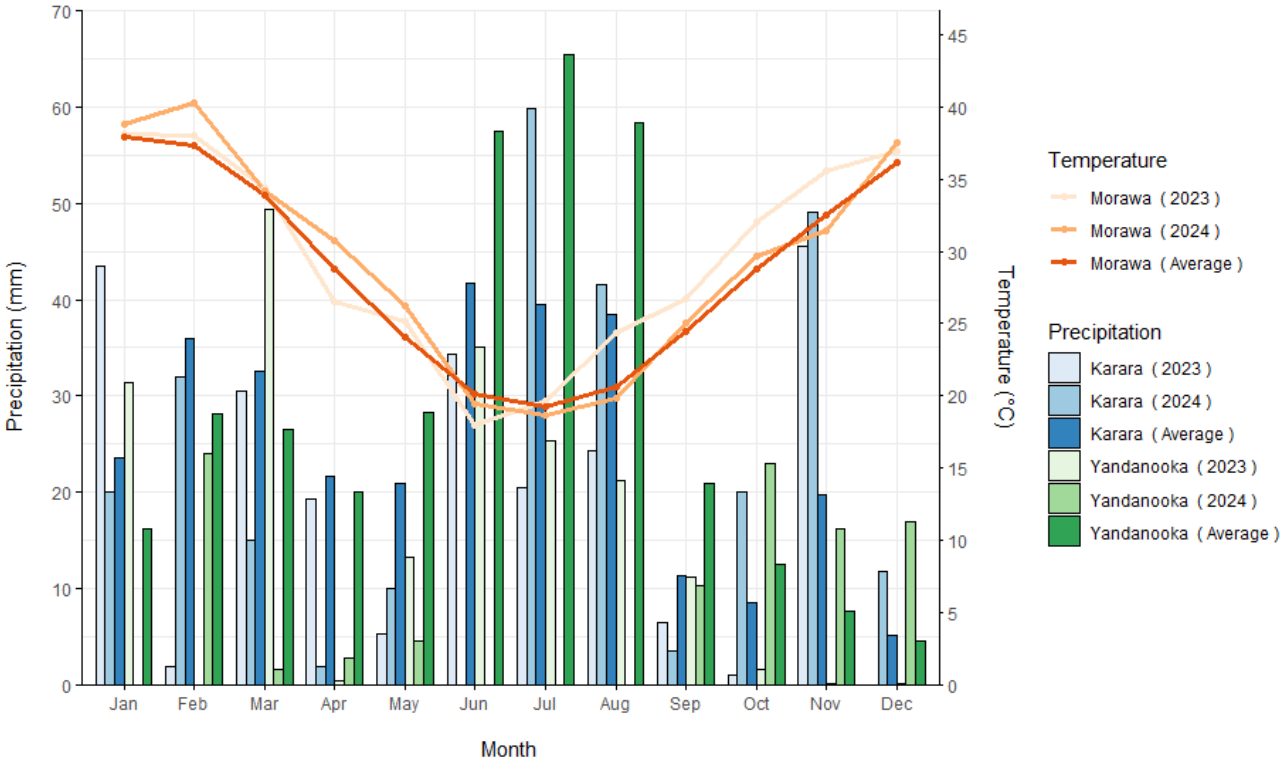
Graph 2.1 presents monthly mean precipitation and maximum temperature statistics for the period 2014 to 2024, as per the below. Note there are no BoM stations within the vicinity of the Survey Area that record both temperature and precipitation, and Morawa Airport BoM station is the only station in the vicinity of the Survey Area that records temperature data.

- Monthly mean maximum temperature (calculated as an average of the daily maximum temperatures across a month):
    - BoM station 8296 at Morawa Airport (within the Merredin IBRA subregion) (BoM, 2025a).
- Monthly precipitation (calculated as the cumulative sum of daily precipitation values across a month):
    - Bureau of Meteorology (BoM) station 8143 at Yandanooka (near the boundary of Lesueur Sandplain and Merredin IBRA subregions) (BoM, 2025a)
    - KML rain gauge at Karara mine site (within the Tallering IBRA subregion) (KML, 2024b).

Monthly maximum temperature at Morawa Airport typically peaks in January (37.9 °C) and February (37.7 °C). Monthly precipitation at both Karara and Yandanooka peaks in winter from June to August, with a total of 120 mm and 181 mm, respectively, received during this period on average. This period is therefore considered the most relevant in terms of promoting plant growth and flowering in the region (**Graph 2.1**).

The climatic conditions for 2023 and 2024 are summarised below, with emphasis on those for winter (i.e. June to August):

- 2023:
  - Mean maximum temperature: Mean maximum winter temperatures at Morawa Airport were slightly warmer than average (20.7 °C compared to the average of 20.0 °C). Maximum temperatures were consistently warmer than average from July to November (**Graph 2.1**).
  - Precipitation: Cumulative winter precipitation was lower than average at Karara (79 mm compared to the average of 120 mm), and significantly lower than average at Yandanooka (82 mm compared to the average of 181 mm). There were only two months in 2023 during which precipitation was greater than or equal to the average (January and November at Karara, and January and March at Yandanooka) (**Graph 2.1**).
- 2024:
  - Mean maximum temperature: Mean maximum winter temperatures at Morawa Airport were slightly cooler than average (19.3 °C compared to the average of 20.0 °C). Overall, temperatures were generally quite similar to average over the course of the year (**Graph 2.1**).
  - Precipitation: Cumulative winter precipitation was significantly higher than average at both Karara (259 mm compared to the average of 120 mm), and Yandanooka (353 mm compared to the average of 181 mm) (**Graph 2.1**).



Graph 2.1 Monthly Mean Climate Statistics for the Survey Area (2014 – 2024)

Source: Yandanooka: Bureau of Meteorology Climate Data Online (BoM, 2025a); Karara: KML Karara Mine Site Weather Data (KML, 2024b).

3.0 Methods

3.1 Desktop Assessment

Prior to commencement of the 2023 field survey, a review of flora and vegetation data relevant to the Survey Area was undertaken. A number of additional or replicate data searches were undertaken in 2024 prior to the 2024 field survey, in order to check for any database changes or additions that may have occurred between 2023 and 2024. The desktop assessment of the Survey Area was undertaken as per the requirements of a Desktop Study as defined in Section 3.0 of the T*echnical Guidance for Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b).

The desktop assessment included obtaining and reviewing copies of reports of previous biological surveys carried out within the vicinity of the Survey Area (including interrogation of the Index of Biodiversity Surveys for Assessments (IBSA) database), and interrogation of relevant regional databases and other sources as listed in **Table 3.1** within the Desktop Study Area (**Figure 1.1**). Where TECs or PECs were identified during the desktop assessment, appropriate DBCA or Department of Climate Change, Energy, the Environment and Water (DCCEEW) nomination/listing descriptions and recovery plans of the TEC or PEC were also reviewed prior to field survey, as well as the 'Methods for survey and identification of Western Australian threatened ecological communities' report from DBCA (2024a).

Table 3.1 Searches Undertaken for the Flora and Vegetation Desktop Assessment

Source	Search Attributes	Search Purpose
DBCA NatureMap (WA Herbarium and Threatened and Priority Flora (TPFL) Databases) (DBCA, 2023e, 2024b)	Database initially interrogated using a 10 km buffer of a central point (490000E, 6777750N); search performed 2 October 2023, reference 67-0923NM. Search updated in 2024 using Desktop Study Area boundary; performed 11 July 2024, reference 21-0724NM	Obtain records of DBCA-listed significant flora taxa within the Desktop Study Area
DBCA Significant Flora Database (WA Herbarium Specimen Database and Threatened and Priority Flora (TPFL) Database) (DBCA, 2023d)	Database interrogated using Desktop Study Area boundary. Search performed 17 October 2023, reference 54-1023FL	Obtain records of DBCA-listed significant flora taxa within the Desktop Study Area
DBCA Threatened and Priority Ecological Communities Database (DBCA, 2023c)	Database interrogated using Desktop Study Area boundary. Search performed 17 October 2023, reference 27-1023EC	Obtain records of DBCA-classified TECs and/or PECs within the Desktop Study Area
DBCA TEC and PEC records spatial data (DBCA-038) (DBCA, 2024c)	Review of mapped DBCA TECs and PECs within or in proximity to the Desktop Study Area	Identify whether there are any DBCA-classified TECs or PECs that could occur within the Desktop Study Area
DBCA TEC and PEC lists (DBCA, 2023f, 2023g)	Review of current DBCA TEC and PEC lists for the Midwest DBCA region	Identify whether there are any additional DBCA-classified TECs or PECs that could occur within the Desktop Study Area

Source	Search Attributes	Search Purpose
DCCEEW Species Profile and Threats (SPRAT) Database (interrogated using the Protected Matters Search Tool) (DCCEEW, 2024)	Database interrogated using Desktop Study Area boundary. Search undertaken 12 July 2024	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
IBSA database (DWER, 2023, 2024)	Approximate Desktop Study Area boundary	Obtain copies of reports and associated spatial data (where available) to identify records of significant flora and vegetation in the vicinity of the Survey Area
Previous flora and vegetation surveys conducted within or in the vicinity of the Survey Area	Desktop Study Area	Identify records of significant flora taxa and vegetation known from the Desktop Study Area
Soil Landscape Mapping (DPIRD-027) (DPIRD, 2025)	Survey Area	Identify soil landscape units mapped in the Survey Area
2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Report 3b) and Pre-European Vegetation spatial database (DBCA, 2019; DPIRD, 2019)	Survey Area	Identify extent of Vegetation System Associations (pre-European vegetation mapping) within the Project Area

3.2 Personnel and Licensing

Table 3.2 lists the personnel involved in fieldwork, plant identifications, data analyses and report preparation for the flora and vegetation assessment. The Project Manager and Field Manager have previous experience (9 years and > 20 years, respectively) in WA and the Midwest region, and field team leaders have previous experience in conducting flora and vegetation surveys in WA, including in the Midwest region. Other personnel have previous experience in assisting with flora and vegetation surveys in WA.

All plant material was collected under the relevant *Flora Taking (Biological Assessment) Licence* (under Regulation 62 of the Biodiversity Conservation Regulations 2018) 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 Western Australian flora, and specifically flora of the Karara area, 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
Bethea Loudon BSc (Biology)	> 15 years	NA	• Plant identifications (including review of identifications undertaken by less experienced staff)
Cathy Godden BSc (Biology)	> 20 years	FB62000050-3 TFL 130-2122	• Field survey (field manager) • Report review
David Coultas BSc (Environmental Biology) (Hons)	> 15 years	FB62000051-2 TFL 131-2122	• Field survey (field manager) • Plant identifications (including review of identifications undertaken by less experienced staff) • Data analysis and VT mapping review • Report review
Emalyn Loudon Bag (Hons)	8 years	-	• Field survey
Jacinta Harrison BAppSc (Environmental Management)	6 years	-	• Field survey
Jaroslav Hruban Mgr (MSc equiv.) (Botany), BSc (Botany) (Hons)	4 years	FB62000251-3 TFL044-2122	• Field survey
Julia Mattner PhD (Plant Science)	> 20 years	NA	• Plant identifications
Kyler Rowson BSc (Marine Biology & Biological Sciences)	3 years	FB62000399 TFL 2223-0139	• Field survey
Liam Chirio BSc (Environmental Science & Wildlife Biology)	2 years	FB62000413-1b	• Field survey
Lotta Ramrath BSc (Environmental Science)		NA	• Plant identifications
Marco Pratissoli DipSc (Environmental Biology and Management)	6 years	FB62000057-2 TFL-2425-0035	• Field survey
Marlee Starcevich BSc (Environmental Science) (Hons)	9 years	NA	• Project management • Plant identifications • Data analysis and VT mapping • Report preparation
Melissa White BSc (Botany)	2 years	FB62000612 TFL 2425 0078	• Field survey • Plant identifications
Peter Zuvich BSc (Marine Science)	1 year	-	• Field survey

Personnel and Qualifications	Experience	Flora Collecting Licence/Permit	Role
Shibi Ullas Chandran BSc (Zoology), MSc (Fisheries Biology and Aquaculture)	7 years	NA	• Plant identifications
Tom Jones BSc (Botany & Zoology)	2 years	FB62000537	• Field survey • Plant identifications
Zachary Borthwick MAppSc (Biological Science) BSc (Botany & Zoology)	1 year	FB62000575	• Field survey • Plant identifications

3.3 Aerial Photography Interpretation and Survey Design

The design of the 2023 and 2024 survey complies with the requirements of EPA Technical Guidance (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 Midwest Bioregion.

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, visible vegetation patterns, and quadrat locations and density from relevant previous surveys. Additional quadrat locations were proposed to ensure that a minimum of three quadrats sampled each major discernible vegetation pattern where possible; for smaller patterns, fewer quadrats were allocated based on the size of the pattern, while for widespread vegetation patterns, quadrats were allocated across their geographic range.

As mentioned in **Section 1.1**, a large proportion of the eastern part of the Survey Area has received considerable historical survey effort with regard to vegetation quadrat sampling, as summarised below and in **Section 5.1.4**:

- **Karara–Mungada Project Survey Area Flora and Vegetation Assessment** (Woodman Environmental, 2008d) (hereafter referred to as 'Karara–Mungada Assessment'): Level 2 (Detailed) flora and vegetation assessment for Gindalbie Metals Limited. Survey work completed in winter 2006 with detailed recording sites data from previous surveys conducted in 2004 and 2005 (Woodman Environmental, 2004, 2007e, 2007g) and quadrats established by Markey and Dillon (2006) within the survey area utilised to aid in the VT mapping process. Karara–Mungada Assessment survey area overlaps most of the eastern part of the current Survey Area.

- **Regional Flora and Vegetation Survey of the Karara to Minjar Block** (Woodman Environmental, 2012) (hereafter referred to as 'Regional Mapping Assessment'): Level 2 (Detailed) flora and vegetation assessment for Karara Mining Limited. Survey work completed in spring 2008, autumn-winter 2009, and spring-summer 2010–2011. Quadrats previously established within the Woodman Environmental (2012) survey area (Markey & Dillon, 2008; Woodman Environmental, 2007b, 2007c, 2007d, 2007f, 2007k, 2007l, 2007m, 2007b, 2008d, 2009b, 2009d, 2011) were also included in the statistical analysis. Eastern part of the current Survey Area forms a component of the Regional Mapping Assessment survey area.

- **Karara Project Expansion: Detailed and Targeted Flora and Vegetation Assessment** (Umwelt, 2021) (hereafter referred to as '2020 Assessment'): Detailed and Targeted flora and vegetation assessment for Karara Mining Limited. Survey work completed in late winter to early spring, 2020. Quadrats previously established or analysed for the Karara–Mungada Assessment and Regional Mapping Assessment were also included in the statistical analysis. 2020 Assessment survey area overlaps most of the eastern part of the current Survey Area.

The quadrat data and associated reports from the above surveys were reviewed prior to the 2023 and 2024 field assessment, and a number of these previously established quadrats were identified as requiring a revisit to ensure taxonomic consistency between those surveys and the current survey. Existing sample sites were also revisited in areas where the most recent data was very old (> 10 years) in order to ensure a good geographic spread of recently collected flora and vegetation data. Data from existing quadrats located within the Survey Area, as well as from additional quadrats established in 2023 and 2024, were utilised for the floristic analysis (see **Section 3.6**) and for building a taxon inventory for the Survey Area (see **Section 5.2.1**).

The above-listed assessments, as well as a number of other assessments (**Section 5.1.4**), also included opportunistic and/or targeted significant flora and vegetation surveys. However, due to the timing of some of these surveys and the fact that changes have occurred to plant taxonomy and conservation status for many taxa and vegetation communities since these surveys were undertaken, the entirety of the Targeted Survey Area was reassessed for significant flora and vegetation as part of the 2023 and 2024 survey. The methods utilised to undertake the Targeted assessment are described in **Section 3.4.3**.

3.4 Field Survey Methods

3.4.1 Survey Timing and Access

The 2023 and 2024 flora and vegetation field assessment was undertaken over multiple site visits as outlined below:

- **Detailed Survey:**
    - 2 to 7 October 2023 (6 team days)
    - 6 to 12 August 2024 (14 team days)
    - 21 to 27 August 2024 (7 team days)
    - 16 to 22 September 2024 (7 team days).
- **Targeted Survey:**
    - 21 to 28 August 2024 (16 team days)
    - 16 to 20 September 2024 (10 team days).

The timing of the field survey was selected to coincide with what is considered to be the most appropriate time to survey in the region. As per EPA Technical Guidance (EPA, 2016b), the recommended timing for a Primary survey in the South-West and Interzone botanical provinces is spring (September to November). However, the majority of flora taxa in the region flower from late winter to early spring, including many of the significant taxa that potentially occur in the Survey Area (see **Section 5.1.5**), hence the slightly earlier time of most of the field survey.

The Survey Area was accessed by vehicle using existing access tracks/drill lines and via foot traverses. Appropriate landholder/manager permissions were obtained prior to undertaking the field survey. All traverses made during the 2023 and 2024 field survey are mapped as track logs in **Figure 3.1**, along with sample site locations (**Section 3.4.2**).

3.4.2 Sample Sites

3.4.2.1 Quadrats

A total of 259 flora and vegetation survey quadrats have been established in the Survey Area (or within 50 m of the Survey Area), of which 100 were assessed during the 2023 and 2024 field survey (**Figure 3.1**). Five of these 100 sites were existing sites (established for other relevant assessments in the Survey Area; **Sections 3.3** and **5.1.4**) that were revisited and resampled in 2023/2024.

The quadrat size utilised for the flora and vegetation survey is the indicative size for flora and vegetation surveys in the Yalgoo IBRA region, as outlined in Table 1 of the EPA Technical Guidance (EPA, 2016b). All quadrats measured 20 m × 20 m, encompassing a total area of 400 metres squared (m^2). Quadrat boundaries were demarcated using handheld Global Positioning System (GPS) units and surveying tape measures. Note that as discussed in **Section 1.2**, approximately 7.2 % and 0.2 % of the Survey Area extends into the Avon Wheatbelt and Geraldton Sandplains IBRA regions, respectively, the indicative quadrat sizes for which are 10 m × 10 m (understorey species) and 20 m × 20 m (overstorey species) for the former, and 10 m × 10 m for the latter (EPA, 2016b). However, the larger 20 m × 20 m size was chosen to be used throughout the Survey Area (irrespective of IBRA region) for consistency.

Quadrat locations were proposed 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 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 (GDA) 1994 or 2020, Zone 50)
- 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 South-West and Interzone botanical provinces; scale presented in **Table 3.4**) 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, five previously surveyed quadrats were revisited in 2023/2024. Historic data from these quadrats, including taxon lists, were taken in the field and taxon presence was confirmed or updated. Representative collections were made where necessary to confirm taxon identities and to align with data collected from quadrats newly established in 2023 and 2024. Additionally, taxa that were observed to be clearly present within previously surveyed quadrats, but were not present on the quadrat taxon list, were added to the taxon list.

3.4.2.2 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 small or narrow to allow for the establishment of quadrats, the establishment and survey of relevés rather than quadrats is considered more appropriate.

A total of 349 relevés have been established in the Survey Area (or within 50 m), of which 28 were assessed during the 2023 and 2024 field survey (**Figure 3.1**). Relevés surveyed an area within a radius of approximately 10 m around a central point. 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.

3.4.2.3 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 (GDA94 or GDA2020, Zone 50), 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, as many polygons can be confidently allocated to a final vegetation type (VT) using a combination of field mapping notes and aerial photograph interpretation. Additional flora taxa (significant, opportunistic and introduced taxa) were also recorded opportunistically in the Survey Area during traverses between quadrats and relevés, and while conducting targeted searching, with GPS locations of such taxa recorded.

A total of 80 vegetation mapping notes have been taken in the Survey Area, 68 of which were recorded during the 2023 and 2024 field survey (**Figure 3.1**).

3.4.3 Targeted Survey for Significant Flora Taxa and Vegetation

The desktop assessment (**Section 3.1**), undertaken prior to the field survey, culminated in a list of significant flora taxa and vegetation that had the potential to be present in the Survey Area. The majority of significant flora taxa identified by the desktop assessment were considered to be theoretically identifiable during the 2023 and 2024 field survey (**Section 5.1.5**). In addition, all significant vegetation communities identified by the desktop assessment were considered to be identifiable irrespective of time of survey (**Section 5.1.5**). Therefore, all such taxa and vegetation were targeted (concurrently) during the field survey.

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 provided to all field team members prior to undertaking the 2023 and 2024 survey. In addition, known locations of significant flora taxa were visited prior to survey, where possible, for both verification and familiarisation purposes.

Systematic targeted survey was undertaken in the Targeted Survey Area within areas of potentially suitable habitat. Targeted survey was generally conducted in a grid pattern via transects spaced approximately 50 m apart. Where less conspicuous or cryptic significant flora taxa were encountered, or where traverses intersected habitat of such taxa, survey was undertaken between transects. Significant flora taxa were also recorded opportunistically in the Survey Area during traverses between quadrats and relevés, and while conducting Targeted searching. 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 Targeted Survey Area, but instead provide a conservative estimate of the numbers of individuals present and the extent of their distributions in the Targeted Survey Area.

The following information was recorded when significant flora taxa or vegetation were encountered during the Targeted survey, or encountered opportunistically:

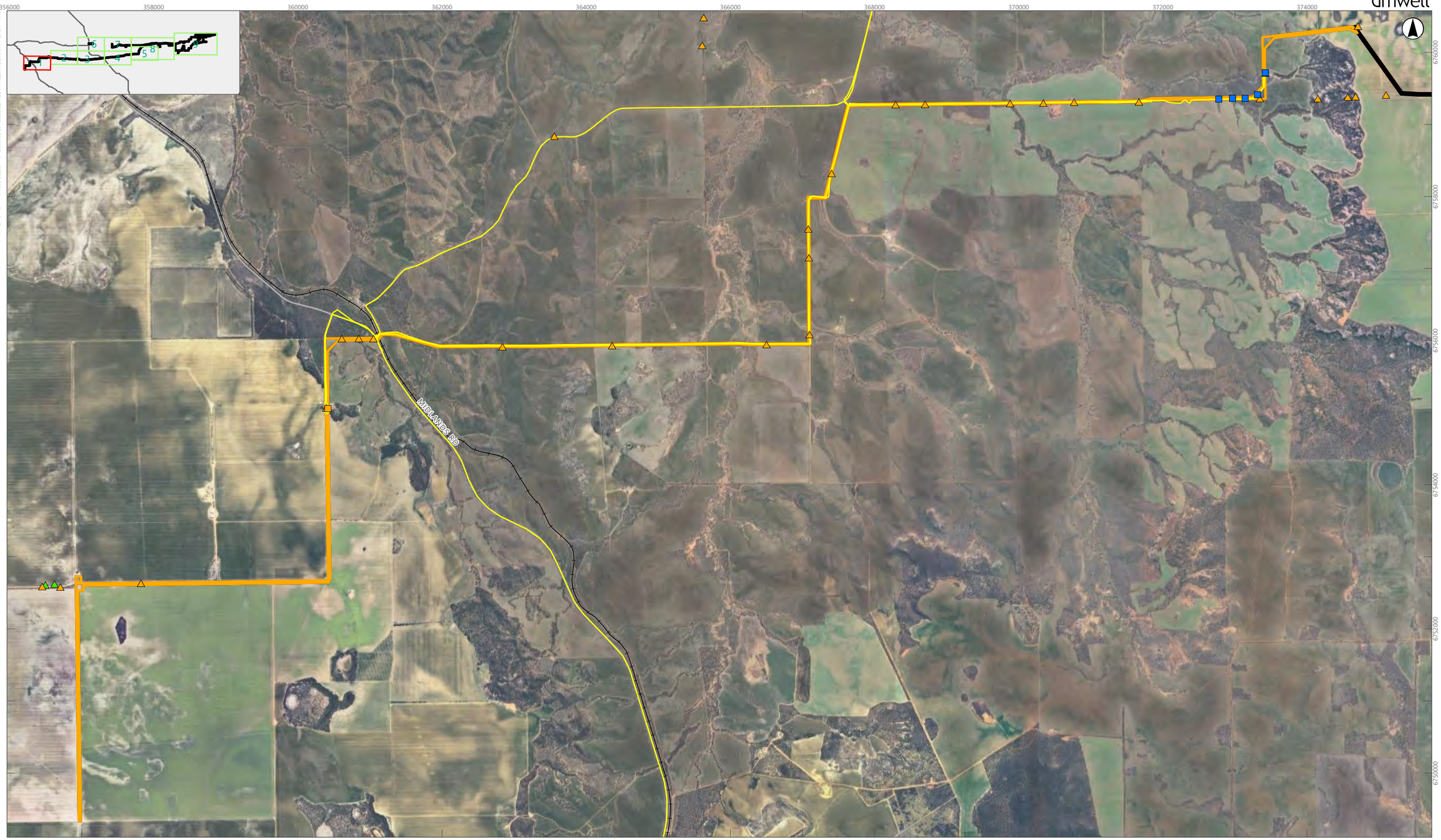
- Location (including GPS coordinates and datum, recorded using handheld GPS units), taxon and count of any significant flora encountered at location within a radius of approximately 25 m from GPS coordinates.
- Location (including GPS coordinates and datum, recorded using handheld GPS units), community 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, dominant or characteristic taxa, vegetation condition, description of disturbances, and any apparent correlation between vegetation and landform features, as necessary.

If new locations of significant flora taxa were identified, a representative collection of material was made for verification purposes (see **Section 3.5**).

Traverses in the Survey Area and Targeted Survey Area from the 2023 and 2024 field survey are mapped as track logs in **Figure 3.1**, along with sample site locations. Note that track logs from previous surveys in the Survey Area are not presented.

3.4.4 Introduced Flora Taxa

Opportunistic locations of introduced flora taxa encountered while traversing between sample sites or while undertaking Targeted survey were recorded using the same method as for significant flora taxa, with particular emphasis given to WoNS and Declared Pests.



Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Targeted Survey Area
- Road
- Railway
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Relevé
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

FIGURE 3.1
Track Logs and Sample Sites
Sheet 1

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Major Watercourse
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

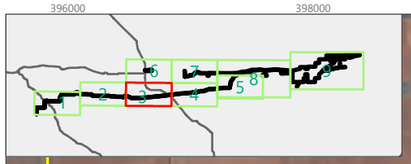
FIGURE 3.1
Track Logs and Sample Sites
Sheet 2

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6764000 6762000 6760000 6758000 6756000 6754000



MORAWA-THREE SPRINGS RD

MULLEWA-WUBIN RD

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Legend

- Survey Area
- Road
- Railway
- Major Watercourse
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 3.1
Track Logs and Sample Sites
Sheet 3

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Vegetation Mapping Note

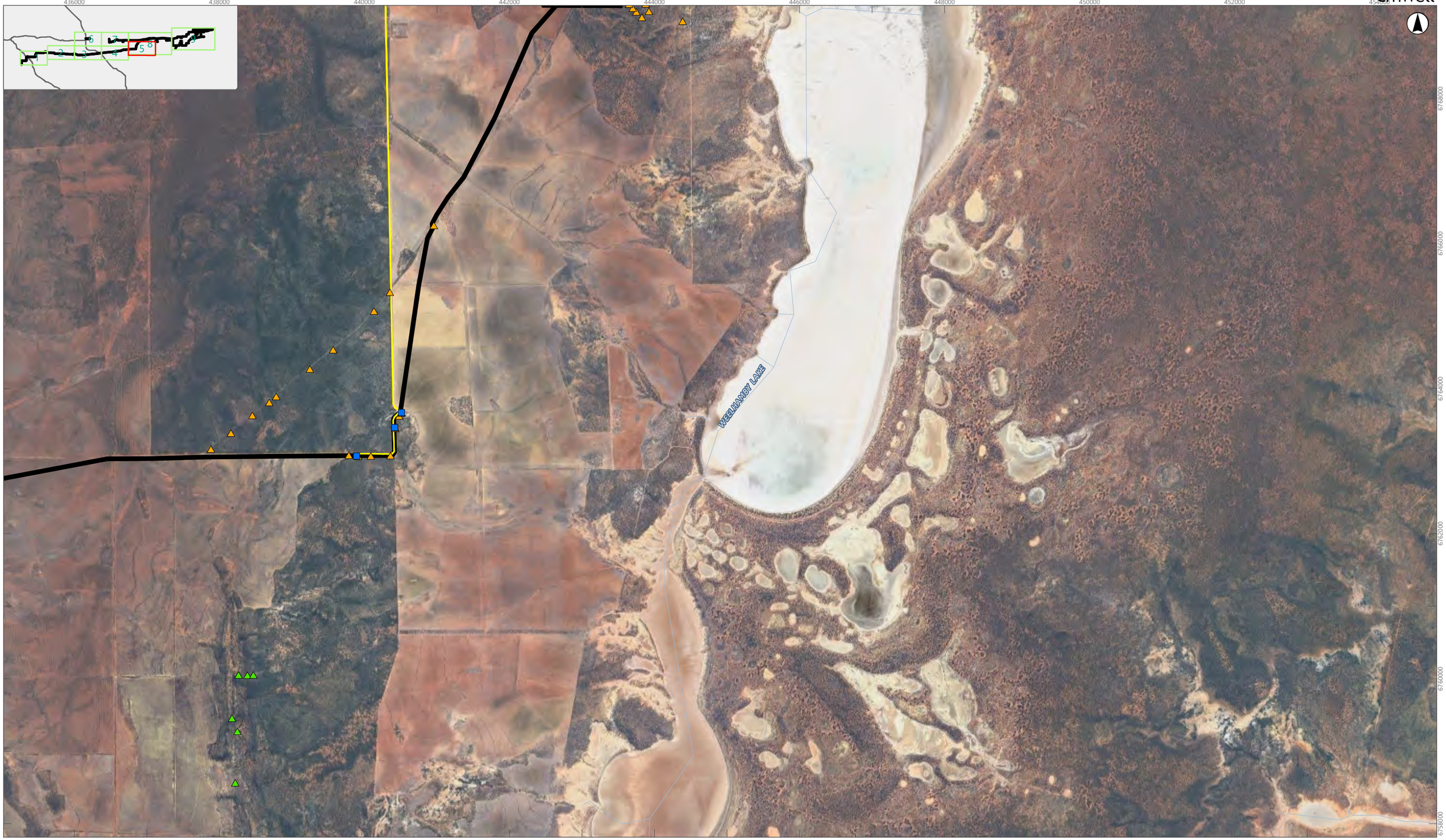
Observations – Historic

- Quadrat
- Relevé

FIGURE 3.1
Track Logs and Sample Sites
Sheet 4

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Major Watercourse
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

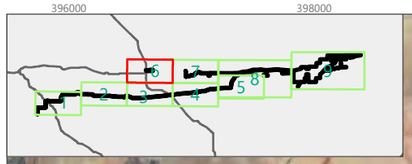
FIGURE 3.1
Track Logs and Sample Sites
Sheet 5

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6776000 6774000 6772000 6770000 6768000 6766000



MULLEWA-WUBIN RD

MINGENEW-MORAWA RD

MORAWA

MORAWA-THREE SPRINGS RD

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Legend

- Survey Area
- Road
- Railway
- Major Watercourse
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 3.1
Track Logs and Sample Sites
Sheet 6

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

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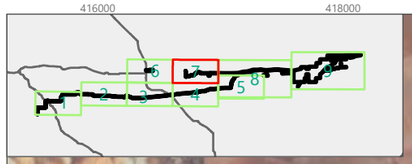
416000 418000 420000 422000 424000 426000 428000 430000 432000 434000

6776000 6774000 6772000 6770000 6768000 6766000



Legend

- Survey Area
- Major Watercourse
- Detailed Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

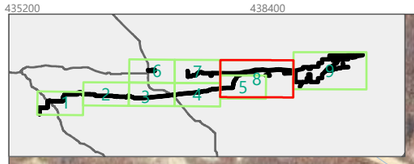
FIGURE 3.1
Track Logs and Sample Sites
Sheet 7

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

435200 438400 441600 444800 448000 451200 454400 457600 460800 464000

6774400 6771200 6768000 6764800 6761600



WEELHAMBY LAKE

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Legend

- Survey Area
- Major Watercourse
- Detailed Survey Track Logs – 2024
- Targeted Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

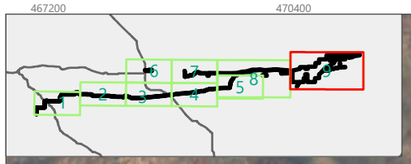
- Quadrat
- Relevé

Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

FIGURE 3.1
Track Logs and Sample Sites
Sheet 8

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

- Survey Area
- Targeted Survey Area
- Detailed Survey Track Logs – 2023
- Detailed Survey Track Logs – 2024
- Targeted Survey Track Logs – 2024

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – 2020

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

FIGURE 3.1
Track Logs and Sample Sites
Sheet 9

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

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 Principal Botanists with extensive previous experience (> 15 years) in plant identifications for flora of WA, including flora of the Karara area (**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 Analyses

3.6.1 Floristic Analysis with Survey Area Data

Floristic agglomerative hierarchical clustering analysis of data from all 259 quadrats in the Survey Area (**Section 3.4.2.1**) was performed to inform the grouping of VTs. Data from all historical quadrats were reviewed thoroughly for taxonomic currency (both in a nomenclature and conceptual context), with nomenclature updated where required (see **Appendix A** for further details).

The floristic classification analysis was undertaken by a botanist with considerable previous experience (9 years) in undertaking and interpreting floristic analysis results and was reviewed by a botanist with extensive previous experience (18 years) in floristic analyses. Both personnel have previous experience with analyses of floristic data from the Midwest region and from previous projects undertaken in the Karara area.

Taxa belonging to the below categories were removed prior to the classification analysis:

- Annual or ephemeral taxa – the presence of annual or ephemeral taxa is strongly influenced by seasonal conditions, with such taxa typically being patchily-distributed, or entirely absent, in seasons with below-average rainfall; this was observed in the Survey Area during the 2023 field assessment, with annual taxa present in some areas (albeit generally in very poor condition), but completely absent in other areas that otherwise possessed similar vegetation composition. Removal of annual and ephemeral taxa is consistent with the methods used for assessments undertaken by DBCA (then Department of Parks and Wildlife/Department of Environment and Conservation) in the region. DBCA have undertaken multiple vegetation surveys of the greenstone ranges and banded ironstone formation (BIF) of the Yilgarn Craton region, with subsequent floristic analyses; all such analyses were done with annual and ephemeral taxa removed from the dataset (Meissner et al., 2009; Meissner & Coppen, 2013, 2014a, 2014b; Meissner & Wright, 2010b, 2010a, 2010c).

- Introduced taxa – introduced taxa were removed as their distributions are generally defined by the presence of disturbance (e.g. clearing, animal movement) rather than natural ecological drivers. Vegetation type must be determined independently of vegetation condition for the purposes of EIA; therefore, including weeds in the classification analysis introduces the risk of VTs allocated by the analysis being based on condition (presence/absence of introduced species) rather than native taxon presence/absence.

- Hybrids – hybrids are usually the result of random reproductive events that produce small numbers (often only one) of sterile offspring and are often not associated with particular habitat types.

- 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. *Corchorus* sp.).

- 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)). Note that singletons were also removed by DBCA for their floristic analyses of vegetation of the Yilgarn Craton greenstone ranges and BIF.

All taxa amalgamated in the classification analysis are presented in **Appendix A**. This was done, for example, where different infra-taxa could not be consistently positively identified at all quadrats due to inadequate material, or when changes to taxon nomenclature had occurred since collection of historic quadrat data.

Additionally, the taxa that comprise the Mulga (*Acacia aneura*) group were amalgamated under a single code for the analysis. Confident identification of Mulga specimens can be difficult, particularly if low rainfall is received in the months prior to field survey, as this often results in a lack of resin (a key diagnostic feature) on the phyllodes. Due to the high level of uncertainty in the identifications within this group, and the proclivity for individuals in this group to produce hybrids within Mulga stands (which are generally omitted from floristic analyses), it was therefore considered that for the purposes of the floristic analyses, all collections identified as belonging to the Mulga group (or being tentatively aligned to a species in the Mulga group), or a putative hybrid or intergrade of Mulga species, would be amalgamated under one taxon code in the analyses. This was also undertaken in the indicator taxon analysis (discussed in **Section 3.7**); this

therefore meant that specific Mulga taxa could not be considered indicator taxa. The approach of amalgamation of Mulga species was supported by a review of the locations of the Mulga species across the Survey Area prior to undertaking the analyses; while some patterns in the distribution of certain species were noted, generally the Mulga species did not exhibit any particular distributional pattern, and often several species and putative hybrids occurred together. A similar approach has also been used previously in DBCA's surveys of BIF ranges in the Yilgarn Craton, with Markey & Dillon (2008) resolving their Mulga entities into approximate morphotypes for their analysis.

The final dataset contained 276 species names from 259 quadrats following the removal and amalgamation of the above-noted taxa.

Prior to undertaking agglomerative hierarchical clustering, a principal components analysis (PCA) using R Statistical Software (R Core Team, 2024) was undertaken on a single-layer data matrix consisting of presence/absence species data. Three analyses were then undertaken to determine the optimal number of clusters, with the minimum of these three metrics being considered to capture the majority of variation in the quadrat data:

- Determining the "elbow" of the curve of a PCA scree plot and retaining all components before this point.
- 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., 2025) and 'cluster' (Maechler et al., 2025) R packages using R Statistical Software (R Core Team, 2024). 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).

In addition to the dendrogram, a cluster plot was generated using the 'factoextra' R package (Kassambara & Mundt, 2020). Prior to generating the cluster plot, PCA was performed to reduce the number of dimensions such that the data can be represented by clusters in a two-dimensional space. The data was then plotted according to the first two principal components that explain the majority of the variance in the dataset. This plot was utilised to assist in determining the feasibility of clusters and quadrat placement in the dendrogram.

3.6.2 Floristic Analysis with Regional Data

In addition to floristic analysis of quadrats located within the Survey Area as described in **Section 3.6.1**, a second floristic analysis was conducted using quadrat data from the Regional Mapping Assessment (Woodman Environmental, 2012) to provide regional context and assist with the identification of potentially regionally significant vegetation in the Survey Area.

Data used for the analysis included floristic data from the Survey Area, as well as from quadrats established within the wider Regional Mapping Assessment study area. Prior to undertaking the analyses, all floristic datasets were reviewed thoroughly for taxonomic currency (both in a nomenclature and conceptual context), with nomenclature updated where required. A summary of the taxonomic and nomenclature updates to the Regional Mapping Assessment quadrats is presented in **Appendix A**.

The methods of analysis used were the same as those described in **Section 3.6.1**, including taxa removed from/amalgamated in the analysis (**Appendix A**), as well as PCA cluster determination, dissimilarity index, and clustering methods. The final dataset contained 281 species codes from 1,102 quadrats following taxa removal and amalgamation.

The resulting classification dendrogram was reviewed to determine the position of Survey Area quadrats in relation to sites from the wider Regional Mapping Assessment study area; from this, the relationships between Survey Area VTs and Regional Floristic Community Types (FCTs) were inferred, with particular attention on Regional FCTs that were identified by Woodman Environmental (2012) to potentially represent significant vegetation. This is discussed further in **Section 3.9.2**.

3.7 Vegetation Type Definition, Mapping and Description

The classification analysis of the Survey Area floristic data aggregated quadrats and taxa into clusters according to the optimal number of cluster analysis (**Section 3.6**). The resulting dendrogram and taxon group matrix were initially examined at this level to determine the plausibility of quadrat groupings with regard to taxon groups, in combination with field observations. This process determined a final number of groups, which were considered to represent VTs.

Following this process, floristic and structural data recorded at relevés was examined to determine whether vegetation sampled by such relevés, such as in the case where vegetation condition may not support classification analysis, was analogous to any of the VTs defined by floristic composition classification. Any such vegetation that was not considered to be analogous with any of the VTs defined by floristic classification was considered to represent a discrete VT.

VT descriptions have been adapted from the National Vegetation Information System (NVIS) Australian Vegetation Attribute Manual (NVIS Technical Working Group, 2017). The use of the NVIS system for VT descriptions is recommended by EPA Technical Guidance (2016b), however it is worthy of note that the latest version (7.0) was published in 2017, subsequent to that of the current EPA Technical Guidance. 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 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. Considering the effect of disturbance factors such as fire on vegetation structure, this approach is designed to provide a map of VTs that reflect taxon composition and the influences of the physical and chemical environment, rather than disturbance history.

This report describes VTs at the NVIS Sub-Association level; this level is considered most 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 VT, indicator taxa were defined via Indicator Taxon Analysis (INDVAL). This was conducted using the 'labdsv' R package (Roberts, 2023) 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 that were used for the Survey Area floristic classification analysis (as per **Appendix A**) were employed for the indicator species analysis. 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, relevé data and vegetation mapping notes data to develop VT mapping polygon boundaries. A number of aerial photography sources were utilised for the vegetation mapping, as per **Table 3.3**. Mapping boundaries were developed using aerial photography at a minimum scale of 1:5,000, and reflected changes in vegetation patterns visible at this scale. The VT mapping polygon boundaries were then digitised using Geographic Information System (GIS) software.

Table 3.3 Aerial Imagery Used for Vegetation Type and Condition Mapping

Imagery	Imagery Year	Description	Purpose
Landgate WA Now Mosaic (LGATE-320)	Varies across Survey Area from 2014 to 2016. Imagery for majority of Survey Area from 2014	Imagery captured from an aircraft at predetermined altitudes and along a predetermined flight path. Resolution ± 1 m, good positional and colour accuracy	Used for VT and vegetation condition mapping for the majority of the Survey Area
KML (Karara_5cm_ RGB_Jul2024)	2024	Imagery captured from an aircraft at predetermined altitudes and along a predetermined flight path. Very high resolution (5 cm) and good colour accuracy. Covers only Karara, Blue Hills North and Terapod mine site areas	Used with Landgate WA Now imagery for VT and vegetation condition mapping, where available
KML (Karara_Large_ Area_15cm_RGB)	2024	Imagery captured from an aircraft at predetermined altitudes and along a predetermined flight path. Very high resolution (15 cm) and good colour accuracy. Covers only Karara Area of Survey Area	Used with Landgate WA Now imagery for VT and vegetation condition mapping, where available
Google Satellite	Varies across Survey Area from 2022 to 2024. Imagery for majority of Survey Area from 2023 to 2024	Satellite imagery. Resolution, colour accuracy and positional accuracy more poor than that of Landgate	Used to supplement KML imagery to map areas that have been cleared or otherwise disturbed since the capture of Landgate WA Now imagery

3.8 Vegetation Condition Mapping

Vegetation condition was described using the vegetation condition scale presented in EPA Technical Guidance (EPA, 2016b) for the South West and Interzone Botanical Provinces (as per **Table 3.4**). Vegetation condition was recorded at all quadrats and relevés, and while traversing the Survey Area. 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.

Table 3.4 Vegetation Condition Scale for the South West and Interzone Botanical Provinces

Condition Ranking	Description
Pristine (P)	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement
Excellent (E)	Vegetation structure intact, disturbance affecting individual species and weeds are nonaggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks
Very Good (VG)	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing
Good (G)	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing
Degraded (D)	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing
Completely Degraded (CD)	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs

Source: Technical Guidance for Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016b).

3.9 Significant Flora and Vegetation Definitions

3.9.1 Significant Flora Taxa

As per EPA definitions (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 5.2.2** with reference to the above categories. Data including point locations and abundance of significant flora taxa recorded within the Survey Area (by the 2023/2024 survey and relevant previous surveys) are also presented in this section. Potential duplication of records in the Survey Area has been avoided by assessment of locations of significant flora taxa recorded by the current survey against previous survey data in a GIS environment.

3.9.2 Significant Vegetation

As per EPA definitions (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 Midwest 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 (as listed under the BC Act) or PEC (as listed by DBCA); 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. In terms of potential regional significance of VTs, the clustering dendrogram of Survey Area quadrats with quadrats from the Regional Mapping Assessment (Woodman Environmental, 2012) (**Section 3.6.2**) was reviewed for the position of Survey Area quadrats with Regional Mapping Assessment quadrats to infer similarities between Survey Area VTs and Regional FCTs. It was assumed that dissolution of groups of quadrats from the Survey Area analysis within this regional analysis likely indicated that the vegetation represented by such quadrats was relatively dissimilar in a regional context; this may not have been obviously evident in the local context of the Survey Area classification analysis due to the comparatively limited size of the dataset being analysed. As mentioned above, it is important to note that this analytical approach does not maintain the original quadrat groupings that formed the basis of the original FCTs

defined by the Regional Mapping Assessment in the resultant dendrogram. Therefore, other information such as quadrat taxon lists, vegetation structure, soils, topography and geographical distribution data was also compared with the information presented for each of the Regional FCTs in order to provide further support for the inferences made. Note also that the Regional Mapping Assessment was undertaken at a much broader scale than the current survey; therefore, it is possible that multiple Survey Area VTs may all have high similarity to a single Regional FCT.

3.10 Likelihood of Occurrence Assessments

Likelihood of occurrence assessments were undertaken for significant flora taxa and vegetation that were identified by the desktop assessment as potentially occurring within the Desktop Study Area. The likelihood of occurrence rated taxa and vegetation communities as 'known', 'likely', or 'unlikely' to occur in the Survey Area, based on whether the Survey Area is located within the known range of the taxon/community, and whether potentially suitable habitat may be present (**Table 3.5**). Key diagnostic characteristics in the relevant TEC or PEC Approved Conservation Advice; nomination/listing descriptions; recovery plans; and the 'Methods for survey and identification of Western Australian threatened ecological communities' document from DBCA (2024a), were also reviewed (where available) when assessing the likelihood of occurrence of a significant vegetation community to be present in Survey Area.

Table 3.5 Significant Flora and Vegetation Likelihood of Occurrence Categories

Category	Description
Known	Existing locations within the Survey Area
Likely	Survey Area clearly within or in close proximity to known range, and habitat likely to be present
Possible	Survey Area potentially within or in relatively close proximity to known range, and habitat possibly present
Unlikely	Survey Area not within or in close proximity to known range, and/or habitat unlikely to be present
Not considered to occur	Survey Area > 200 km from known range, and/or habitat not considered to be present

4.0 Adequacy and Survey Limitations

4.1 Adequacy of Survey Assessment

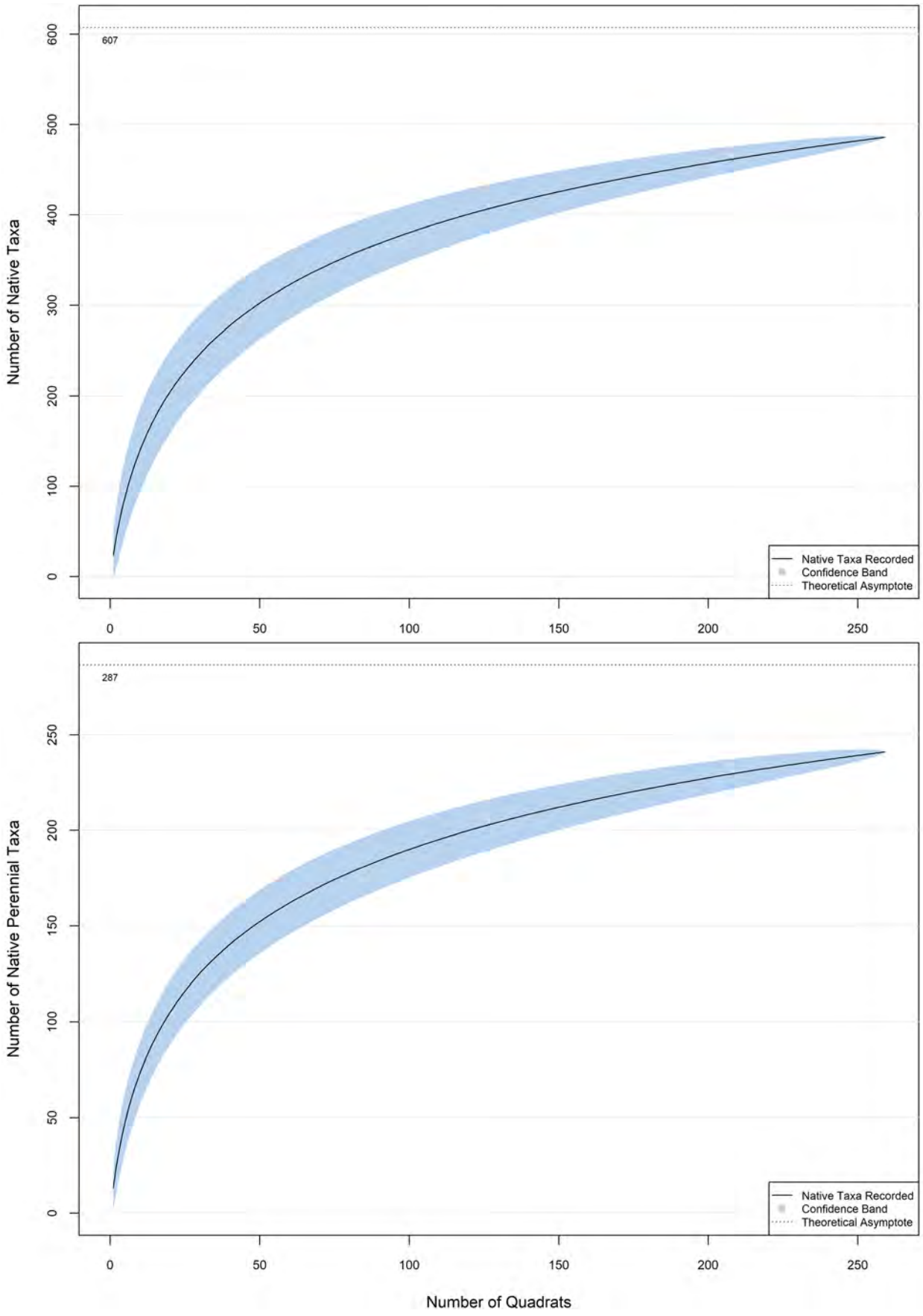
The Survey Area covers 13,557 ha, with 259 quadrats established within it (or within 50 m) by the current survey or relevant previous assessments. Where possible, quadrats were established in all preliminary vegetation patterns discernible by initial aerial photograph interpretation (**Section 3.3** and **Section 3.4.2**), both to adequately sample variation in vegetation throughout the Survey Area, 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 diversity of topography and soil types noted in the Survey Area, as well as its size; approximately 1 quadrat has been established per 51 ha across the entire Survey Area, or 1 quadrat per 42 ha of vegetation within the Survey Area (i.e. excluding areas mapped as 'Water' and 'Cleared Land').

To provide an indication of the adequacy of this survey, taxon accumulation curves were produced with the 'vegan' R package (Oksanen et al., 2025) using R Statistical Software (R Core Team, 2024). 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 curves were generated using Survey Area quadrat data (those newly established in 2023/2024 and historical quadrats) using all native recorded within each quadrat, both inclusive and exclusive of annual taxa (to account for quadrats established in low rainfall seasons). Taxon accumulation calculations were then undertaken using the 'SpadeR' R package (Chao et al., 2016), utilising the Chao-2 estimator (bias corrected form) for species richness (Chao, 1987) and compared to the actual number of taxa recorded in the Survey Area. This provides an indication as to whether sufficient quadrats were surveyed to adequately sample the species richness in the Survey Area. However, as the generation of taxon accumulation curves includes quadrat data only, and not opportunistically recorded taxa or taxa recorded at relevés or vegetation mapping notes, the indication of adequacy of survey is considered to be conservative.

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, both inclusive and exclusive of annual taxa.

Graph 4.1 presents the native taxon accumulation curves for the Survey Area. A summary of the results of tests against the Chao-2 estimator and Mueller-Dombois & Ellenberg measure are presented in **Table 4.1**. Using the Chao-2 estimator, the recorded number of native taxa within quadrats is equivalent to 80.0 % and 84.1 % of the estimated native taxon richness in the Survey Area, including annuals and excluding annuals, respectively. The number of quadrats established by the field survey satisfies the Mueller-Dombois & Ellenberg adequacy measure, with an increase in recorded native taxa of 2.3 % (including annuals) and 2.2 % (excluding annuals) following a 10 % increase in quadrats. Therefore, assessments against the Chao-2 estimator and Mueller-Dombois & Ellenberg tests both suggest that sampling in the Survey Area was adequate.



Graph 4.1 Survey Area Quadrat Data Native Taxon Accumulation Curve

Top: including annual taxa; bottom: excluding annual taxa.

Table 4.1 Results of Adequacy of Survey Tests for Quadrats of the Survey Area

Parameters	Number of Taxa Recorded	Estimated Taxa Present (Chao-2)	Chao-2 Test Result (%)*	Mueller-Dombois & Ellenberg Test Result
Native taxa including annuals	486	607	80.0	2.3
Native taxa excluding annuals	241	287	84.1	2.2

** Calculated as the number of taxa recorded in quadrats, divided by the estimated number of taxa present (using Chao-2).*

4.2 Assessment of Potential Limitations of Survey

Table 4.2 presents an assessment of the potential limitations of the flora and vegetation assessment of the Survey Area, in accordance with EPA Technical Guidance (EPA, 2016b). Note that this table deals specifically with the current survey conducted in 2023 and 2024. For data used in this assessment which originated from other surveys – either for the purposes of taxon inventory, significant flora distribution and abundance, or floristic analysis – individual reports were reviewed to identify any specific limitations that may have significantly affected the results. Furthermore, as discussed in **Section 1.3**, **Section 3.3** and **Section 3.6**, issues relating to changes in plant nomenclature or taxonomy since these earlier surveys, as well as some of these surveys being conducted out of season, were addressed prior to commencing floristic analysis. This was achieved both via revisiting and resurveying previously established quadrats in the field, and thoroughly reviewing historical quadrats for taxonomic currency and updating nomenclature where required. Therefore, it is considered that there are no significant limitations associated with the utilisation of historical quadrat data.

In summary, there were no limitations that were considered to have had a significant effect on the results of the flora and vegetation assessment.

Table 4.2 Assessment of Potential Limitations of the Flora and Vegetation Assessment of the Survey Area

Limitation	Determination	Comment
Effort and extent	Not a limitation	A Detailed Survey was undertaken over 34 team days across the Borefield Corridor, Tilley Siding, Yandanooka Pipeline and parts of the Karara Area that were unsurveyed or long-unsurveyed. In addition, a Targeted Survey was undertaken over 26 team days across the entire Targeted Survey Area. Multiple sample sites were established in each remnant vegetation pattern identified in the Survey Area, excluding two highly modified vegetation types (HMVTs). All VTs defined by floristic composition analysis were sampled by at least three quadrats, with the exception of VTs I, J and M, due to the small areas of these VTs being intersected by the Survey Area. Overall, 259 quadrats, 349 relevés and 80 vegetation mapping notes have been established in the Survey Area, of which 100, 28 and 68 were newly established by this current survey (**Section 3.4.2**). The number of sample sites is considered adequate to characterise the flora and vegetation of the Survey Area, and adequacy of survey measures indicated that the Survey Area was well sampled (**Section 4.1**). Therefore, it is considered that there are no limitations in terms of Detailed survey effort and extent. No constraints prevented appropriate sampling techniques (sample site establishment, foot transects) being employed. Relative ease of access within the Survey Area enabled detailed VT and vegetation condition mapping to be undertaken throughout the Survey Area. Mapping reliability is therefore considered to be relatively high. A desktop assessment was undertaken prior to the field survey to identify significant flora taxa and significant vegetation communities that had the potential to be present in the Survey Area. Systematic Targeted survey for these taxa and communities was undertaken within the Targeted Survey Area, and opportunistically within the wider Survey Area. The Targeted significant flora survey was conducted on foot along transects undertaken at 50 m intervals (**Section 3.4.3**). A 50 m interval was considered to be adequate to provide appropriate data on the distribution of significant flora taxa within the Targeted Survey Area. When searching for smaller, cryptic taxa such as *Gunniopsis divisa* (P3), small deviations were taken off the transect lines to ensure all suitable habitat was checked. Due to the intervals between transects, and large numbers encountered of some small taxa (e.g. *Rhodanthe collina* (P3)), the presented numbers of individuals/locations are not considered to be a full census of each taxon within the Targeted Survey Area. Instead, these likely conservative estimates of the numbers of individuals/locations actually present. Targeted searching for significant flora taxa across the entire Survey Area has not been undertaken. Further survey for significant flora taxa may be required depending on the precise location of future impact areas. In addition, the Survey Area was not surveyed for significant taxa identified subsequent to the field survey being completed (e.g. the potentially undescribed *Tecticornia* sp. 'Karara 1' and *Tecticornia* sp. 'Karara 2'). However, there were no records of such taxa within the Targeted Survey Area.

Limitation	Determination	Comment
Competency / experience of the team carrying out the survey	Not a limitation	The Project Manager has 9 years' previous experience conducting similar assessments in WA, including in the Karara area. The Field Managers have extensive experience (>15 years) in conducting systematic sampling in WA and the Karara area. Other field team leaders have previous experience (> 4 years) in conducting flora and vegetation surveys, including in the Midwest 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. Information relating to identifying characteristics, flowering period and habitat of significant flora taxa that may be present, and relating to dominant taxa, soil and landform characteristics for significant vegetation, was provided to all field team members prior to undertaking the field surveys. Where possible, field personnel observed in situ locations of significant flora taxa known to occur in the Targeted Survey Area prior to Targeted searching commencing. Personnel overseeing plant identifications have > 15 years' experience in plant identification in flora of the Midwest region, and have extensive experience in flora of the Karara area specifically. Relevant taxonomic experts (including botanists at the WA Herbarium) were consulted for any specimens considered to be difficult to identify or of taxonomic interest.

Limitation	Determination	Comment
Proportion of flora recorded and/or collected and identified	Not a limitation	The timing of the 2023 and 2024 field survey was selected to coincide with what is considered to be the most appropriate time to survey in the region. As per EPA Technical Guidance (EPA, 2016b), the recommended timing for a Primary survey in the South-West and Interzone botanical provinces is spring (September to November). However, the majority of flora taxa in the Karara region flower from late winter to early spring, including many of the significant taxa that potentially occur in the Survey Area (**Section 5.1.5**), hence the slightly earlier time of the field surveys (August to October). All vascular groups that were present in the Survey Area were sampled. At least one reference specimen of all taxa encountered (excluding common, distinctive taxa) was collected for verification and identification purposes during the 2023 and 2024 field survey. In addition, all unknown vascular taxa were collected. Specimens were identified at the WA Herbarium using 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. A very small number of specimens could not be identified to species level due to inadequate material; however, none of these are considered likely to represent significant taxa. This is not considered to constitute a limitation of the assessment. Winter conditions for 2024 were cooler and wetter than average, but were warmer and drier than average in 2023 (**Section 2.0**). The poor conditions in 2023 and later timing of the site visit (October) corresponded with observable drought stress, senescence of perennial taxa, few perennial taxa in flower, and poor abundance and diversity of annual and ephemeral taxa. It is possible that a small number of particularly fragile taxa (e.g. some grass species) may not have been detectable or identifiable during this site visit. However, the conditions prior to the 2024 site visits were good, corresponding with abundant annual and ephemeral taxa, and many perennial taxa in flower. While the first site visit in August 2024 may have been slightly too early in the germination and emergence cycle of some annual taxa (some annual species had germinated but were not yet reproductively mature or in flower), these taxa, and those that may not have been detectable or identifiable during the 2023 site visit, were likely captured by the subsequent site visits in 2024. Adequacy of survey measures indicate that the Survey Area was well sampled. A high percentage of taxa expected to occur in the Survey Area (using the Chao-2 estimator) was recorded within quadrats (80 % of annual and perennial taxa, and 84.1 % of perennial taxa). The number of quadrats established in the Survey Area satisfies the criterion suggested by Mueller-Dombois & Ellenberg, with a final increase of 2.3 % in annual and perennial taxa, and 2.2 % in perennial taxa, per 10 % increase in quadrats (**Section 4.1**).
Sources of information e.g. previously available information (whether historic or recent) as distinct from new data	Not a limitation	Reasonable contextual information for the Survey Area was available prior to the field surveys. Sources of information used included government databases including those from DBCA and DCCEEW, with DBCA databases in particular having been extensively populated with data from numerous surveys conducted in the general vicinity of the Survey Area. In addition, other general sources pertaining to the climate, geomorphology, and flora and vegetation of the region, as well as previous surveys conducted within and in the vicinity Survey Area, were utilised. All information sources are considered to have high reliability, unless where stated.

Limitation	Determination	Comment
Survey timing and weather/season/cycle	Not a limitation	The 2023 and 2024 field surveys were conducted in late winter to early/mid spring, corresponding with what is considered the optimum flowering period for the Midwest. As discussed above, the 2023 field survey was conducted following a warmer and drier winter than average. However, the 2024 survey followed a wetter winter than average, and given the survey effort was greater in 2024 than 2023, it is likely that the 2024 surveys would have captured most flora taxa that may not have been detectible or identifiable during the 2023 survey.
Disturbances (e.g. fire, flood, accidental human intervention etc.) that may have affected results of survey	Not a limitation	Some disturbances associated with exploration and historic mining activity were apparent throughout the Karara Area; however, these did not appear to have significantly impacted the flora taxa present and are therefore not considered to have affected the results of the assessment. There was no evidence of recent fires, or evidence of any other significant non-clearing related disturbances. Parts of the Survey Area were drought-affected with widespread condition loss or senescence of shrubs, which was particularly evident during the 2023 field survey. However, this generally did not affect the ability to identify taxa in these areas, as typically there were some individuals present with sufficient material to make an identification. Along the Yandanooka Pipeline and Borefield Corridor, the vegetation immediately adjacent to roads, railway lines and cleared areas had evidence of edge effects including greater weed presence and dust on foliage, as is to be expected. Vegetation adjacent to areas cleared for pasture also had high weed levels. However, this was generally not reflective of the vegetation condition in these areas as a whole, and did not affect the ability to identify flora taxa in these areas. Sample sites were placed outside areas subject to edge effects, where possible.
Remoteness and/or access restrictions	Not a limitation	Most areas were relatively easy to access using roads and access tracks, allowing high intensity of sampling across the Survey Area. Areas where access tracks were absent were accessed on foot; the flat terrain and generally low, open vegetation allowed foot access to be relatively straight-forward.

5.0 Results

5.1 Desktop Assessment

5.1.1 Geology, Landform and Soils

The Survey Area extends across a transitional area including across multiple IBRA regions and subregions (as discussed in **Section 1.2**). The typical geological, landform and soil features across these IBRA subregions are described in **Table 5.1**.

Soil landscape mapping has been prepared across WA as a compilation of the results of a variety of soil and soil landscape surveys, considering general ecological information, vegetation physiognomy and composition, patterns of variation, conservation status, gradational association and land system representation (DPIRD, 2025). Soil landscape mapping information for the Survey Area originates from three surveys (with data reliability indicated as per DPIRD (2025)):

- Geraldton land resources survey (Rogers, 1996): “High data quality, broad scale mapping”.
- Sandstone Yalgoo Paynes Find soil-landscapes (Payne et al., 1998): “Limited data, broad scale or imprecise mapping”.
- Three Springs Latham land resources survey (unpublished report): “Medium data quality, broad scale mapping”.

The Survey Area occurs across 55 soil-landscape units in six soil landscape zones, as summarised in **Table 5.2** and presented in **Figure 5.1** (DPIRD, 2025). None of these soil landscape units are listed as TECs under the EPBC Act (DCCEEW, 2025) or listed as TECs or PECs by DBCA (DBCA, 2023f, 2023g).

The eastern part of the Survey Area occurs within the Warriedar Fold Belt, which is a series of low undulating hills of Archaean greenstone composed of banded ironstone formation (BIF) and basalts. Greenstone belts consist of metamorphosed volcanic rocks, including mafic rocks such as basalt and gabbro, associated with sedimentary rocks, such as BIF, and are generally expressed at the surface as a series of ranges or hills. The Warriedar Fold Belt includes the larger area of the Blue Hills, Gnows Nest Range, Bullajungadeah Hills, Pinyalling Hill and the unnamed hills in the southwest surrounding Mount Mulgine and the abandoned town of Rothsay (Lipple et al. (1983) in Meissner and Coppen (2014b)).

Table 5.1 Typical Geological, Landform and Soil Features of IBRA Regions and Subregions Intersected by the Survey Area

Region	Region Characteristics	Subregion	Subregion Characteristics	Location in Relation to Survey Area
Avon Wheatbelt	Active drainage dissecting a Tertiary plateau in Yilgarn Craton. Gently undulating landscape of low relief. Residual lateritic uplands and derived sandplains; Quaternary alluvials and eluvials	**Merredin**	Ancient peneplain with low relief, gently undulating landscape. There is no connected drainage; salt lake chains occur as remnants of ancient drainage systems that now only function in very wet years. Lateritic uplands are dominated by yellow sandplain	Tilley Siding, western half of Yandanooka Pipeline and majority of Borefield Corridor
Geraldton Sandplains	Mainly sedimentary basins exposing Permian to Cretaceous sediments; horsts of Proterozoic rocks. Extensive lateritic sandplain, locally dissected especially near the coast, and covered with leached sandy soils near the coast and yellow sands with an earthy fabric further inland, both overlying laterite	**Lesueur Sandplain**	Coastal Aeolian and limestones, Jurassic siltstones and sandstones (often heavily lateritised) of central Perth Basin. Alluvials are associated with drainage systems. There are extensive yellow sandplains in south-eastern parts, especially where the subregions overlaps the western edge of the Pilbara Craton	Western end of Borefield Corridor (approx. 9.0 km)
Yalgoo	Sedimentary basin with locally-exposed rocks of Permian to Recent age; most of the surface covered by alluvium and colluvium. Gently undulating plain with mesa-shaped remnants in the east and fields of longitudinal dunes. Hard alkaline red soils predominate in the plains with red sands in the dunefields	**Tallering**	Red sandy plains of the Western Yilgarn Craton and southern Carnarvon Basin. The latter has a basement of Phanerozoic sediments. Earth to sandy-earth plains in the western Yilgarn Craton	Entirety of Karara Area and eastern half of Yandanooka Pipeline

Source: 'A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002' (CALM, 2003); 'Plant Life of Western Australia' (Beard, 2015).

Table 5.2 Soil Landscape Units of the Survey Area

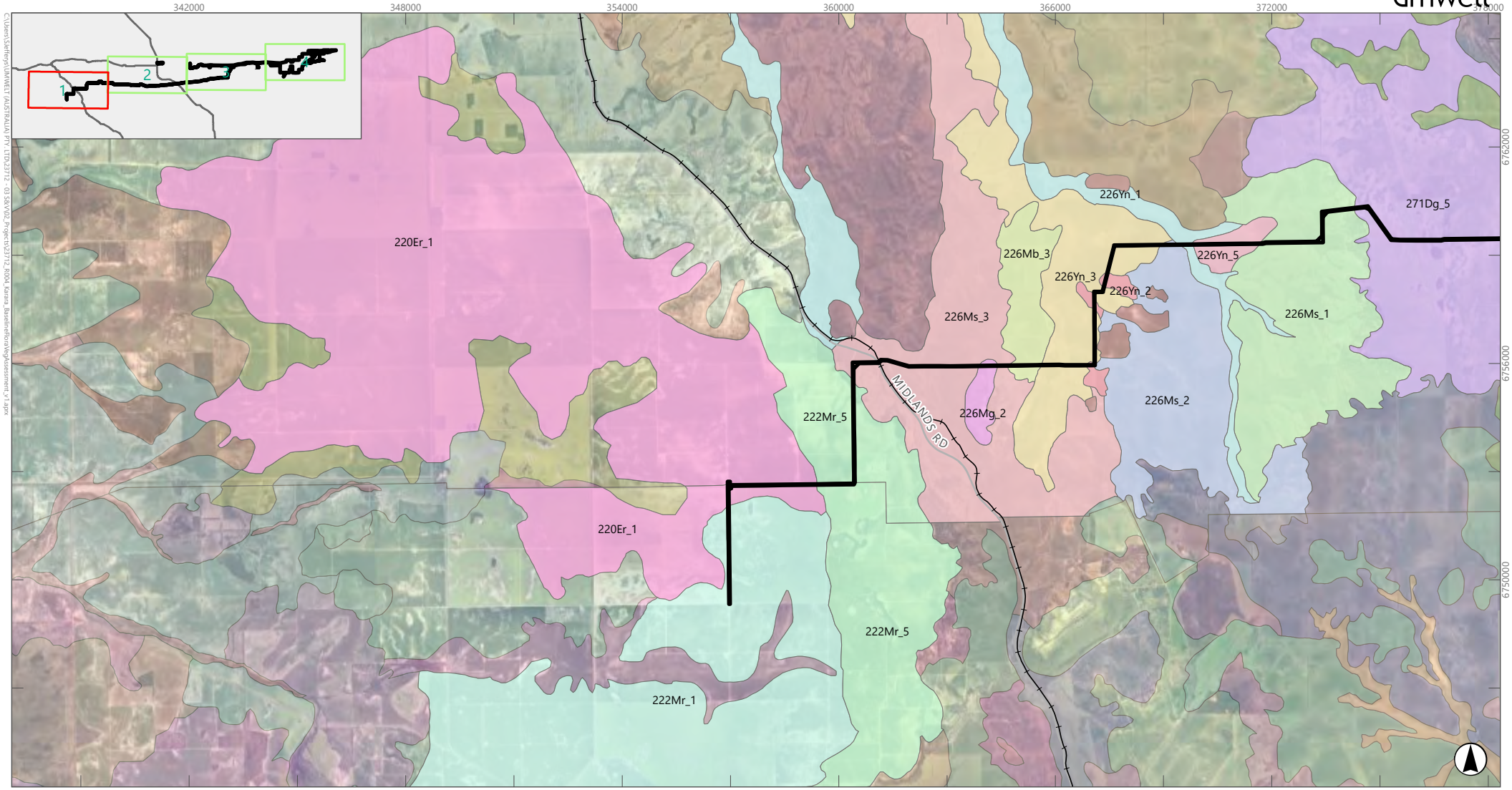
IBRA Subregion	Unit	Description*	Extent (ha) in Survey Area
Lesueur Sandplain	**Eradu 1 Subsystem**	Level to gently undulating sandplain; deep, yellow siliceous clayey sands and pale sands over ferruginous gravel	10.1
	Mooladara Hill 1 Subsystem	Level to gently undulating sandplain with long gentle gradients with shallow valleys; yellow and pale deep sands or sands over gravel	8.2
	Mooladara Hill 5 Subsystem	Gently inclined hill slopes; Yellow and pale deep sands and some gravels	9.6
Merredin	**Bowgarder 1 Subsystem**	Ridge crests and upper slopes; red shallow loams and loamy earths, red sandy earths. rock outcrops common	2.7
	Bowgarder 2 Subsystem	Undulating rises and gently inclined foot slopes; red shallow loams and loamy earths, red sandy earths, some alkaline often over hardpan	3.7
	Bowgarder System	Undulating rises and gently inclined slopes	3.8
	Carnegie System	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands	47.9
	Challenge System	Gently undulating gritty and sandy surfaced plains, occasional granite hills, tors and low breakaways, supporting acacia shrublands and occasional halophytic shrublands	3.3
	Dalgooka 1 Subsystem	Undulating low rises with stony ridge crests and a few shallow depressions; loamy duplexes and earths, often alkaline	17.9
	Dalgooka 3 Subsystem	loamy duplexes and earths, commonly alkaline, rock outcrop and stony soils	0.5
	Dalgooka 4 Subsystem	Gently undulating low rises with occasional prominent gravelly ridges; yellow deep sand and sandy earths, some gravels and loamy duplexes	8.1
	Dalgooka 5 Subsystem	undulating sandplain; yellow deep sand and sandy earths	18.6
	Gabanintha System	Greenstone ridges, hills and foot slopes supporting sparse acacia and other mainly non-halophytic shrublands	1.2
	Granada 5 Subsystem	Undulating rises with broad gravelly ridge crests, long gentle gradients; Yellow deep sands and sandy earths, some gravels	1.0
	Koolanooka 1 Subsystem	Crests and slopes of steep low hills; rock and rocky soils with sandy loam matrix with loamy earths and duplexes on lower slopes	16.2
	Koolanooka 2 Subsystem	Lower, rolling hills with occasional rocky outcrops and gently inclined foot slopes; red loams and clays over red-brown hardpan with some rock outcrops and shallow sands and loams	2.7

IBRA Subregion	Unit	Description*	Extent (ha) in Survey Area
	Mooladara Hill 5 Subsystem	Gently inclined hill slopes; Yellow and pale deep sands and some gravels	2.1
	Morawa 1 Subsystem	Low rises and ridges with gentle upper slopes; shallow sands and loams over granite and red-brown hardpan	126.7
	Morawa 2 Subsystem	Gently undulating low rises; shallow sands and loams over granite and red-brown hardpan	3.0
	Morawa East Subsystem 1	Low rises and ridges with gentle upper slopes; shallow sands and loams over granite and red-brown hardpan	0.4
	Moriarty System	Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys	1.8
	Mount Budd 3 Subsystem	Very gently to gently inclined lower foot slopes with cracking brown alkaline clays and minor areas of sandy loam gradational soils.	1.8
	Mount Nunn 1 Subsystem	Rolling to steep low hills with rocky crests and upper slopes; rocky soils	3.2
	Mount Nunn 2 Subsystem	long gently inclined sandy foot slopes; red and yellow sands and sandy earths	3.1
	Mount Scratch 1 Subsystem	Undulating to rolling rises with numerous drainage lines, shallow stony soils on hill crests and gravelly loams	12.4
	Mount Scratch 2 Subsystem	Line of rolling low hills; duplexes, loams and clays, often rocky or alkaline	1.2
	Mount Scratch 3 Subsystem	Slopes and undulating rises; loamy earths and duplexes, some saline	11.1
	Mullingarra 2 Subsystem	Rocky outcrops, hill crests and isolated knolls; shallow stony soils with occasional lateritic remnants and silicified pallid zone material. Shallow rocky and gravelly soils	1.0
	Nerramyne System	Undulating plains of sandy-surfaced laterite and weathered granite with low remnant plateau, breakaways and rises supporting acacia shrublands	161.7
	Noolagabbi 1 Subsystem	Level to very gently inclined valley flats; brown loamy duplexes and red shallow loams over hardpans	28.3
	Noolagabbi 2 Subsystem	Level to very gently inclined valley flats; sandy loams over red-brown hardpans	9.5
	Noolagabbi 4 Subsystem	Very gently to gently inclined slopes; sandy loams over red-brown hardpans, often with rock	2.5
	Noolagabbi 5 Subsystem	Level to very gently inclined valley flats and foot slopes. red gradational loams and clays, alkaline	3.3
	Noolagabbi 7 Subsystem	narrow drainage line, moderate secondary salinity; saline loamy soils, often with red-brown hardpans	5.3
	Noolagabbi East Subsystem 2	Level to very gently inclined valley flats; sandy loams over red-brown hardpans	179.4

IBRA Subregion	Unit	Description*	Extent (ha) in Survey Area
	Noolagabbi East Subsystem 7	Narrow drainage line, moderate secondary salinity; saline loamy soils, often with red-brown hardpans	1.4
	Noolagabbi Saline Drainage, Phase 2	Narrow drainage lines to broad level salt plains in broad mature valleys	4.0
	Pindar 2 Subsystem	Gently undulating sandplain and gentle slopes; acid yellow deep sand and sandy earths with some loamy earths and hardpan soils	9.6
	Pindar A System	Loamy plains surrounded by sandplain supporting York gum woodlands and acacia shrublands	42.2
	Pindar South Subsystem 1	Gently undulating sandplain and long gentle slopes; acidic yellow and brown deep sands and sandy earths	3.0
	Pindar South Subsystem 4	Gently undulating sandplain; red and yellow deep sands with sandy and loamy earths	59.8
	Saline Drainage 2 Subsystem	Narrow drainage lines to broad level salt plains in broad mature valleys; salt lakes and saline soils	11.9
	Saline Drainage System	Narrow drainage lines to broad level salt plains in broad mature valleys	7.1
	Yandanooka 1 Subsystem	Stream bed and immediate alluvial plain of rivers and creeks of the Yandanooka Valley. Well drained red sands and moderately well to poorly drained sandy loamy duplex soils	0.7
	Yandanooka 2 Subsystem	Low rises of yellowish red and red sandy soils over sandstone	2.0
	Yandanooka 3 Subsystem	Alluvial plain and lower slopes of the Yandanooka Valley. Sandy loam duplex soils and red and brown clays	10.6
	Yandanooka 5 Subsystem	Alluvial plain of well drained red sands and loams	3.8
	Yowie System	Sandy plains supporting tall shrublands of mulga and bowgada with patchy wanderrie grasses	138.1
Tallering	**Campsite System**	Alluvial plains supporting eucalypt woodlands with halophytic understoreys and acacia shrublands	733.8
	Carnegie System	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands	459.5
	Challenge System	Gently undulating gritty and sandy surfaced plains, occasional granite hills, tors and low breakaways, supporting acacia shrublands and occasional halophytic shrublands	849.3
	Cunyu System	Calcrete platforms, intervening drainage floors and channels and minor alluvial plains, supporting acacia shrublands, occasional casuarina woodlands and minor halophytic shrublands	0.0
	Doney System	Calcareous alluvial plains with eucalypt woodlands adjacent to salt lake systems	559.0

IBRA Subregion	Unit	Description*	Extent (ha) in Survey Area
	Euchre System	Low granite breakaways with alluvial plains and sandy tracts supporting eucalypt woodlands and acacia shrublands	101.6
	Graves System	Basalt and greenstone rises and low hills supporting eucalypt woodlands with prominent saltbush and bluebush understoreys	15.5
	Joseph System	Undulating yellow sandplain supporting dense mixed acacia, melaleuca and casuarina shrublands with patchy mallees	2,316.8
	Moriarty System	Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys	765.2
	Nerramyne System	Undulating plains of sandy-surfaced laterite and weathered granite with low remnant plateaux, breakaways and rises supporting acacia shrublands	568.4
	Pindar A System	Loamy plains surrounded by sandplain supporting York gum woodlands and acacia shrublands	2,782.7
	Tallering System	Prominent ridges and hills of banded ironstone, dolerite and sedimentary rocks supporting bowgada and other acacia shrublands	1,539.2
	Tealtoo System	Level to gently undulating loamy plains with fine ironstone gravel mantles supporting dense acacia shrublands	672.1
	Yowie System	Sandy plains supporting tall shrublands of mulga and bowgada with patchy wanderrie grasses	1,186.5

** Source: Soil Landscape Mapping - Best Available spatial dataset (DPIRD-027) (DPIRD, 2025).*



Legend

- Survey Area
- Road
- Railway

Soil Landscape Mapping

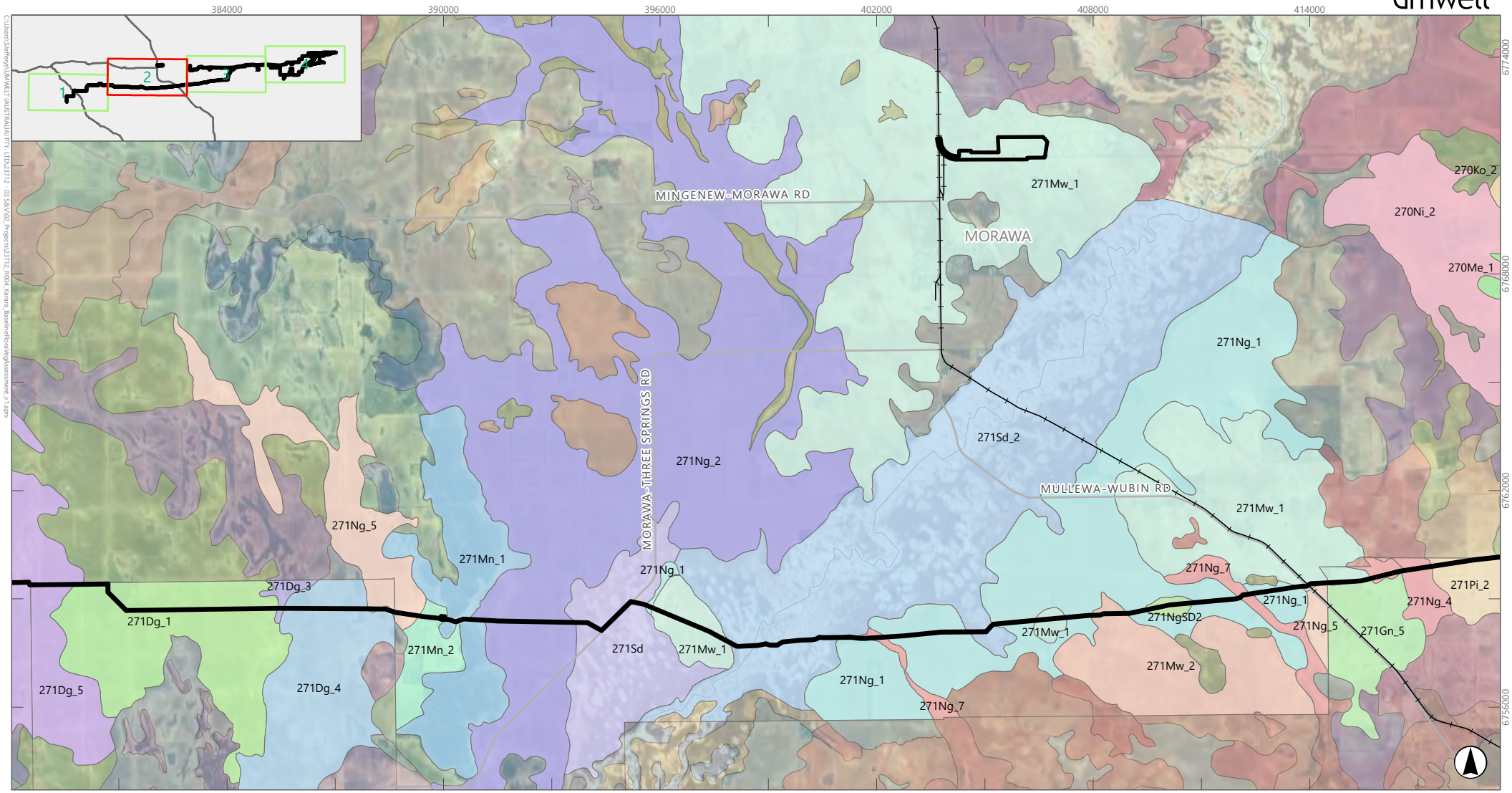
- 220Er_1: Eradu 1 subsystem
- 222Mr_1: Mooladara Hill 1 subsystem
- 222Mr_5: Mooladara Hill 5 subsystem
- 226Mb_3: Mount Budd 3 subsystem
- 226Mg_2: Mullingarra 2 subsystem
- 226Ms_1: Mount Scratch 1 subsystem
- 226Ms_2: Mount Scratch 2 subsystem
- 226Ms_3: Mount Scratch 3 subsystem
- 226Yn_1: Yandanooka 1 subsystem
- 226Yn_2: Yandanooka 2 subsystem
- 226Yn_3: Yandanooka 3 subsystem
- 226Yn_5: Yandanooka 5 subsystem
- 271Dg_5: Dalgooka 5 subsystem

FIGURE 5.1

Soil Landscape Mapping Sheet 1

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2025), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Soil Landscape Mapping

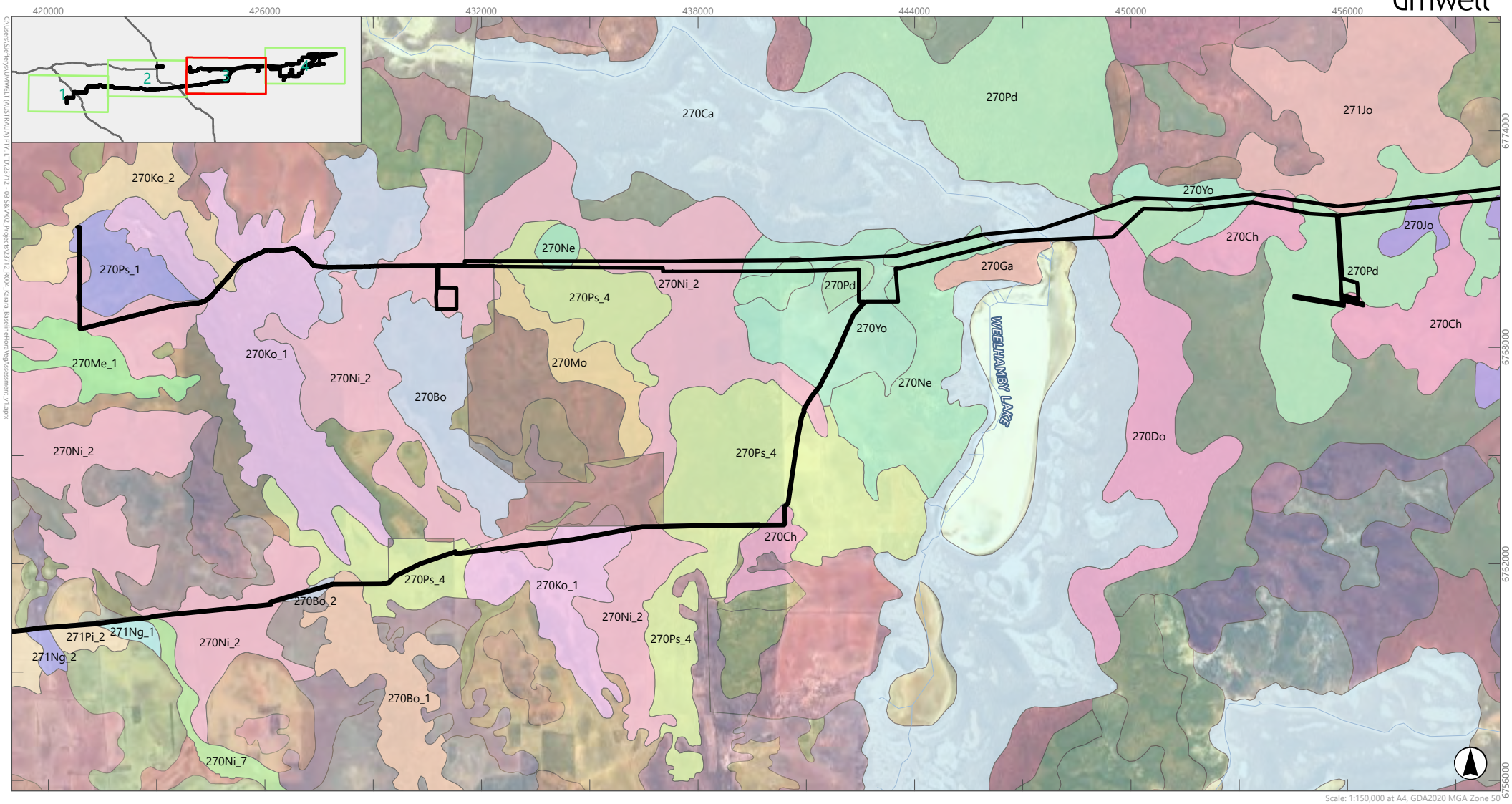
- 270Ko_2: Koolanooka 2 subsystem
- 270Me_1: Morawa East subsystem 1
- 270Ni_2: Noolagabbi East subsystem 2
- 271Dg_1: Dalgooka 1 subsystem
- 271Dg_3: Dalgooka 3 subsystem
- 271Dg_4: Dalgooka 4 subsystem
- 271Dg_5: Dalgooka 5 subsystem
- 271Gn_5: Granada 5 subsystem
- 271Mn_1: Mount Nunn 1 subsystem
- 271Mn_2: Mount Nunn 2 subsystem
- 271Mw_1: Morawa 1 subsystem
- 271Mw_2: Morawa 2 subsystem
- 271NgSD2: Noolagabbi Saline Drainage, phase 2
- 271Ng_1: Noolagabbi 1 subsystem
- 271Ng_2: Noolagabbi 2 subsystem
- 271Ng_4: Noolagabbi 4 subsystem
- 271Ng_5: Noolagabbi 5 subsystem
- 271Ng_7: Noolagabbi 7 subsystem
- 271Pi_2: Pindar 2 subsystem
- 271Sd: Saline Drainage system
- 271Sd_2: Saline Drainage 2 subsystem

FIGURE 5.1

Soil Landscape Mapping
Sheet 2

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2025), Umwelt (2025), KML (2023)



Legend

Survey Area

Major Watercourse

Soil Landscape Mapping

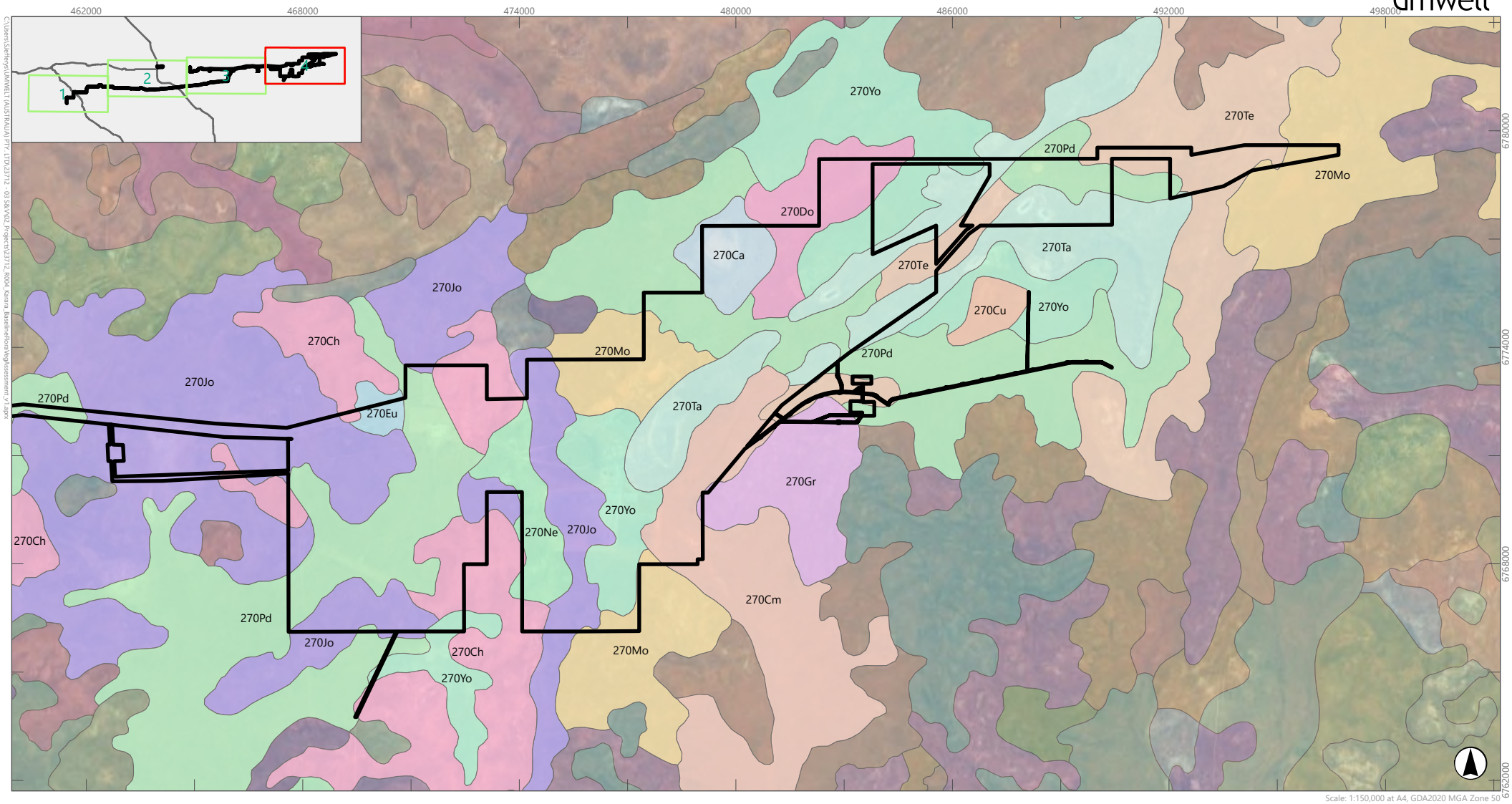
- 270Bo: Bowgarder system
- 270Bo_1: Bowgarder 1 subsystem
- 270Bo_2: Bowgarder 2 subsystem
- 270Ca: Carnegie system
- 270Ch: Challenge system
- 270Do: Doney system
- 270Ga: Gabanintha system
- 270Jo: Joseph system
- 270Ko_1: Koolanooka 1 subsystem
- 270Ko_2: Koolanooka 2 subsystem
- 270Me_1: Morawa East subsystem 1
- 270Mo: Moriarty system
- 270Ne: Nerramyne system
- 270Ni_2: Noolagabbi East subsystem 2
- 270Ni_7: Noolagabbi East subsystem 7
- 270Pd: Pindar A system
- 270Ps_1: Pindar South subsystem 1
- 270Ps_4: Pindar South subsystem 4
- 270Yo: Yowie system
- 271Jo: Joseph system
- 271Ng_1: Noolagabbi 1 subsystem
- 271Ng_2: Noolagabbi 2 subsystem
- 271Pi_2: Pindar 2 subsystem

FIGURE 5.1

Soil Landscape Mapping
Sheet 3

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2025), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

Survey Area

Soil Landscape Mapping

- 270Ca: Carnegie system
- 270Ch: Challenge system
- 270Cm: Campsite system
- 270Cu: Cunyu system
- 270Do: Doney system
- 270Eu: Euchre system
- 270Gr: Graves system
- 270Jo: Joseph system
- 270Mo: Moriarty system
- 270Ne: Nerramyne system
- 270Pd: Pindar A system
- 270Ta: Tallering system
- 270Te: Tealtoo system
- 270Yo: Yowie system

FIGURE 5.1

Soil Landscape Mapping
Sheet 4

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2025), Umwelt (2025), KML (2023)

5.1.2 Regional Vegetation

Table 5.3 presents the typical vegetation communities associated with the IBRA subregions of the Survey Area.

The Pre-European Vegetation Spatial Dataset has been created from previous State-wide vegetation mapping datasets, primarily by J. S. Beard (Beard et al., 2013; DPIRD, 2019). It represents the vegetation of WA (as vegetation system associations (VSAs)) as presumed to have existed prior to European settlement, at a scale of 1:250,000. The Survey Area occurs across 27 VSAs, as summarised in **Table 5.4**. This table also presents the current extent of each VSA in relation to its pre-European extent within the respective IBRA subregion, and the percentage of the current extent of each VSA currently protected for conservation (as a proportion of the current extent) within the respective IBRA subregion (DBCA, 2019). Note that as per DBCA's Statewide Vegetation Statistics Report (DBCA, 2019), protected areas in this context are considered to be any areas listed in DBCA's Legislated Lands and Waters dataset as either Crown reserves or lands managed under Section 8A of the *Conservation and Land Management Act 1984* that have an International Union for Conservation of Nature (IUCN) category of I to IV. Note that this dataset was last updated in 2018, and it is understood that no further updates are currently planned.

All VSAs that occur within the Tallering IBRA subregion have greater than 84 % of their Pre-European extents remaining, but the VSAs in the Merredin and Lesueur Sandplain subregions are generally less well represented, with a minimum of 7.9 % and an average of 42.5 %. There is generally little conservation of VSAs in the respective subregion, and 12 VSAs do not have any area protected in the subregion (**Table 5.4**).

Table 5.3 Typical Vegetation of IBRA Regions and Subregions Intersected by the Survey Area

Region	Region Characteristics	Subregion	Subregion Characteristics	Location in Relation to Survey Area
Avon Wheatbelt	Proteaceous scrub-heaths, rich in endemics; mixed eucalypt, *Allocasuarina huegeliana* and Jam-York Gum woodlands on alluvials and eluvials	**Merredin**	Scrub-heath on sandplain; *Acacia-Casuarina* thickets on ironstone gravels; York gum (*Eucalyptus loxophleba*), salmon gum (*Eucalyptus salmonophloia*) and wandoo (*Eucalyptus wandoo*) woodlands on loams; halophytes on saline soils	Tilley Siding, western half of Yandanooka Pipeline and majority of Borefield Corridor
Geraldton Sandplains	Proteaceous scrub-heaths, rich in endemics. Extensive York Gum and Jam woodlands on outwash plains associated drainage	**Lesueur Sandplain**	Scrub-heath on sandplain near the coast; *Acacia-Casuarina* thickets further inland. *Acacia* scrub with scattered trees of *Eucalyptus loxophleba* on hard-setting loams	Western end of Borefield Corridor (approx. 9.0 km)
Yalgoo	Mainly *Acacia* scrub and low woodland becoming tree and shrub steppe in the north, and with halophytes along the lower river courses	**Tallering**	Low woodlands to open woodlands of *Eucalyptus*, *Acacia* and *Callitris* on the Western Yilgarn Craton and southern Carnarvon Basin. Mulga, *Callitris- Eucalyptus salubris*, and Bowgada open woodlands and scrubs in the western Yilgarn Craton. The subregion is particularly rich in ephemerals	Entirety of Karara Area and eastern half of Yandanooka Pipeline

Source: 'A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002' (CALM, 2003); 'Plant Life of Western Australia' (Beard, 2015).

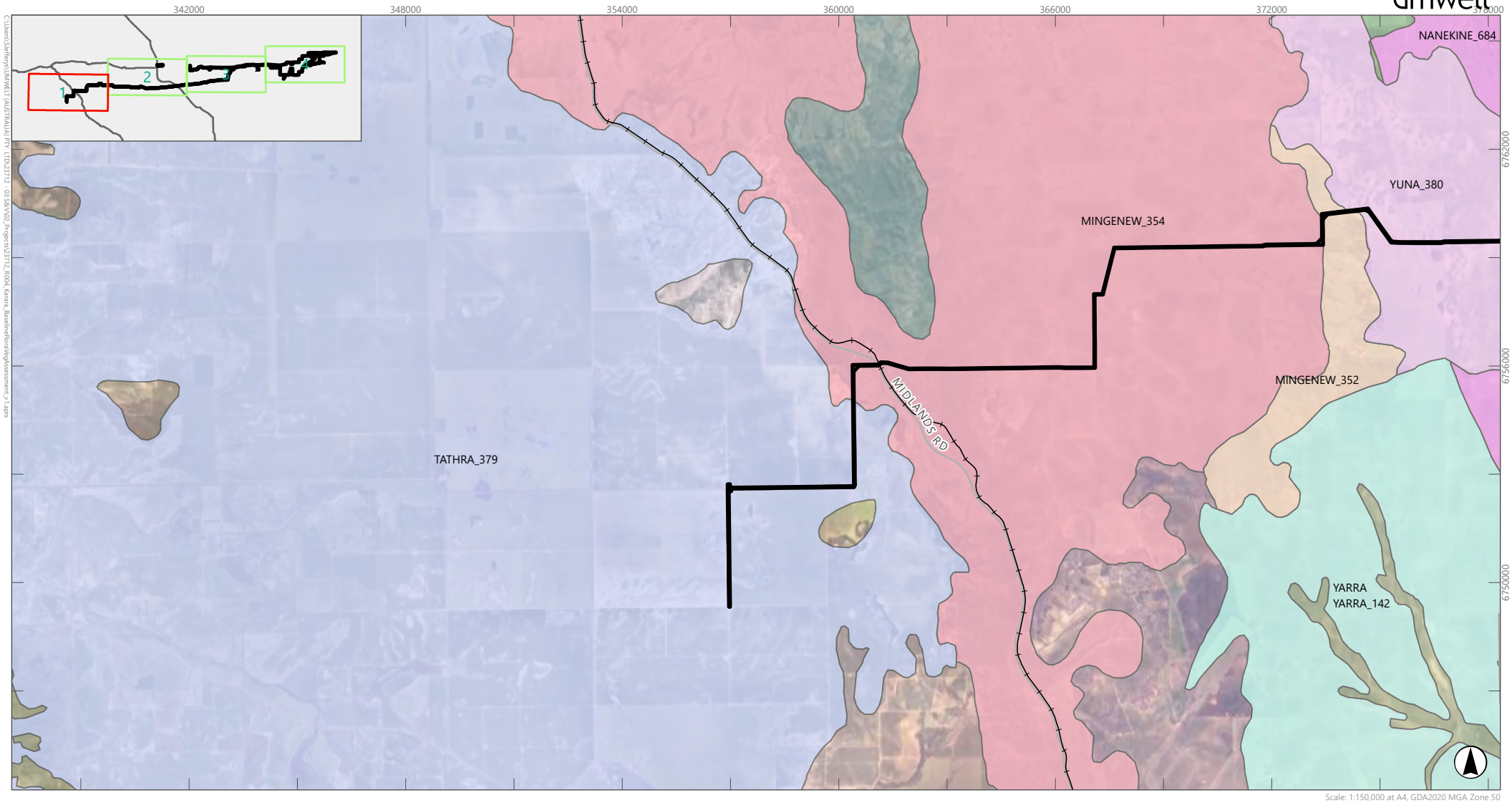
Table 5.4 Vegetation System Associations of the Survey Area

IBRA Subregion	VSA	Description*	Extent (ha)			Pre-European Extent Remaining (%)*	Current Extent Protected for Conservation (%)*
			Survey Area^	Pre-European*	Current*		
Lesueur Sandplain	**Tathra_379**	Shrublands; scrub-heath on lateritic sandplain in the central Geraldton Sandplain Region	28.5	369,252	111,607	30.2	5.58
Merredin	**Billeranga_692**	Shrublands; casuarina & melaleuca thicket	5.3	2,639	1,633	61.9	2.80
	Jibberding_352	Medium woodland; York gum	198.1	89,070	53,997	60.6	0.10
	Jibberding_374	Shrublands; bowgada scrub with scattered York gum	240.0	4,930	2,256	45.8	2.24
	Jibberding_420	Shrublands; bowgada & jam scrub	113.3	7,623	6,980	91.6	0
	Jibberding_437	Shrublands; Mixed acacia thicket on sandplain	25.5	163,512	143,130	87.5	1.36
	Jibberding_551	Shrublands; *Allocasuarina campestris* thicket	2.0	15,479	6,106	39.5	0
	Jibberding_631	Succulent steppe with woodland and thicket; York gum over *Melaleuca thyoides* & samphire	43.9	47,781	28,437	59.5	0.72
	Mingenew_352	Medium woodland; York gum	3.5	2,631	1,238	47.1	0
	Mingenew_354	Shrublands; jam and *Acacia rostellifera* (+ hakea) scrub with scattered York gum	42.1	91,100	10,353	11.4	0.98
	Nanekine_684	Mosaic: Shrublands; Shrublands; jam scrub with scattered York gum in the valleys / *Allocasuarina campestris* thicket	25.6	124,221	33,139	26.7	0.96
	Perenjori_352	Medium woodland; York gum	78.2	194,632	15,336	7.9	0.35
	Perenjori_358	Shrublands; bowgada & *Acacia quadrimarginea* on stony ridges	0.0	274	213	77.9	0
	Perenjori_551	Shrublands; *Allocasuarina campestris* thicket	90.9	107,903	12,547	11.6	0.44

IBRA Subregion	VSA	Description*	Extent (ha)			Pre-European Extent Remaining (%)*	Current Extent Protected for Conservation (%)*
			Survey Area^	Pre-European*	Current*		
	Perenjori_631	Succulent steppe with woodland and thicket; York gum over *Melaleuca thyoides* & samphire	17.0	30,707	13,390	43.6	0.19
	Perenjori_693	Mosaic: Low woodland: *Allocasuarina huegeliana* over mallee and acacia scrub / *Allocasuarina campestris* thicket	4.6	4,219	3,077	72.9	0
	Perenjori_1155	Mosaic: Medium woodland; York gum / Shrublands; *Allocasuarina campestris* thicket	15.6	14,384	1,342	9.3	1.39
	Yarra Yarra_142	Medium woodland; York gum & salmon gum	56.4	107,152	11,857	11.1	0.15
	Yuna_380	Shrublands; scrub-heath on sandplain	24.7	17,464	2,143	12.3	1.51
Tallering	**Yalgoo_41**	Shrublands; Teatree scrub	102.7	287	287	100	0
	Yalgoo_125	Bare areas; salt lakes	64.5	25,181	21,377	84.9	0
	Yalgoo_355	Shrublands; bowgada & jam scrub with scattered York gum & red mallee	58.9	55,020	54,692	99.4	0
	Yalgoo_358	Shrublands; bowgada & *Acacia quadrimarginea* on stony ridges	2,814.6	55,530	55,448	99.9	0
	Yalgoo_363	Shrublands; bowgada scrub with scattered cypress pine	4,210.5	11,915	11,729	98.5	0
	Yalgoo_364	Shrublands; bowgada scrub with scattered eucalypts & cypress pine	2,552.9	108,810	108,535	99.8	0
	Yalgoo_419	Shrublands; bowgada, jam and *Melaleuca hamata* thicket	1,989.6	302,322	289,440	95.7	0
	Yalgoo_420	Shrublands; bowgada & jam scrub	748.1	455,832	454,715	99.8	0.02

** Source: 2018 DBCA Statewide Vegetation Statistics report (DBCA, 2019).*

^ Source: Pre-European Vegetation spatial dataset (DPIRD-006) (DPIRD, 2019).



Legend

- Survey Area
- Road
- Railway

Vegetation System Association

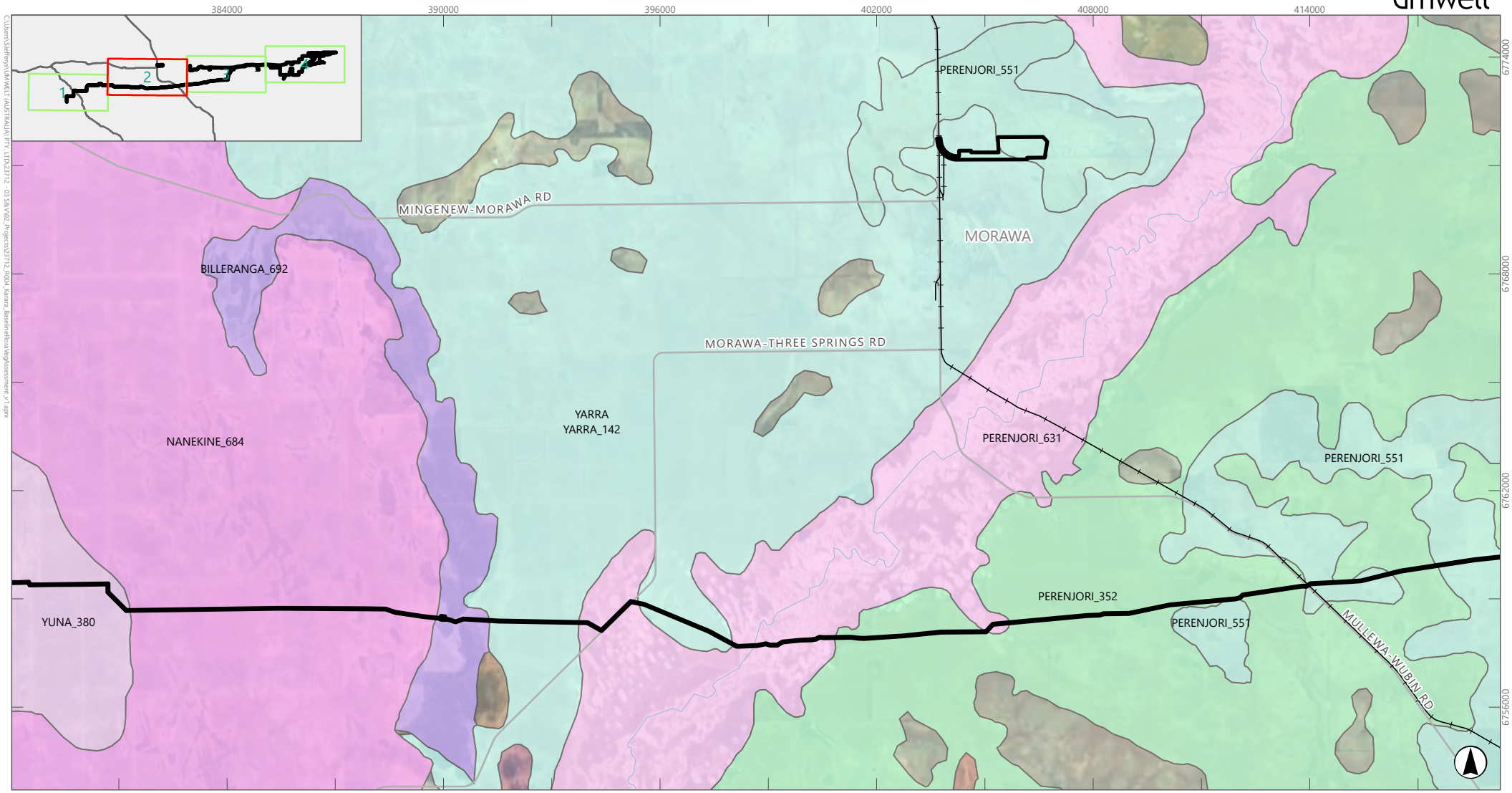
- MINGENEW_352
- MINGENEW_354
- NANEKINE_684
- TATHRA_379
- YARRA YARRA_142
- YUNA_380

FIGURE 5.2

Vegetation System Associations
Sheet 1

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2019), Umwelt (2025), KML (2023)



Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Vegetation System Association

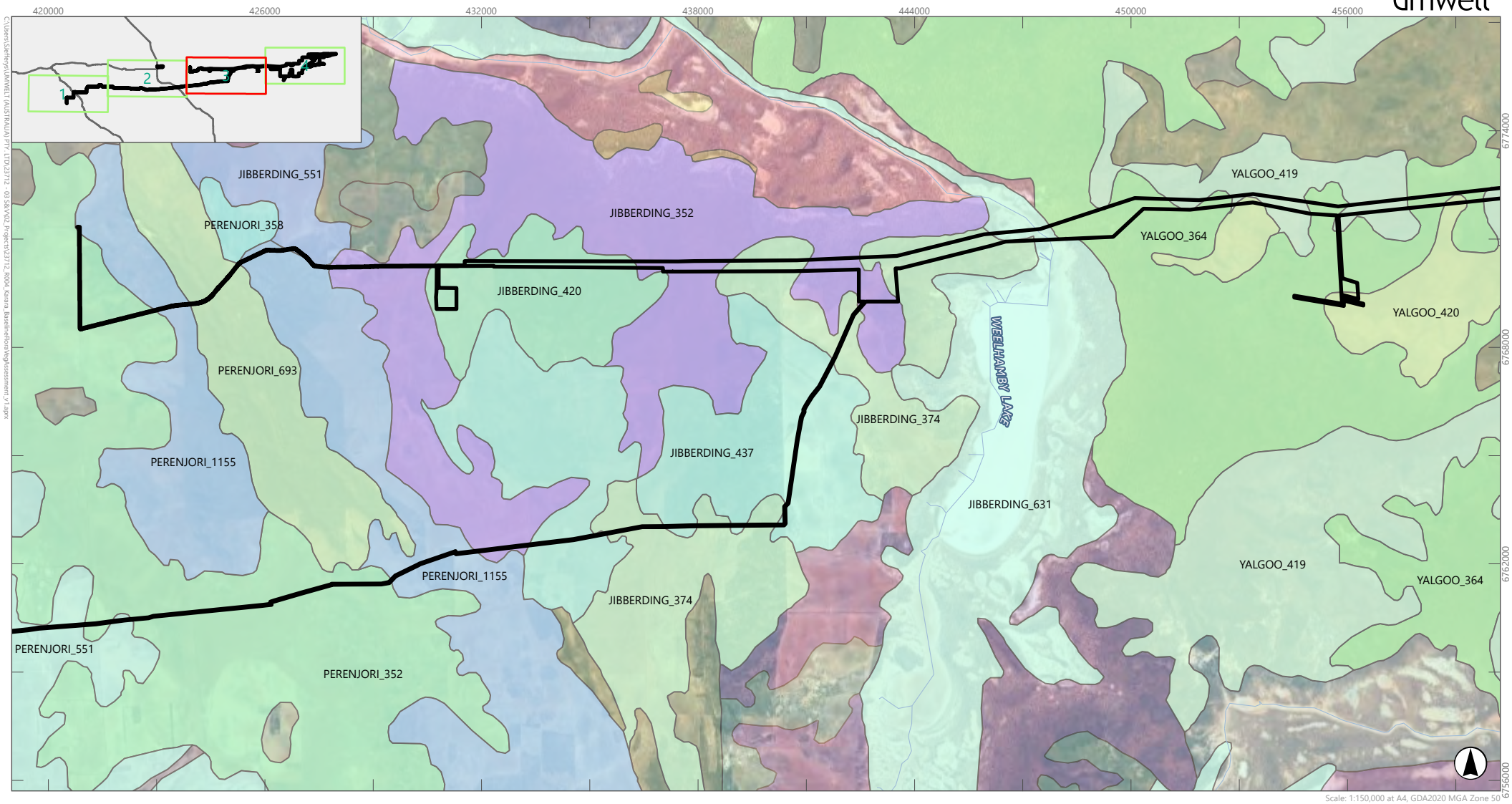
- BILLERANGA_692
- NANEKINE_684
- PERENJORI_352
- PERENJORI_551
- PERENJORI_631
- YARRA YARRA_142
- YUNA_380

FIGURE 5.2

Vegetation System Associations
Sheet 2

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2019), Umwelt (2025), KML (2023)



Legend

Survey Area

Major Watercourse

Vegetation System Association

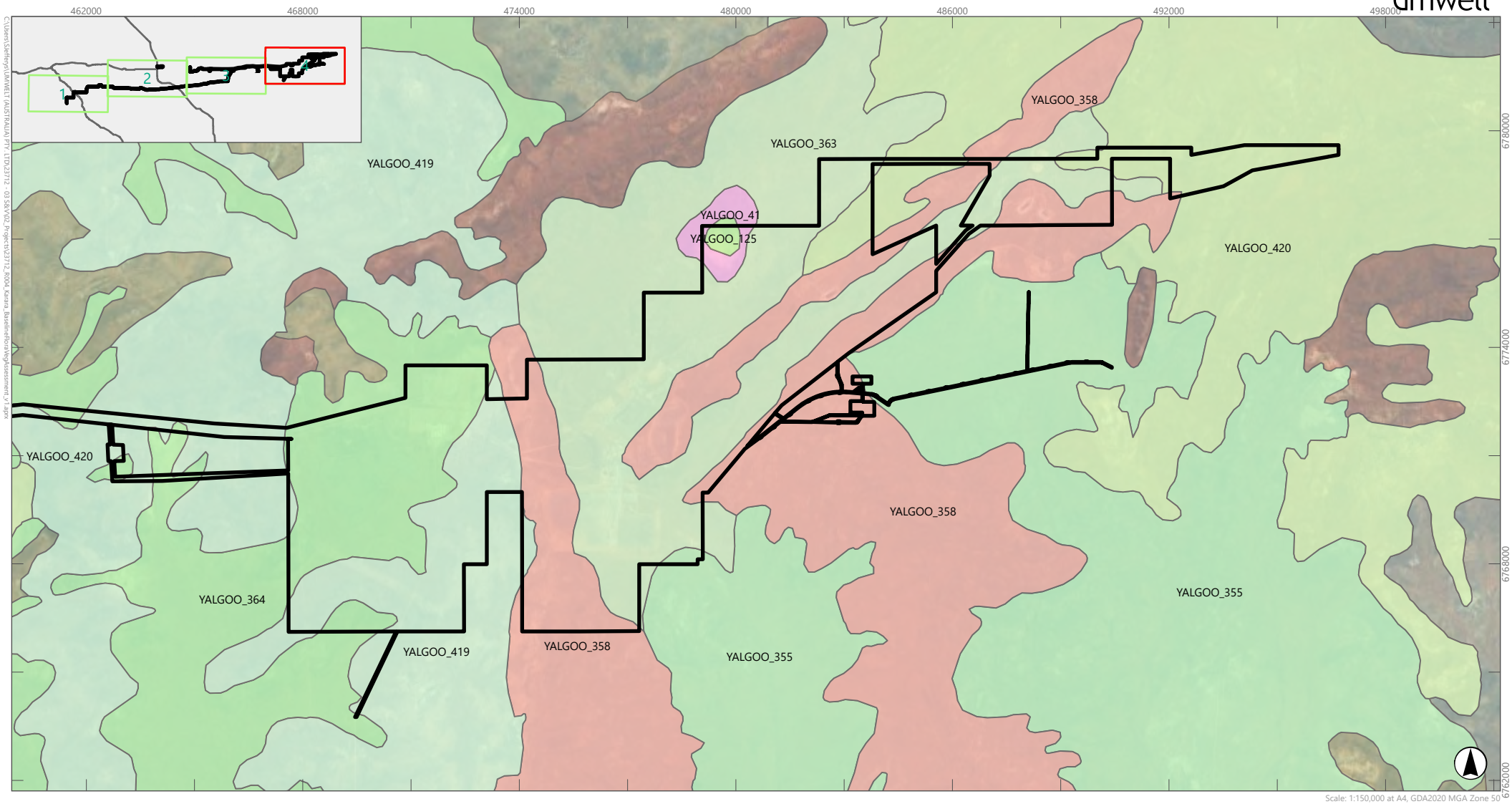
- JIBBERDING_352
- JIBBERDING_374
- JIBBERDING_420
- JIBBERDING_437
- JIBBERDING_551
- JIBBERDING_631
- PERENJORI_352
- PERENJORI_358
- PERENJORI_551
- PERENJORI_693
- PERENJORI_1155
- YALGOO_364
- YALGOO_419
- YALGOO_420

FIGURE 5.2

Vegetation System Associations
Sheet 3

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2019), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation System Association

- YALGOO_41
- YALGOO_125
- YALGOO_355
- YALGOO_358
- YALGOO_363
- YALGOO_364
- YALGOO_419
- YALGOO_420

FIGURE 5.2

Vegetation System Associations
Sheet 4

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DPIRD (2019), Umwelt (2025), KML (2023)

5.1.3 Fire History

The DBCA Fire History dataset (DBCA-060) contains records of fire events (prescribed burns; bushfire) on DBCA managed lands, or fire events which otherwise have incurred costs borne by DBCA. The only fire information contained in this dataset for the Survey Area is a small area burnt in January 2008 on the eastern end of the Yandanooka Pipeline area of the Survey Area, approximately 7 km west of Karara camp (DBCA, 2025b).

There is no fire history information for the Survey Area (either in the last 10 years or long term) in the North Australia and Rangelands Fire Information (NAFI) database (NAFI, 2025).

5.1.4 Local Flora and Vegetation Surveys

Many flora and vegetation assessments have been undertaken within and in the vicinity of the Survey Area. Those that are relevant to the Project are summarised in **Table 5.5**. This table was generally limited to surveys undertaken within the last 10 years, unless that survey was highly relevant to this current assessment. Note that the nomenclature and conservation status of the taxa presented in **Table 5.5** have been updated where required, and taxa that are no longer listed as significant are not presented.

Table 5.5 Summary of Key Results of Local Flora and Vegetation Surveys

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Flora and vegetation of the banded iron formations of the Yilgarn Craton: the central Tallering Land System (Markey & Dillon, 2008)	Partially located within the Survey Area (Karara Area) and extending north to Minjar and east to Walagnumming Hill)	• Level 2 (Detailed) flora and vegetation survey	• 103 quadrats	• September and October 2005	• 414 taxa • 4 hybrids	10 taxa: • *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3) • *Gunniopsis divisa* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Polianthion collinum* (P3) • *Psammomoya implexa* (P3) • *Rhodanthe collina* (P3)	26 taxa recorded	• 8 FCTs described
Karara–Mungada Project Survey Area Flora and Vegetation Assessment (Woodman Environmental, 2008d)	Overlaps majority of eastern part of Karara Area	• Level 2 (Detailed) flora and vegetation survey • Targeted searching for significant flora taxa • Incorporates data from Markey and Dillon (2006) and Woodman Environmental (2004, 2007a, 2007e, 2007g, 2007h, 2007i, 2007j, 2008a, 2008c)	• 155 quadrats • 53 targeted flora searching transects • 119 significant flora monitoring quadrats	Main survey: • June–September 2006 (quadrats and targeted searching) Other surveys from which data was incorporated in assessment: • September–October 2005 (quadrats, targeted searching) • April–May 2006 (targeted searching) • September 2007 (targeted searching)	• 514 taxa • 202 genera • 72 families	20 taxa: • *Acacia karinae* (P3) • *Acacia woodmaniorum* (T) • *Calandrinia kalanniensis* (P2) • *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3) • *Drummondita fulva* (P3) • *Grevillea globosa* (P3) • *Grevillea scabrida* (P3) • *Grevillea subtiliflora* (P3) • *Gunniopsis divisa* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Melaleuca barlowii* (P3) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Polianthion collinum* (P3) • *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1) • *Rhodanthe collina* (P3) • *Stenanthemum poicilum* (P3) • *Stylidium scintillans* (T)	26 taxa, including two Declared Pests: • *Echium plantagineum* • *Galium aparine*	• 23 FCTs mapped • One PEC identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1) (FCTs 4, 8, 9, 10a, 10b, 11, 12, 13, and 14).

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Regional Flora and Vegetation Survey of the Karara to Minjar Block (Woodman Environmental, 2012)	Overlaps the majority of Karara Area	• Level 2 (Detailed) regional flora and vegetation survey • Incorporates data from Markey and Dillon (2008) and Woodman Environmental (2007b, 2007c, 2007d, 2007f, 2007k, 2007l, 2007m, 2007b, 2008d, 2009b, 2009d, 2011)	• 990 quadrats	Main survey: • September–October 2008 • May, July–August, October–December 2009 • September–January 2010–2011 Other surveys from which data has been incorporated in assessment: • September–October 2005 • August 2006 • May–June 2007	• 640 taxa • 2 known hybrids • 14 putative hybrids • 241 genera • 70 families	28 taxa: • *Acacia diallaga* (P1) • *Acacia karinae* (P3) • *Acacia subsessilis* (P3) • *Acacia woodmaniorum* (T) • *Allocasuarina tessellata* (P3) • *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3) • *Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100) (P1) • *Cyanicula fragrans* (P3) • *Dicrastylis linearifolia* (P3) • *Drummondita fulva* (P3) • *Eremophila grandiflora* (P1) • *Grevillea globosa* (P3) • *Grevillea scabrida* (P3) • *Grevillea subtiliflora* (P3) • *Gunniopsis divisa* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Melaleuca barlowii* (P3) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Petrophile pauciflora* (P3) • *Polianthion collinum* (P3) • *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1) • *Psammomoya implexa* (P3) • *Rhodanthe collina* (P3) • *Stenanthemum poicilum* (P3) • *Stylidium scintillans* (T)	41 taxa, including two Declared Pests: • *Echium plantagineum* • *Galium aparine*	• 32 FCTs, two of which were split further into 4 subtypes each, and one additional plant community mapped • Three PECs identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1) (FCTs 1, 2, 3, 4, 5, 6, 10 and 12) o Yalgoo (Gnows Nest/Wolla Wolla and Woolgah–Wadgingarra) vegetation assemblages (banded ironstone formation) (P1) (FCTs 2 and 3) o Warriedar/Pinyalling/Walagnumming Hills vegetation assemblages (banded ironstone formation) (P1) (FCTs 1, 10 and 28).
Flora and Vegetation Survey of the Railway Corridor and Associated Borrow Pits (Karara to Tilley Siding) (Woodman Environmental, 2009c)	Overlaps majority of Survey Area; extends from Tilley Siding to near western boundary of Karara Area	• Level 1 (Reconnaissance) flora and vegetation survey • Incorporates data from Woodman Environmental (Woodman Environmental, 2007g, 2008b, 2008d)	• 106 relevés ('detailed site recordings')	Main survey: • September–October 2008 • December 2008 Other surveys from which data has been incorporated in assessment: • October 2005 • August 2006 • October–November 2006 • February 2007	• 348 taxa • 160 genera • 60 families	7 taxa: • *Drummondita fulva* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Melaleuca barlowii* (P3) • *Persoonia pentasticha* (P3) • *Petrophile pauciflora* (P3) • *Stenanthemum poicilum* (P3) • *Tecticornia bulbosa* (T)	17 taxa, including one Declared Pest: • *Echium plantagineum*	• 39 plant communities identified, as well as 6 disturbance community types • No PECs or TECs identified

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Flora and Vegetation Assessment of the Proposed Linear Infrastructure Corridor: Proposed Karara Iron Ore Project (Woodman Environmental, 2009a)	Overlaps majority of Survey Area; extends from near the western end of the Borefield Corridor to near Karara mine site	• Level 1 (Reconnaissance) flora and vegetation survey • Incorporates data from Woodman Environmental (Woodman Environmental, 2007g, 2008d, 2009c)	• 'Detailed recording sites' (number of sites not provided in text)	Main survey: • March 2009 Other surveys from which data has been incorporated in assessment: • October 2006 • May 2007 • July 2007 • October 2008	• 364 taxa • 171 genera • 63 families	9 taxa: • *Baeckea* sp. Perenjori (J.W. Green 1516) (P2) • *Grevillea leptopoda* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Melaleuca barlowii* (P3) • *Persoonia pentasticha* (P3) • *Pityrodia viscida* (P4) • *Stenanthemum poicilum* (P3) • *Verticordia comosa* (P1) • *Verticordia spicata* subsp. *squamosa* (T)	25 taxa, including one Declared Pest: • *Echium plantagineum*	• 47 plant communities (and degraded versions of plant communities) mapped • One TEC identified: o Plant assemblages of the Billeranga System as originally described in Beard (1976) (CR).
Flora and vegetation of the greenstone ranges of the Yilgarn Craton: Warriedar Fold Belt (Meissner & Coppen, 2014b)	Just south of eastern part of Karara Area	• Level 2 (Detailed) flora and vegetation survey	• 50 quadrats	• September 2011	• 286 taxa • 91 genera • 36 families	20 taxa: • *Acacia diallaga* (P1) • *Acacia karinae* (P3) • *Acacia subsessilis* (P3) • *Acacia sulcaticaulis* (T) • *Allocasuarina tessellata* (P3) • *Calandrinia* sp. Warriedar (F. Obbens 04/09) (P2) • *Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100) (P1) • *Cyanicula fragrans* (P3) • *Dodonaea amplisemina* (P4) • *Eremophila grandiflora* (P1) • *Grevillea scabrida* (P3) • *Grevillea subtiliflora* (P3) • *Hydrocotyle dimorphocarpa* (P1) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Rhodanthe collina* (P3) • *Stenanthemum poicilum* (P3)	14 taxa, none of which are Declared Pests of WoNS	• 6 vegetation units (VUs) identified • VUs were not compared to any known PECs or TECs
Blue Hills (Tenements M59/595 & M59/596) Targeted Flora Survey (Maia, 2014)	Overlaps eastern part of Karara Area	• Targeted searching for significant flora taxa	• Targeted flora searching transects	• June 2014	• 70 taxa • 52 genera • 33 families	7 taxa: • *Acacia karinae* (P3) • *Acacia woodmaniorum* (T) • *Drummondita fulva* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Persoonia pentasticha* (P3)	2 taxa, neither of which are Declared Pests of WoNS	• 7 VUs from Karara–Mungada Survey identified within study area • One PEC identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1).

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Conservation Significant Flora Survey Northern Leases – Golden Grove (Woodman Environmental, 2014a)	Approximately 47 km north of Karara Area	• Targeted searching for significant flora taxa	• Targeted flora searching transects	• June 2014	NA	1 taxon: • *Acacia speckii* (P4)	NA	• Two PECs identified: o Minjar and Chulaar Hills vegetation assemblages (banded ironstone formation) (P1) o Yalgoo (Gnows Nest/Wolla Wolla and Woolgah–Wadgingarra) vegetation assemblages (banded ironstone formation) (P1)
Rothsay Iron Ore Project Programme of Works Significant Flora and Vegetation Assessment (Woodman Environmental, 2014b)	Approximately 9.8 km south of Karara Area	• Targeted searching for significant flora taxa and vegetation	• Targeted searching along proposed drill pads and access tracks	• January 2014	NA	4 taxa: • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Persoonia pentasticha* (P3) • *Stenanthemum poicilum* (P3)	NA	• One PEC identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1)
Shine Project Targeted Biological Survey Shine Survey Area – Footprint and Buffer Area (Woodman Environmental, 2014c)	Approximately 28 km north of Karara Area	• Targeted searching for significant and introduced flora taxa	• Targeted flora searching transects	• September 2014	NA	3 taxa: • *Drummondita fulva* (P3) • *Micromyrtus trudgenii* (P3) • *Rhodanthe collina* (P3)	4 taxa, none of which are Declared Pests of WoNS	NA

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Rothsay Gold Project Flora and Vegetation Assessment (Woodman Environmental, 2017)	Approximately 10 km south of Karara Area	• Level 2 (Detailed) flora and vegetation survey • Targeted searching for significant flora taxa within select areas of appropriate habitat	• 35 quadrats	• October 2016	• 300 taxa • 1 putative hybrid • 163 genera • 59 families	16 taxa: • *Acacia karinae* (P3) • *Allocasuarina tessellata* (P3) • *Bossiaea* sp. Jackson Range (G. Cockerton & S. McNee LCS 13614) (P3) • *Calandrinia* sp. Warriedar (F. Obbens 04/09) (P2) • ?*Cyanicula fragrans* (P3) • *Grevillea globosa* (P3) • *Grevillea scabrida* (P3) • *Grevillea subtiliflora* (P3) • *Gunniopsis divisa* (P3) • *Hemigenia tichbonii* (P1) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Rhodanthe collina* (P3) • *Stenanthemum poicilum* (P3) • Habitat for *Stylidium scintillans* (T) but survey potentially later than the flowering period of this taxon	22 taxa, including one Declared Pest: • *Echium plantagineum*	• 9 VUs mapped • One PEC identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1) (VUs 2 and 3). • VUs 2, 6, 7 and 9 identified as being potential significant vegetation in a local context (as per EPA (2016b)) • VUs 6, 7 and 9 identified as being potential significant vegetation in a regional context (as per EPA (2016b))
Rothsay Gold Project – Targeted Survey for Stylidium scintillans (Threatened) (Woodman Environmental, 2018)	Approximately 10 km south of Karara Area	• Targeted searching for significant flora taxa within select areas of appropriate habitat	• Targeted flora searching transects	• August 2018	NA	4 taxa: • *Calandrinia* sp. Warriedar (F. Obbens 04/09) (P2) • *Menkea draboides* (P3) • *Micromyrtus acuta* (P3) • *Petrophile pauciflora* (P3)	NA	NA
Rothsay Gold Project – Targeted Survey for Hemigenia tichbonii (Woodman Environmental, 2019)	Approximately 11 km south of Karara Area	• Targeted searching for significant flora taxa within select areas of appropriate habitat	• Targeted flora searching transects	• June 2019	NA	1 taxon: • *Hemigenia tichbonii* (P1)	NA	NA

Project and Source	Location in Relation to Survey Area	Survey Scope	Parameters of Assessment	Timing	Number of Flora Taxa	Significant Flora Taxa^	Introduced Flora Taxa^	Vegetation and Significant Vegetation*
Karara Project Expansion Detailed and Targeted Flora and Vegetation Assessment (Umwelt, 2021)	Overlaps eastern part of Karara Area	• Detailed flora and vegetation survey • Targeted flora and vegetation survey within project footprint • Incorporates data from Markey and Dillon (2008) and Woodman Environmental (2007b, 2007c, 2007d, 2007f, 2007k, 2007l, 2007m, 2007b, 2008d, 2009b, 2009d, 2011)	• 265 quadrats • 269 relevés • Targeted searching at 50 m spacing	Main survey: • August–September 2020 (quadrats and targeted searching) Other surveys from which data was incorporated in assessment: • September–October 2005 (quadrats, targeted searching) • April–May 2006 (targeted searching) • June–September 2006 (quadrats and targeted searching) • September 2007 (targeted searching)	• 271 taxa • 137 genera • 54 families	26 taxa: • *Acacia karinae* (P3) • *Acacia woodmaniorum* (T) • *Allocasuarina tessellata* (P3) • *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1) • *Calandrinia ?kalanniensis* (P2) • *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3) • *Drummondita fulva* (P3) • *Grevillea globosa* (P3) • *Grevillea scabrida* (P3) • *Grevillea subtiliflora* (P3) • *Gunniopsis divisa* (P3) • *Hibbertia cockertoniana* (P3) • *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1) • *Melaleuca barlowii* (P3) • *Micromyrtus acuta* (P3) • *Micromyrtus trudgenii* (P3) • *Millotia dimorpha* (P1) • *Persoonia pentasticha* (P3) • *Petrophile pauciflora* (P3) • *Polianthion collinum* (P3) • *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1) • *Rhodanthe collina* (P3) • *Stenanthemum poicilum* (P3) • *Stylidium scintillans* (T) • *Swainsona picta* (P1) • *Crassula* sp. nov. (potentially undescribed)	32 taxa, including two Declared Pests: • *Echium plantagineum* • *Galium aparine*	• 32 VUs mapped • One PEC identified: o Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation) (P1) (VUs 16, 19, 20, 21, 22, 24, 25, 26, 27 and 28). • 18 VUs identified as being potential significant vegetation in a local context (as per EPA (2016b)) • 9 VUs identified as being potential significant vegetation in a regional context (as per EPA (2016b))

5.1.5 Significant Flora Taxa

The interrogation of the DBCA WA Herbarium specimen database and TPFL databases (DBCA, 2023d) returned 333 listed significant vascular flora taxa that have records within the Desktop Study Area. The majority of these taxa have records in the western half of the Desktop Study Area in the Geraldton Sandplains and Avon Wheatbelt IBRA regions. The 333 taxa include 45 taxa listed as Threatened under the BC Act. A total of 14 of the 333 taxa have DBCA records within the Survey Area, of which four also have records within the Targeted Survey Area: *Acacia karinae*, *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096), *Gunniopsis divisa* and *Rhodanthe collina* (all DBCA-listed P3 taxa, and all within the Mine Area part of the Targeted Survey Area).

The 2023 search of the DBCA database via NatureMap did not return any significant flora taxa additional to those returned by the interrogation of the DBCA WA Herbarium specimen database and TPFL databases, but the updated search in 2024 with the larger interrogation area (i.e. the Desktop Study Area) returned an additional 12 listed flora taxa with records within the Desktop Study Area (DBCA, 2023e, 2024b). This includes *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982), which is listed as Endangered under the EPBC Act, and was previously listed as Threatened under the BC Act. Following an update to the taxonomy of *Hypocalymma* sect. *Hypocalymma* published in 2023 (Keighery et al., 2023), *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982) and a more common subspecies, *Hypocalymma angustifolium* subsp. Swan Coastal Plain (G.J. Keighery 16777), were both included in the new name *Hypocalymma balbakiae*. The records that were previously attributable to *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982) are now considered to represent a less common ecological variant of *Hypocalymma balbakiae*, rather than a distinct taxonomic entity. Consequently, the accepted range of this consolidated entity under this new treatment has resulted in a considerable expansion compared to the previously accepted range of *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982), with *Hypocalymma balbakiae* extending from near Gregory in the north to near Denmark in the south, and being common within that range (WA Herbarium, 1998-). Therefore, *Hypocalymma balbakiae* is not considered to be at risk and is not listed at State or Commonwealth level. The authors of the paper within which this taxonomic update was published noted that a nomination would be prepared to the Threatened Species Scientific Committee for delisting of the name *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982) (Keighery et al., 2023). Therefore, given *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982) is no longer a formally recognised name, this taxon has not been included in this desktop assessment and will not be discussed further in this report in a significant flora context.

The interrogation of the DCCEEW SPRAT database with regard to MNES listed under the EPBC Act (DCCEEW, 2024) identified 63 flora taxa (or habitat for such taxa) as occurring or potentially occurring within the Desktop Study Area (full interrogation results presented in **Appendix B**). The results included *Hypocalymma angustifolium* subsp. Hutt River (S. Patrick 2982), but as discussed above, this taxon has been excluded from the desktop assessment. Note that the DCCEEW SPRAT database search results include intersections with broadly mapped, potentially suitable habitat for each taxon, rather than point records alone (as per the DBCA database searches); the results therefore include taxa that 'may occur' or are 'likely to occur', as well as those 'known to occur'. Of the 63 taxa returned by this search, 25 were indicated as potentially occurring in the Survey Area itself (**Appendix B**).

Appendix C presents a summary of significant flora taxa known to occur or potentially occurring within the Desktop Study Area. This list has been compiled from the results of searches of DBCA's TPFL and WA Herbarium databases (DBCA, 2023d), DBCA NatureMap database (DBCA, 2023e, 2024b), DCCEEW SPRAT database (DCCEEW, 2024), and the results of local surveys (**Section 5.1.4**). **Appendix C** also presents the known flowering period and habitat for each taxon, according to data from specimens lodged at the WA Herbarium (1998-).

A total of 368 listed significant flora taxa were returned by the desktop assessment of the Desktop Study Area (**Appendix C**), comprising 70 taxa listed under the EPBC and/or BC Acts, 297 taxa listed as Priority by DBCA only, and one potentially undescribed species. The locations of these taxa are presented in **Figure 5.3** (subject to the availability of spatial data in the case of records from previous local surveys).

According to all sources compiled for the desktop assessment, 24 taxa have existing records within the Survey Area (shaded grey in **Appendix C**), and of these, 13 have existing records within the Targeted Survey Area (shaded light blue in **Appendix C** and listed below):

- *Acacia karinae* (P3)
- *Allocasuarina tessellata* (P3)
- *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- *Crassula* sp. nov. (potentially undescribed)
- *Grevillea globosa* (P3)
- *Grevillea scabrida* (P3)
- *Gunniopsis divisa* (P3)
- *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- *Micromyrtus trudgenii* (P3)
- *Persoonia pentasticha* (P3)
- *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- *Rhodanthe collina* (P3).

312000 338000 364000 390000 416000 442000 468000 494000 520000 546000

6838000 6812000 6786000 6760000 6734000 6708000

GERALDTON-MOUNT MAGNET RD
NANGETTY-WALKAWAY RD
MINGENEW-MULLEWA RD
MULLEWA-WUBIN RD
LOCKIER RIVER
IRWIN RIVER
MINGENEW
MINGENEW-MORAWA RD
MIDLANDS RD
MORAWA
DONGARA
MILLS DR
MORAWA-THREE SPRINGS RD
MONGERS LAKE
PERENJORI
ARROWSMITH RIVER
CARNAMAH-PERENJORI RD
GREAT NORTHERN HWY
THREE SPRINGS
INDIAN OCEAN DR
BRAND HWY
YARRA YARRA LAKES
ENEABBA-THREE SPRINGS RD
CARNAMAH
CARNAMAH-ENEABBA RD
ENEABBA
COOLIMBA-ENEABBA RD
COOROW
COOROW-LATHAM RD

Scale: 1:650,000 at A3, GDA2020 MGA Zone 50

Legend

- Desktop Study Area
- Survey Area
- Road
- Railway
- Major Watercourse

FIGURE 5.3
Existing Significant Flora Records of the Desktop Study Area

0 13 26 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2023d), Umwelt (2021), KML (2023), Woodman Environmental (2008d, 2011, 2012)

Significant Flora (Umwelt)

- Acdia *Acacia diallaga* (P1)
- Ackar *Acacia karinae* (P3)
- Acsus *Acacia subsessilis* (P3)
- Acsul *Acacia sulcaticaulis* (T)
- Acwo *Acacia woodmaniorum* (T)
- Alte *Allocasuarina tessellata* (P3)
- BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)
- Basc *Banksia scabrella* (P4)
- BospJR *Bossiaea* sp. Jackson Range (G. Cockerton & S. McNee LCS 13614) (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Caka *Calandrinia kalanniensis* (P2)
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- ChspWa *Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100) (P1)
- ChspYa *Chamelaucium* sp. Yalgoo (Y. Chadwick 1816) (P1)
- Csn *Crassula sp. nov.* (PU)
- Cyfr *Cyanicula fragrans* (P3)
- Dili *Dicrastylis linearifolia* (P3)
- Dosc *Dodonaea scurra* (P1)
- Drfu *Drummondita fulva* (P3)
- Ergr *Eremophila grandiflora* (P1)
- Erolp *Eremophila oldfieldii* subsp. *papula* (P1)
- Eujuk *Eucalyptus jutsonii* subsp. *kobela* (P1)
- Eusy *Eucalyptus synandra* (T)
- Grgl *Grevillea globosa* (P3)
- Grle *Grevillea leptopoda* (P3)
- Grph *Grevillea phanerophlebia* (T)
- Grsc *Grevillea scabrida* (P3)
- Grsu *Grevillea subtiliflora* (P3)
- Gudi *Gunniopsis divisa* (P3)
- Hico *Hibbertia cockertoniana* (P3)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Made *Malleostemon decipiens* (P1)
- Meba *Melaleuca barlowii* (P3)
- Mesc *Melaleuca sclerophylla* (P3)
- Medr *Menkea draboides* (P3)
- Miac *Micromyrtus acuta* (P3)
- Mitru *Micromyrtus trudgenii* (P3)
- Midi *Millotia dimorpha* (P1)
- Pepe *Persoonia pentasticha* (P3)
- Pepau *Petrophile pauciflora* (P3)
- Pivi *Pityrodia viscida* (P4)
- Poco *Polianthion collinum* (P3)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Psim *Psammomoya implexa* (P3)
- Rhco *Rhodanthe collina* (P3)
- Stpo *Stenanthemum poicilum* (P3)
- Stsc *Stylidium scintillans* (T)
- Swpi *Swainsona picta* (P1)v
- Tebu *Tecticornia bulbosa* (T)
- Thni *Thryptomene nitida* (P3)
- Veco *Verticordia comosa* (P1)
- Vesps *Verticordia spicata* subsp. *squamosa* (T)

Significant Flora (DBCA)

- Acce *Acacia cerastes* (P3)
- Acchc *Acacia chapmanii* subsp. *chapmanii* (P2)
- Accocl *Acacia congesta* subsp. *cliftoniana* (P1)
- Accow *Acacia congesta* subsp. *wonganensis* (P2)
- Acdia *Acacia diallaga* (P1)
- Acfla *Acacia flabellifolia* (P3)
- Acform *Acacia formidabilis* (P3)
- Acgra *Acacia graciliformis* (P1)
- Acimi *Acacia imitans* (P4)
- Acisi *Acacia isoneura* subsp. *isoneura* (P3)
- Acisn *Acacia isoneura* subsp. *nimia* (P3)
- Ackar *Acacia karinae* (P3)
- Acla *Acacia lanceolata* (P3)
- Aclal *Acacia latipes* subsp. *licina* (P3)
- Aclim *Acacia lineolata* subsp. *multilineata* (P1)
- Acme *Acacia megacephala* (P3)
- Acmuri *Acacia muriculata* (P1)
- Acnil *Acacia nigripilosa* subsp. *latifolia* (P1)
- Acno *Acacia nodiflora* (P3)
- Acpt *Acacia pterocaulon* (P1)
- Acrec *Acacia recurvata* (T)
- AcspG *Acacia* sp. Goodlands (B.R. Maslin 7761) (P1)
- Acspe *Acacia speckii* (P4)
- Acsub *Acacia subrigida* (P2)
- Acsus *Acacia subsessilis* (P3)
- Acsul *Acacia sulcaticaulis* (T)
- Actel *Acacia telmica* (P3)
- Acung *Acacia unguicula* (T)
- Acvi *Acacia vittata* (P2)
- Acwi *Acacia wilsonii* (T)
- Acwo *Acacia woodmaniorum* (T)
- Algr *Allocasuarina grevilleoides* (P3)
- Alra *Allocasuarina ramosissima* (P3)
- Alte *Allocasuarina tessellata* (P3)
- Anad *Androcalva adenothalia* (T)
- Anmicr *Angianthus micropodioides* (P3)
- Apex *Apectospermum exsertum* (P3)
- Asmo *Asteridea morawana* (P1)
- Atmu *Atriplex muelleri* (P1)
- Aunu *Austrostipa nunaginensis* (P3)
- Bafa *Babingtonia fascifolia* (P1)
- Bamin *Babingtonia minutifolia* (P1)
- Bape *Babingtonia peteriana* (P2)
- BaspBH *Baeckea* sp. Billeranga Hills (M.E. Trudgen 2206) (P1)
- BaspMo *Baeckea* sp. Morawa (M.A. Langley MAL4177) (P1)
- BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)
- BaspWa *Baeckea* sp. Walkaway (A.S. George 11249) (P3)
- Bagr *Balaustion grande* (P3)
- Bahe *Balaustion hemisphaericum* (P1)
- Babe *Banksia benthamiana* (P4)
- Baboe *Banksia borealis* subsp. *elatior* (P3)
- Bach *Banksia chamaephyton* (P4)
- Bacy *Banksia cypholoba* (P3)
- Bael *Banksia elegans* (P4)
- Bafrc *Banksia fraseri* var. *crebra* (P3)
- Bafro *Banksia fraseri* var. *oxycedra* (P3)
- Basc *Banksia scabrella* (P4)
- Baspm *Banksia splendida* subsp. *macrocarpa* (P3)
- Basu *Banksia subulata* (P3)
- Batr *Banksia trifontinalis* (P3)
- Beap *Beyeria apiculata* (P1)
- Bega *Beyeria gardneri* (P3)
- BospJR *Bossiaea* sp. Jackson Range (G. Cockerton & S. McNee LCS 13614) (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Cadea *Caladenia denticulata* subsp. *albicans* (P1)
- Calom *Caladenia longicauda* subsp. *minima* (P2)
- Caka *Calandrinia kalanniensis* (P2)
- CaspWa *Calandrinia* sp. Warriedar (F. Obbens 04/09) (P2)
- Cabr *Calectasia browneana* (P2)
- Caac *Calothamnus accedens* (P4)
- Caar *Calothamnus arcuatus* (P2)
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Cach *Calytrix chrysantha* (P4)
- Caece *Calytrix ecalycata* subsp. *ecalycata* (P3)
- Caene *Calytrix eneabbensis* (P4)
- Capl *Calytrix plumulosa* (P3)
- Capur *Calytrix purpurea* (P2)
- Casu *Calytrix superba* (P4)
- Cemi *Centrolepis milleri* (P3)
- Chrep *Chamelaucium repens* (P1)
- ChspBu *Chamelaucium* sp. Bunjil (M.E. Ballingall 1970) (P1)
- ChspWa *Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100) (P1)
- ChspWH *Chamelaucium* sp. Wongan Hills (B.H. Smith 1140) (P3)
- ChspYa *Chamelaucium* sp. Yalgoo (Y. Chadwick 1816) (P1)
- Chrh *Cheyniana rhodella* (P2)
- Chhu *Chorizema humile* (T)
- Cogr *Comesperma griffinii* (P2)
- Corh *Comesperma rhadinocarpum* (P3)
- Codit *Conostylis dielsii* subsp. *teres* (T)
- Comi *Conostylis micrantha* (T)
- Coac *Corynotheca acanthoclada* (P1)
- Crno *Cryptandra nola* (P3)
- Crst *Cryptandra stellulata* (P3)
- Cyfr *Cyanicula fragrans* (P3)
- Dasc *Dampiera scaevolina* (P1)
- Date *Dampiera tephrea* (P3)
- Dacha *Darwinia chantiae* (P3)
- Dapol *Darwinia polychroma* (T)
- DaspSt *Darwinia* sp. Strawberry (M.G. Corrick 8279) (P2)

FIGURE 5.3

LEGEND: Existing Significant Flora Records of the Desktop Study Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2023d), Umwelt (2021), KML (2023), Woodman Environmental (2008d, 2011, 2012)

- Dasph *Darwinia sphaerica* (P2)
- Daax *Dasymalla axillaris* (T)
- Dabu *Daviesia bursarioides* (T)
- Dasp *Daviesia speciosa* (T)
- Deel *Desmocladus elongatus* (P4)
- Dili *Dicrastylis linearifolia* (P3)
- Dieb *Diuris eburnea* (P1)
- Dire *Diuris recurva* (P4)
- Doam *Dodonaea amplisemina* (P4)
- Dosc *Dodonaea scurra* (P1)
- Drco *Drakaea concolor* (T)
- Drpe *Drosera pedicellaris* (P1)
- Drfu *Drummondita fulva* (P3)
- Drru *Drummondita rubriviridis* (P1)
- Elma *Elatine macrocalyx* (P3)
- Endu *Enekbatus dualis* (P1)
- Enlo *Enekbatus longistylus* (P3)
- Enpl *Enekbatus planifolius* (P1)
- Epde *Epitriche demissus* (P2)
- Eracut *Eremaea acutifolia* (P3)
- ErglMo *Eremophila glabra* subsp. Morawa (C.A. Gardner 7521) (P1)
- Ergr *Eremophila grandiflora* (P1)
- Erni *Eremophila nivea* (T)
- Erolp *Eremophila oldfieldii* subsp. *papula* (P1)
- Errot *Eremophila rostrata* subsp. *trifida* (T)
- Ersar *Eremophila sargentii* (P2)
- Erser *Eremophila sericea* (P1)
- ErspTh *Eremophila* sp. Thundelarra (B. Buirchell BB 324) (P1)
- Ervi *Eremophila viscida* (T)
- Euab *Eucalyptus abdita* (P2)
- Euara *Eucalyptus arachnaea* subsp. *arrecta* (P3)
- Eubl *Eucalyptus blaxellii* (P4)
- Eucr *Eucalyptus crispata* (T)
- Euebp *Eucalyptus ebbanoensis* subsp. *photina* (P4)
- Eujuk *Eucalyptus jutsonii* subsp. *kobela* (P1)
- Eule *Eucalyptus leprophloia* (T)
- Eumae *Eucalyptus macrocarpa* subsp. *elachantha* (P4)
- Eumap *Eucalyptus macrocarpa x pyriformis* (P3)
- Eupr *Eucalyptus pruiniramis* (T)
- Eurhr *Eucalyptus rhodantha* var. *rhodantha* (T)
- Eurhp *Eucalyptus rhodantha* var. *x petiolaris* (P4)
- Eusy *Eucalyptus synandra* (T)
- Euzo *Eucalyptus zopherophloia* (P4)
- Eure *Euryomyrtus recurva* (P3)
- EuspJH *Eutaxia* sp. Jasper Hill (R.J. Cranfield 8607) (P1)
- Fiax *Fitzwillia axilliflora* (P2)
- Frcon *Frankenia conferta* (T)
- Frgl *Frankenia glomerata* (P4)
- Garo *Gastrolobium rotundifolium* (P3)
- Gldr *Glyceria drummondii* (T)
- Gnca *Gnephosis cassiniana* (P3)
- Gnse *Gnephosis setifera* (P1)
- Goci *Gompholobium cinereum* (P3)
- Goneo *Goodenia neogoodenia* (P4)
- Goper *Goodenia perryi* (P3)
- Grama *Grevillea amplexans* subsp. *adpressa* (P1)
- Grasp *Grevillea asparagoides* (P3)
- Grbic *Grevillea biformis* subsp. *cymbiformis* (P3)
- Grbrh *Grevillea bracteosa* subsp. *howatharra* (T)
- Grer *Grevillea erinacea* (P3)
- Grgl *Grevillea globosa* (P3)
- Grgr *Grevillea granulosa* (P3)
- Grhi *Grevillea hirtella* (P3)
- Grle *Grevillea leptopoda* (P3)
- Grma *Grevillea makinsonii* (P3)
- Grmu *Grevillea murex* (T)
- Grobc *Grevillea obliquistigma* subsp. *cullenii* (P3)
- Grph *Grevillea phanerophlebia* (T)
- Grro *Grevillea rosieri* (P2)
- Grru *Grevillea rudis* (P4)
- Grsc *Grevillea scabrida* (P3)
- Grsu *Grevillea subtiliflora* (P3)
- Grte *Grevillea tenuiloba* (P3)
- Gual *Guichenotia alba* (P3)
- Guqu *Guichenotia quasicalva* (P2)
- Gudi *Gunniopsis divisa* (P3)
- Gyre *Gyrostemon reticulatus* (T)
- Hata *Haegiela tatei* (P4)
- Halor *Haemodorum loratum* (P3)
- Hame *Hakea megalosperma* (T)
- HespE *Hemiandra* sp. Eneabba (H. Demarz 3687) (P3)
- HespW *Hemiandra* sp. Watheroo (S. Hancocks 4) (P4)
- Hedi *Hemigenia diadela* (P2)
- Hepi *Hemigenia pimeleifolia* (P2)
- Hesa *Hemigenia saligna* (P3)
- Hespma *Hemigenia* sp. major (C.A. Gardner 2677) (P1)
- Heti *Hemigenia tichbonii* (P1)v
- Hech *Hensmania chapmanii* (T)
- Hest *Hensmania stoniella* (P3)
- Hico *Hibbertia cockertoniana* (P3)
- Higlb *Hibbertia glomerosa* var. *bistrata* (P3)
- Hisu *Hibbertia subvillosa* (P3)
- Hoch *Homalocalyx chapmanii* (P2)
- Hoan *Hopkinsia anoectocolea* (P3)
- Hysto *Hyalosperma stoveae* (P2)
- Hydi *Hydrocotyle dimorphocarpa* (P1)
- Hysp *Hydrocotyle spinulifera* (P3)
- Hyte *Hypocalymma tetrapterum* (P3)
- Ispe *Isotropis petrensis* (P1)
- Kole *Korthalsella leucothrix* (P1)
- Lade *Lasiopetalum decoratum* (P2)
- Laog *Lasiopetalum ogilvieanum* (P1)
- Lega *Lechenaultia galactites* (P3)
- Leju *Lechenaultia juncea* (P3)
- Lelo *Lechenaultia longiloba* (P4)
- Lefa *Lepidium fasciculatum* (P3)
- Lesa *Lepidium sagittulatum* (P1)
- Lede *Lepidobolus densus* (P4)
- Legi *Lepidosperma gibsonii* (T)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- LespKo *Lepidosperma* sp. Koolanooka (K.R. Newbey 9336) (P1)
- Legr *Leucopogon grammatus* (P3)
- LespYa *Leucopogon* sp. Yanneymooning (F. Mollemans 3797) (P3)
- Lest *Leucopogon stokesii* (T)
- Lico *Liparophyllum congestiflorum* (P4)
- Lyex *Lyginia excelsa* (P2)
- Made *Malleostemon decipiens* (P1)
- MaspYR *Malleostemon* sp. Yalgoo Road (Morawa Tree Committee 329) (P1)
- Meba *Melaleuca barlowii* (P3)
- Mesc *Melaleuca sclerophylla* (P3)
- Medr *Menkea draboides* (P3)
- Mestd *Mesomelaena stygia* subsp. *deflexa* (P3)
- Miac *Micromyrtus acuta* (P3)
- Mimu *Micromyrtus mucronulata* (P1)
- Mini *Micromyrtus ninghanensis* (P1)
- Miro *Micromyrtus rogeri* (P1)
- Mitru *Micromyrtus trudgenii* (P3)
- Miuni *Micromyrtus uniovulum* (P2)
- Midi *Millotia dimorpha* (P1)
- Mija *Millotia jacksonii* (P2)
- Mife *Mirbelia ferricola* (P3)
- MispTe *Mirbelia* sp. Ternata (M.D. Crisp & L.G. Cook MDC 9267) (P1)
- Nisa *Nicotiana salina* (P1)
- Pagr *Papistylus grandiflorus* (P2)
- Padix *Paracaleana dixonii* (T)
- Pech *Persoonia chapmaniana* (P3)
- Pefi *Persoonia filiformis* (P3)
- Peka *Persoonia kararae* (P2)
- Pepe *Persoonia pentasticha* (P3)
- Peru *Persoonia rudis* (P3)
- Pebi *Petrophile biternata* (P3)
- Pecod *Petrophile conifera* subsp. *divaricata* (P2)
- Pegl *Petrophile globifera* (P3)
- Pepau *Petrophile pauciflora* (P3)
- Pese *Petrophile septemfida* (P3)
- Phnu *Philotheca nutans* (P1)
- Phpip *Phlebocarya pilosissima* subsp. *pilosissima* (P3)
- Picy *Pigea cymulosa* (T)
- Pivi *Pityrodia viscida* (P4)
- Popr *Podotheca pritzelii* (P3)
- Poun *Podotheca uniseta* (P3)
- Poco *Polianthion collinum* (P3)
- Poas *Poranthera asybosca* (P1)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Psim *Psammomoya implexa* (P3)
- Ptfas *Ptilotus fasciculatus* (P4)
- Rhco *Rhodanthe collina* (P3)
- RhspYu *Rhodanthe* sp. Yuna (G.J. Keighery, B.J. Keighery & B. Moyle 2820) (P3)
- Riol *Ricinocarpos oliganthus* (P1)
- Roha *Roebuckiella halophila* (P3)

FIGURE 5.3

LEGEND: Existing Significant Flora Records of the Desktop Study Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2023d), Umwelt (2021), KML (2023), Woodman Environmental (2008d, 2011, 2012)

- Scch *Scaevola chrysopogon* (P2)
- Scka *Scaevola kallophylla* (P4)
- Scfis *Schoenia filifolia* subsp. *subulifolia* (T)
- Scba *Schoenus badius* (P2)
- Scgr *Schoenus griffinianus* (P4)
- Scna *Schoenus natans* (P4)
- ScspEn *Schoenus* sp. Eneabba (F. Obbens & C. Godden 1154) (P2)
- Scbrb *Scholtzia brevistylis* subsp. *brevistylis* (P1)
- Scbrp *Scholtzia brevistylis* subsp. *prowaka* (P2)
- Sccal *Scholtzia calcicola* (P2)
- Scpro *Scholtzia prostrata* (P3)
- Scsub *Scholtzia subsessilis* (P1)
- ScspKH *Sclerolaena* sp. Koolanooka Hills (R. Meissner & Y. Caruso 437) (P1)
- Spne *Spergularia nesophila* (P3)
- Stdim *Stawellia dimorphantha* (P4)
- Stpo *Stenanthemum poicilum* (P3)
- StcaN *Stylidium carnosum* subsp. Narrow leaves (J.A. Wege 490) (P1)
- Stcor *Stylidium cornuatum* (P2)
- Stdr *Stylidium drummondianum* (P3)
- Stlo *Stylidium longitubum* (P4)
- Stpen *Stylidium pendulum* (P1)
- Stpse *Stylidium pseudocaespitosum* (P2)
- Stric *Stylidium ricae* (P3)
- Stsc *Stylidium scintillans* (T)
- StspTS *Stylidium* sp. Three Springs (J.A. Wege & C. Wilkins JAW 600) (P2)
- Stti *Stylidium tinkeri* (P2)
- Stto *Stylidium torticarpum* (P3)
- Stwil *Stylidium wilroyense* (P3)
- Stxan *Stylidium xanthopis* (P1)
- Stfi *Styphelia filifolia* (P3)
- Sthya *Styphelia hyalina* (P3)
- Stlon *Styphelia longissima* (T)
- Stmarg *Styphelia marginata* (T)
- Stob *Styphelia obtecta* (T)
- Stpal *Styphelia pallens* (P2)v
- Swpi *Swainsona picta* (P1)v
- Syou *Synaphea oulopha* (P3)
- Sysp *Synaphea sparsiflora* (P2)
- Syxe *Synaphea xela* (P2)
- Tebu *Tecticornia bulbosa* (T)
- Tefi *Tecticornia fimbriata* (P3)
- Thap *Thelymitra apiculata* (P4)
- Thst *Thelymitra stellata* (T)
- Thfo *Thomasia x formosa* (P1)
- Thni *Thryptomene nitida* (P3)
- Thsh *Thryptomene shirleyae* (P2)
- ThspWa *Thryptomene* sp. Wandana (M.E. Trudgen MET 22016) (P3)
- Thsp *Thryptomene spicata* (P2)
- Thvel *Thryptomene velutina* (P2)
- Thgl *Thysanotus glaucus* (P4)
- Thve *Thysanotus vernalis* (P3)
- Trso *Tricoryne soullierae* (P3)
- Trpr *Triglochin protuberans* (P3)
- TrspWH
- Urca *Urodon capitatus* (P3)
- Veal *Verticordia albida* (T)
- Vear *Verticordia argentea* (P2)
- Veau *Verticordia aurea* (P4)
- Vecap *Verticordia capillaris* (P4)
- Vechp *Verticordia chrysostachys* var. *pallida* (P3)v
- Veco *Verticordia comosa* (P1)
- Vedao *Verticordia dasystylis* subsp. *oestopoia* (P1)
- Veder *Verticordia densiflora* var. *roseostella* (P3)
- Vefr *Verticordia fragrans* (P3)
- Veine *Verticordia insignis* subsp. *eomagis* (P3)
- Velul *Verticordia luteola* var. *luteola* (P3)
- Velur *Verticordia luteola* var. *rosea* (P1)
- Vemum *Verticordia muelleriana* subsp. *muelleriana* (P3)
- Vepe *Verticordia penicillaris* (P4)
- Vepo *Verticordia polytricha* (P4)
- Vesps *Verticordia spicata* subsp. *squamosa* (T)
- Veve *Verticordia venusta* (P3)
- Viceo *Vittadinia cervicularis* var. *occidentalis* (P1)
- Wumu *Wurmbea murchisoniana* (P4)
- Wutu *Wurmbea tubulosa* (T)

FIGURE 5.3

LEGEND: Existing Significant Flora Records of the Desktop Study Area

5.1.6 Significant Vegetation

The interrogation of DBCA's TEC and PEC Database (DBCA, 2023c) returned a total of 16 State TECs and PECs with DBCA-applied buffer polygons that intersect or occur within the Desktop Study Area. However, three of these communities relate to invertebrate fauna communities and are not relevant to a flora and vegetation assessment; therefore, they are not discussed further in this report. These communities are:

- Badja calcrete groundwater assemblage type on Moore palaeodrainage on Badja Station
- Granite outcrop pools with endemic aquatic fauna
- Ninghan calcrete groundwater assemblage type on Moore palaeodrainage on Ninghan Station.

The remaining 13 State-listed significant vegetation communities comprise six TECs listed under the BC Act (all Critically Endangered (CR)), six Priority 1 PECs and one Priority 3 PEC, as presented in **Table 5.6** and **Figure 5.4**. Of these 16 communities, the buffer polygons of two TECs and two PECs intersect the Survey Area (shaded in light blue in **Table 5.6**).

A review of DBCA's TEC and PEC records spatial database (DBCA-038) (DBCA, 2024c) and current DBCA TEC and PEC lists (DBCA, 2023f, 2023g) did not identify any additional significant vegetation communities within, or having the potential to occur within, the Survey Area.

The interrogation of the DCCEEW SPRAT database with regard to MNES listed under the EPBC Act (DCCEEW, 2024) identified one vegetation community listed under the EPBC Act that is "'likely' to occur in Survey Area", being the 'Eucalypt woodlands of the Western Australian Wheatbelt' TEC (CR) (full interrogation results presented in **Appendix B**). This TEC was also returned by the interrogation of DBCA's TEC and PEC Database (DBCA, 2023c).

Review of previous flora and vegetation surveys discussed in **Section 5.1.4** returned an additional listed significant vegetation community in the Desktop Study Area, being the 'Yalgoo (Gnows Nest/Wolla Wolla and Woolgah-Wadgingarra) vegetation assemblages (banded ironstone formation)' P1 PEC. This community was not returned by the DBCA TEC and PEC Database interrogation as it occurs slightly north of the Desktop Study Area near Yalgoo, approximately 54 km north of the Karara Area.

In summary, a total of 14 listed significant vegetation communities were returned by the desktop assessment of the Desktop Study Area, including six TECs listed under the BC Act and an additional TEC listed under the EPBC Act. According to DBCA records, four of these 14 communities have buffer polygons that intersect the Survey Area, as presented in **Figure 5.4**.

Table 5.6 Significant Vegetation Communities Returned from Desktop Assessment

Community	Status (WA)	Status (EPBC)	DBCA Description*	Nearest DBCA Buffer to Survey Area^	Source
Assemblages of the organic mound springs of the Three Springs area	TEC (CR)	-	This community occurs in the Three Springs area. The mound spring habitat is characterised by continuous discharge of groundwater in raised areas of peat. The peat and surrounds provide a stable, permanently moist series of microhabitats. There is a high level of heterogeneity of invertebrate fauna assemblages between occurrences, and all are associated with a rich and healthy fauna. The distinctive assemblages are composed of invertebrate groups commonly including beetles, oligochaetes, non-biting midges and bugs. The vegetation component of the community contains many moisture-loving species including an overstorey of *Melaleuca preissiana* (moonah) trees. *Eucalyptus camaldulensis* (river red gum) and *Eucalyptus rudis* (flooded gum) are also found in a number of the mound springs. The shrub layer often includes *Hypocalymma angustifolium* (white myrtle) and *Acacia saligna* (orange wattle) over *Machaerina vaginalis* (sheath twigrush) and other sedges. The herbaceous *Patersonia occidentalis* (purple flag, swamp variant) has been recorded at several occurrences	3.9 km south of western end of Borefield Corridor	DBCA
Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes vegetation assemblages associated with the BIF in the Blue Hills Range, including Mt Karara and Windaning Hill (Mungada Ridge) (part of the Central Tallering Land System), as described in Markey and Dillon (2008)	Within Karara Area	DBCA; Maia; Umwelt; Woodman Environmental
Coastal sands dominated by *Acacia rostellifera*, *Eucalyptus oraria* and *Eucalyptus obtusiflora*	PEC (P1)	-	Floristically, this community is similar to other *Acacia rostellifera* communities but is differentiated on structure, being dominated by mallee eucalypts. The community occurs on limestone ridges, in some swales in the coastal dunes between Cape Burney and Dongara, on the Greenough Alluvial Flats on limestone soil and near Tarcoola Beach. Some very small occurrences have also been recorded on the limestone scarp north of the Buller River	48.3 km west of western end of Borefield Corridor	DBCA

Community	Status (WA)	Status (EPBC)	DBCA Description*	Nearest DBCA Buffer to Survey Area^	Source
Eucalypt woodlands of the Western Australian Wheatbelt	PEC (P3)	TEC (CR)	This community occurs in the IBRA Avon Wheatbelt 1 and 2 and Western Mallee subregions. It also includes outlying patches in the eastern parts of JAF01 Northern Jarrah Forests and JAF02 Jarrah Forests adjacent to the Avon Wheatbelt, that are off the Darling Range, and receive less than 600 mm mean annual rainfall. The structure of the ecological community is a woodland in which the minimum crown cover of the tree canopy in a mature woodland is 10 %. The key dominant or co-dominant species of the tree canopy are species of *Eucalyptus* trees that typically have a single trunk. Native understorey is present but is of variable composition, being a combination of grasses, other herbs and shrubs. The description, area and condition thresholds that apply to the EPBC-listed TEC of the same name, also apply to this PEC	Multiple occurrences intersect Yandanooka Pipeline and Borefield Corridor in multiple locations	DBCA, DCCEEW ('likely' to occur in Survey Area)
Ferricrete floristic community (Rocky Springs type)	TEC (CR)	-	This community comprises tall shrubland and has been recorded between Arrino and Eneabba, on irregularly inundated red brown sandy loams over ferricrete. It is generally dominated by *Acacia blakelyi*, *Allocasuarina campestris* and *Labichea lanceolata* subsp. *lanceolata*. Associated species include *Alyogyne hakeifolia*, *Borya sphaerocephala*, *Isotoma hypocrateriformis* (Woodbridge poison), *Petrophile seminuda*, *Stylidium dichotomum* (pins-and-needles), *Thysanotus patersonii* and *Pterochaeta paniculata* (woolly waitzia)	11.7 km south of western end of Borefield Corridor	DBCA

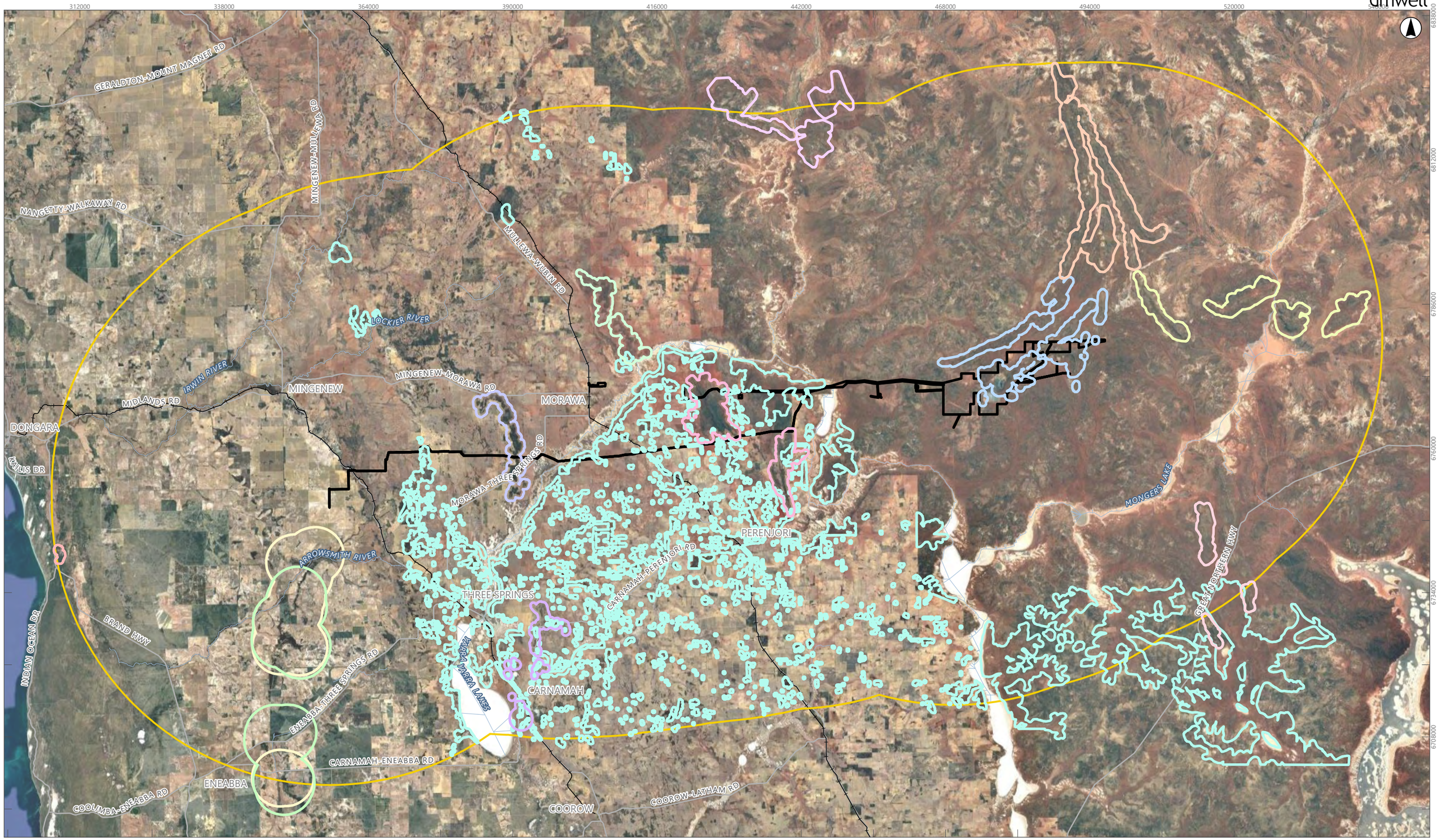
Community	Status (WA)	Status (EPBC)	DBCA Description*	Nearest DBCA Buffer to Survey Area^	Source
Gullewa vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes Buddadoo Range, Edamura Range, Mugga Mugga Hill and Murdaburia Hill; vegetation assemblages associated with BIF as described by Markey and Dillon (2010). Community types 1, 2, 3, 4a and 4b were associated with BIF landforms and lateritic breakaways. It was noted by Markey and Dillon (2010) that the lower slopes and stony colluvial and outwash plains communities were broadly similar to those of the Central Tallering land system (which includes the Blue Hills PEC); however, the rocky upland communities (Communities 2 and 4a) of the Central Tallering area were not similar to those of Gullewa. Likewise, the mafic hills and saline depressions of Gullewa were not represented in the Central Tallering dataset. It was noted by Markey and Dillon (2010) that there was less than 50 % of taxa in common between the Gullewa and Central Tallering datasets	39.0 km north of central part of Yandanooka Pipeline	DBCA
Koolanooka System as originally described in Beard (1976)	TEC (CR)	-	This community is known from the Koolanooka Hills, its footslopes and the Perenjori Hills. It comprises *Eucalyptus ebbanoensis* subsp. *ebbanoensis* mallee and *Acacia* sp. scrub with scattered *Allocasuarina huegeliana* (rock sheoak) over red loam and ironstone on the upper slopes and summits, *Allocasuarina campestris* scrub over red loam on hill slopes, shrubs and emergent mallees on shallow red loam over massive ironstone on steep rocky slopes, *Eucalyptus loxophleba* (York gum) woodland over scrub on the footslopes, and mixed *Acacia* sp. scrub on granite. The community was originally described in Beard's (1976a) *The vegetation of the Perenjori area, Western Australia: Map and explanatory memoir* (1:250,000 vegetation series, Vegmap Publications, Perth, Western Australia)	Western end of Yandanooka pipeline and eastern end of Borefield Corridor south of Bowgarder Nature Reserve	DBCA
Minjar and Chulaar Hills vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes vegetation assemblages associated with BIF at Minjar and Chulaar Hills (part of the Central Tallering Land System), as described in Markey and Dillon (2008)	11.2 km north of eastern end of Karara Area	DBCA; Woodman Environmental

Community	Status (WA)	Status (EPBC)	DBCA Description*	Nearest DBCA Buffer to Survey Area^	Source
Mount Gibson Range vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes Buddadoo Range, Edamura Range, Mugga Mugga Hill and Murdaburia Hill; vegetation assemblages associated with BIF in the Mount Gibson Range (Meissner & Caruso, 2008b)	32.7 km south-southeast of eastern end of Karara Area	DBCA
Plant assemblages of the Billeranga System as originally described in Beard (1976)	TEC (CR)	-	The community occurs in the Billeranga Hills in the north-eastern Wheatbelt of WA. It generally comprises: *Melaleuca nematophylla* (wiry honeymyrtle) - *Allocasuarina campestris* thicket on clay sands over laterite on slopes and ridges; open mallee over mixed scrub on yellow sand over gravel on western slopes; *Eucalyptus loxophleba* (York gum) woodland over sandy clay loam or rocky clay on lower slopes and creeklines; and mixed scrub or scrub dominated by *Dodonaea inaequifolia* over red brown loamy soils on the slopes and ridges. The community was originally described by Beard (1976a)	Borefield Corridor west of Three Springs-Morawa Road	DBCA; Woodman Environmental
Plant assemblages of the Inering System as originally described in Beard (1976)	TEC (CR)	-	The community occurs in the Inering Hills in the northern Wheatbelt of WA. It generally comprises: *Allocasuarina campestris* scrub over chert and granite hills; *Allocasuarina campestris* thicket with scattered *Acacia acuminata* and *Allocasuarina huegeliana* (rock sheoak) over brown sandy loam over stony and lateritic summits and slopes; *Acacia* sp. mixed low woodland on red brown sandy loam over granite on summits and slopes; *Melaleuca cardiophylla* (tangling melaleuca) thicket with scattered *Eucalyptus loxophleba* (York gum) and *Eucalyptus salmonophloia* (salmon gum) over granite on the lower slopes and foothills; and *Eucalyptus loxophleba* woodland over clay loam on the foothills. The community was originally described by Beard (1976a). The total range of this TEC was estimated at 2,175.5 ha in 2002, encompassing both the original Inering system mapped by Beard (1976a) and some additional areas as noted in the Interim Recovery Plan (CALM, 2002). The estimated area of occupancy included the Archaean-Granite complex of hills 2.5 km southwest of Carnamah northwards to Three Springs	25.5 km south of central part of Borefield Corridor	DBCA

Community	Status (WA)	Status (EPBC)	DBCA Description*	Nearest DBCA Buffer to Survey Area^	Source
Plant assemblages of the Moonagin System as originally described in Beard (1976)	TEC (CR)	-	The community occurs on the fine-grained Archaean rocks of the Moonagin and Milhun Ranges (north-east of Morawa). It generally comprises *Acacia* spp. scrub on red soil on the summits and slopes of the hills; *Acacia* spp. scrub with scattered *Eucalyptus loxophleba* (York gum) and *Eucalyptus oleosa* (giant mallee) on red loam flats on the foothills; and *Eucalyptus loxophleba* woodland on red loam flats of the pediments. The community was originally described by Beard (1976a). The total Pre-European vegetation extent was estimated to originally cover 6,536 ha, of which 32.8 % was remaining in 2019 (DPIRD, 2019)	5.3 km north of eastern end of Yandanooka Pipeline	DBCA
Warriedar/Pinyalling/ Walagnumming Hills vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes vegetation assemblages associated with BIF at the Warriedar, Pinyalling and Walagnumming Hills (part of the Central Tallering land system) as described in Markey and Dillon (2008)	9.1 km east of eastern end of Karara Area	DBCA; Woodman Environmental
Yalgoo (Gnows Nest/Wolla Wolla and Woolgah-Wadgingarra) vegetation assemblages (banded ironstone formation)	PEC (P1)	-	Includes vegetation assemblages associated with BIF in Gnows Nest Range, Wolla Wolla and Woolgah-Wadgingarra Hills, as described by Markey and Dillon (2011)	54 km north of central part of Karara Area	Woodman Environmental

** Source: Priority Ecological Communities for Western Australia Version 35 (DBCA, 2023f); Threatened Ecological Communities (TECs) Listed under the Biodiversity Conservation Act 2016 (DBCA, 2023g).*

^ Source: DBCA Threatened and Priority Ecological Communities Database interrogation spatial data (DBCA, 2023c).



Scale: 1:650,000 at A3, GDA2020 MGA Zone 50

Legend

- Desktop Study Area
- Survey Area
- Road
- Railway
- Major Watercourse

Significant Vegetation (DBCA, 2023c)

- Assemblages of the organic mound springs of the Three Springs area (WA – CR)
- Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation) (WA – P1)
- Coastal sands dominated by *Acacia rostellifera*, *Eucalyptus oraria* and *Eucalyptus obtusiflora* (WA – P1)
- Eucalypt woodlands of the Western Australian Wheatbelt (WA – P3, EPBC – CR)
- Ferricrete floristic community (Rocky Springs type) (WA – CR)
- Gullewa vegetation assemblages (banded ironstone formation) (WA – P1)
- Koolanooka System as originally described in Beard (1976) (WA – CR)
- Minjar and Chulaar Hills vegetation assemblages (banded ironstone formation) (WA – P1)
- Mount Gibson Range vegetation assemblages (banded ironstone formation) (WA – P1)
- Plant assemblages of the Billeranga System as originally described in Beard (1976) (WA – CR)
- Plant assemblages of the Inering System as originally described in Beard (1976) (WA – CR)
- Plant assemblages of the Moonagin System as originally described in Beard (1976) (WA – CR)
- Warriedar/Pinyalling/Walagnumming Hills vegetation assemblages (banded ironstone formation) (WA – P1)

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), DBCA (2023c), KML (2023)

0 13 26 km

FIGURE 5.4
Existing Significant Vegetation Records of the Desktop Study Area

5.1.7 Groundwater and Surface Water Values

5.1.7.1 Surface Water

The majority of the Survey Area is located within the Yarra Monger hydrographic catchments within the Yarra Yarra basin, with the western 25 km of the Borefield Corridor intersecting the Irwin catchment of the Greenough River basin (DWER, 2018).

The Survey Area intersects numerous non-perennial minor watercourses, including Ikewah Brook and Green Brook, which are intersected by the Wheatbelt Area at the very western end of the Survey Area and Targeted Survey Area (Landgate, 2022). Given these watercourses are ephemeral, they would only flow after heavy rainfall events. The Borefield Corridor and Yandanooka Pipeline parts of the Survey Area also intersect numerous saline lakes and drainage areas, including a saline drainage line that feeds into Weelhamby Lake.

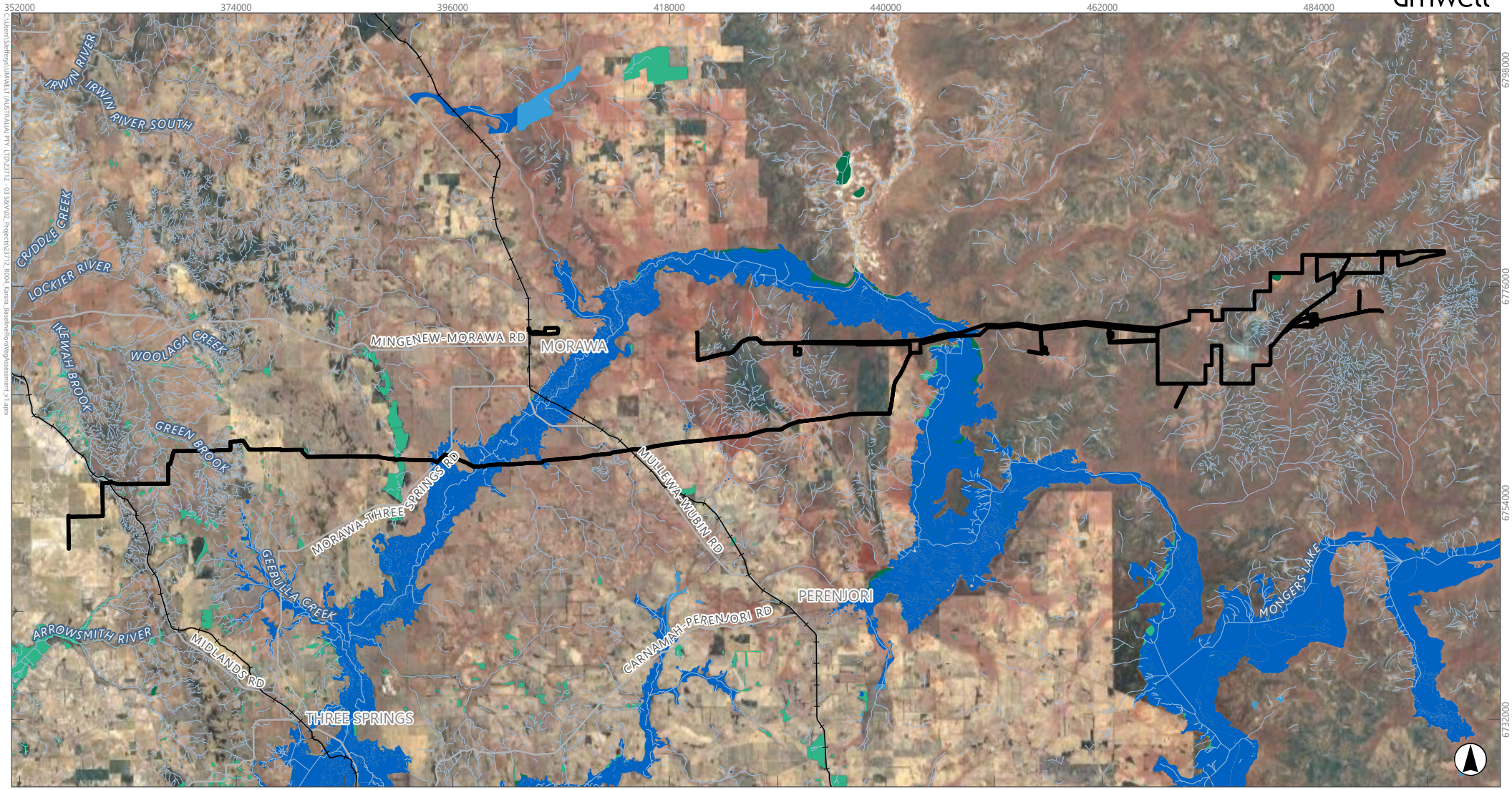
There are no Ramsar sites in the Desktop Study Area (DBCA, 2017a). Thundelarra Lignum Swamp, located approximately 25 km northeast of the eastern end of the Karara Area, is a listed swamp in the Australian Wetlands Database Directory of Important Wetlands (DBCA, 2018; DCCEEW, 2019). The Thundelarra Lignum Swamp supports a significant example of 'lignum-canegrass' community which occurs very sparsely from Carnarvon to Kalgoorlie. Inundation of the Thundelarra Lignum Swamp is very sporadic and is a significant breeding area for waterbird species (DCCEEW, 2019).

5.1.7.2 Groundwater

The BoM GDE Atlas is a national dataset of Australian GDEs that can be used to inform groundwater planning and management. The Atlas was interrogated using the Desktop Study Area boundary to obtain locations and information about two types of GDEs:

- Aquatic GDEs: ecosystems that rely on the surface expression of groundwater – this includes surface water ecosystems that may have a groundwater component, such as rivers, wetlands and springs. Note that marine and estuarine ecosystems can also be groundwater dependent, but these are not mapped in the Atlas.
- Terrestrial GDEs: ecosystems that rely on the subsurface presence of groundwater – this includes all vegetation ecosystems.

According to the BoM Groundwater Dependent Ecosystems (GDE) Atlas, there are numerous 'High' and 'Moderate' potential aquatic and terrestrial GDEs in and within the vicinity of the Survey Area, including those associated with saline clay pans and drainage areas, salt lakes, and Ikewah Brook and Green Brook (BoM, 2025b) (**Figure 5.5**).



Scale: 1:550,000 at A4, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Watercourse

GDE – Aquatic

- High potential GDE - from national assessment
- Moderate potential GDE - from national assessment

GDE – Terrestrial

- High potential GDE - from national assessment
- Moderate potential GDE - from national assessment

FIGURE 5.5

BoM GDE Atlas 'High' and 'Moderate' Potential GDEs

0 11 22 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), KML (2023), BoM (2025b)

5.2 Field Survey Results

5.2.1 Flora Census

A total of 497 discrete vascular flora taxa, two putative hybrids and one informal taxon variant were recorded in the Survey Area by the 2023 and 2024 survey. Of the 500 flora entities recorded, 43 taxa are introduced (as per WA Herbarium (1998-), discussed further in **Section 5.2.5**). A total of 279 of the 500 flora entities are perennial (including ephemeral perennial and geophytic taxa; e.g. tuberous species that have above-ground parts visible only during certain times of the year), and 221 taxa are annual.

Within quadrats established in 2023 and 2024, average native taxon richness (excluding putative hybrids and taxon variants) per quadrat was 28 (± 15), with the greatest number of taxa recorded in a single quadrat being 67 (MLED07), and the lowest number being 3 (MLEQ-009).

When including data from all historical sample sites across the Survey Area (amended for taxonomic and nomenclatural accuracy as per **Appendix A**), a total of 748 discrete vascular flora taxa, two named hybrids (as per WA Herbarium (1998-)), three putative hybrids and one informal taxon variant have been recorded in the Survey Area. Of the 748 flora entities recorded, 64 taxa are introduced (as per WA Herbarium (1998-), discussed further in **Section 5.2.5**). A total of 463 of the 748 flora entities are perennial (including ephemeral perennial and geophytic taxa), and 285 are annual. The discrete taxa, hybrids and variants in the Survey Area represent 75 families and 286 genera. The most well-represented families were:

- Asteraceae: 103 discrete taxa
- Fabaceae: 85 discrete taxa and 2 named hybrids
- Chenopodiaceae: 65 discrete taxa and 1 putative hybrid
- Myrtaceae: 60 discrete taxa and 1 putative hybrid
- Poaceae: 51 discrete taxa.

A full list of flora taxa that have been recorded in the Survey Area by the current survey and relevant previous surveys is presented in **Appendix D**. Raw data recorded at all sample sites in the Survey Area (including those established for relevant previous flora and vegetation assessments) are presented in **Appendix E**.

Note that several collections from the Survey Area could not be identified to species level due to poor material. Some are known to be distinct taxa relative to other taxa recorded by the survey, and therefore have been included in the totals presented above and in **Appendix D** (e.g. *Corchorus* sp.). This includes four *Tecticornia* entities *Tecticornia* sp. 'Karara 1' to *Tecticornia* sp. 'Karara 4', collections of which were reviewed by *Tecticornia* expert Kelly Shepherd at the WA Herbarium. Of these, *Tecticornia* sp. 'Karara 1' and *Tecticornia* sp. 'Karara 2' potentially represent unrecognised taxa, and are discussed further in **Section 5.2.2**. According to Shepherd, the *Tecticornia* sp. 'Karara 3' specimen was unusual in that it had dorsiventrally flattened flowers and soft cup-like bracts, but the flowers were too immature to make a proper assessment of its identity. Mature fruits and seeds and DNA sequencing would be required to determine whether the specimen represents a distinct new species. Therefore, this entity has precautionarily been treated as a distinct taxon relative to the other *Tecticornia* taxa recorded by the survey. Finally, the *Tecticornia* sp. 'Karara 4' specimen was sterile and could not be assigned an identification, but has also been treated as a distinct taxon.

Other collections made in the Survey Area 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. *Sclerolaena* sp.). Such collections are not included in the totals above or presented in **Appendix D**, but are presented in the raw sample site data in **Appendix E**. None of these collections are considered to represent significant flora taxa.

5.2.2 Significant Flora Taxa

A total of 41 significant flora taxa have been recorded in the Survey Area by the 2023 and 2024 survey and previous surveys (including survey data sourced from DBCA database interrogations), comprising four Threatened taxa (listed under the BC and/or EPBC Acts), 33 Priority flora taxa, as well as four taxa that are considered significant as per EPA definitions (2016a, 2016b) as they represent potentially undescribed taxa ('PU') (discussed further below). Of the 41 significant flora taxa of the Survey Area, 14 have been recorded in the Targeted Survey Area (Mine Area only; no significant flora taxa have been recorded in the Wheatbelt Area) (**Table 5.7**). These 14 taxa are all DBCA Priority flora taxa. With the exception of *Seringia exastia* (EPBC: CR), all of the 37 listed significant flora taxa have been previously recorded in the Desktop Study Area (**Section 5.1.5**).

Table 5.7 presents a summary of data relating to significant flora taxa that have been recorded within the Survey Area. A description and summary of regional information for each taxon recorded in the Survey Area is provided in **Table 5.8**. Photographs of each species are presented in **Appendix F** and location coordinates for the 2023 and 2024 records are provided in **Appendix G**. Locations of all significant flora taxa recorded in the Survey Area (as well as those recorded within 50 m of the Survey Area) are presented in **Figure 5.6**.

Abundance information is provided for perennial taxa in **Table 5.7**, but is not considered appropriate for annual or ephemeral taxa, as the abundance of these taxa is strongly influenced by seasonal conditions, with fewer individuals usually present following below-average rainfall; instead, the number of locations is presented for annual and ephemeral taxa in **Table 5.7**. Note that abundance information is not available for some historical data records; these records were attributed a count of '1' for the purpose of **Table 5.7**. The plant counts for these taxa are therefore likely to be conservative. Historical records of significant flora taxa that were located in areas that have since been cleared have been removed from the dataset presented in **Table 5.7**. Potential duplication of records elsewhere in the Survey Area has been avoided by assessment of locations of significant flora recorded by the 2023 and 2024 survey against historical data in a GIS environment.

Table 5.7 also presents a summary of the VTs within which each significant flora taxon was recorded (refer to **Section 5.2.6** for VT descriptions), and their potential preferred habitat based on proportional location representation and landforms/soils (indicated in **Table 5.7** with '^'). However, it is worthy of note that some taxa have been recorded from few locations, and therefore there may not be sufficient data to confidently assign preferred habitat for these taxa.

Further discussion on specific significant flora taxa is provided below.

***Acacia woodmaniorum* (T)**

According to DBCA databases (DBCA, 2023d), three records of *Acacia woodmaniorum* (T) are present within the Survey Area (**Section 5.1.5**). However, two of these three records relate to individuals that have been artificially introduced in March 2017 (via planting cuttings or translocating whole plants) as part of KML's Translocation Proposal. The first of the translocation sites is on the rehabilitated mine area of the Terapod North Pit, and the second on the Blue Hills North rehabilitated Waste Rock Dump. Monitoring of these translocation sites has been undertaken since 2017, with the most recent monitoring from October 2024 demonstrating a survival rate of 100 % of cuttings and 83 % of salvaged plants at the first translocation site (a total of 15 plants present at October 2024), and a survival rate of 55 % for cuttings and 61 % for salvaged plants at the second site (a total of 25 plants present at October 2024) (KML, 2024a). The translocated plants have demonstrated evidence of flowering and fruiting over the history of monitoring, although KML's Translocation Report (KML, 2024a) does not indicate whether new seedlings have been recorded at the translocation sites.

The third DBCA record of *Acacia woodmaniorum* (T) within the Survey Area relates to a location of a single individual growing on the edge of the Terapod South pit within the abandonment bund. It is not clear how this individual came to be at this location. According to KML (2024a), monitoring of this plant has been ruled out due to safety concerns.

No other records of *Acacia woodmaniorum* (T) are known from the Survey Area. As of 2007, *Acacia woodmaniorum* was known from just three regional populations (at Mungada Ridge, Mungada West/Blue Hills North and Jasper Hill) over an area of approximately 40 km^2. The main population comprised several to many thousand individuals while the other two populations contained much smaller numbers (Maslin & Buscumb, 2007). Woodman Environmental (2008a) conducted a regional survey for this taxon in 2007 to attempt to extend the distribution and increase the known number of individuals by discovering additional populations. Many of the locations visited during the survey possessed similar habitat, at least superficially, to that which the known populations occupy, however no further populations were found. It was therefore considered highly unlikely that further substantial populations of *Acacia woodmaniorum* would be discovered in the future. Whilst every potential location was not comprehensively searched during the survey, the most likely locations were searched, and a relatively wide geographical spread of locations was obtained (Woodman Environmental, 2008a). Indeed, when discounting the three records discussed above that have been artificially introduced or are growing on an old mine pit, according to DBCA databases (DBCA, 2023d) no further populations of *Acacia woodmaniorum* have been identified in addition to those at Mungada Ridge, Mungada West and Jasper Hill. Therefore, given this taxon has not been recorded occurring naturally in the Survey Area despite significant historic survey effort, it is unlikely that the Survey Area provides suitable habitat for this taxon.

***Seringia exastia* (EPBC: CR)**

Seringia exastia was recorded in the Desktop Study Area and Survey Area for the first time in 2024. The taxon was recorded at a single location on a cleared road verge within the Mine Area. The record from the Survey Area represents a range extension to the known range of this taxon by approximately 90 km to the west (WA Herbarium, 1998-).

Seringia exastia is currently listed as Threatened (Critically Endangered) under the Commonwealth EPBC Act only; it was recently removed from the list of Threatened flora gazetted under the WA BC Act. The listing of this taxon as Threatened was supported by knowledge at the time of listing, which indicated that the taxon was discrete from all other *Seringia* taxa on morphological grounds, and was known from a single population within the Port of Broome. Recent taxonomic work has determined that *Seringia exastia* is conspecific with (i.e. the same as) *Seringia elliptica*, a taxon widespread across northern and central WA, Northern Territory (NT) and extending into South Australia (SA) (Binks et al., 2020). Consequently, *Seringia elliptica* and *Seringia exastia* were amalgamated. Under international nomenclatural rules, the name applied to amalgamated taxon must be the oldest valid name; in this case this was *Seringia exastia*. This amalgamation has created an anomalous situation whereby *Seringia exastia* as now circumscribed is a common, widespread species that clearly no longer meets the criteria for Threatened status under either of the aforementioned Acts. This taxon is now known from across the arid zone of WA from almost 300 vouchered records, including from within numerous national parks and nature reserves. It also extends well into the NT, and the northwest of SA.

There are now effectively no reasons for *Seringia exastia* to still be listed as a Threatened taxon other than a delayed administrative response to new information concerning its taxonomic and conservation status. Following removal of *Seringia exastia* from the list of Threatened flora, the State of WA did not assign any other conservation rating to this taxon. This reflects the relatively unusual circumstances of this case, as taxa that are delisted in WA are typically by default assigned a Priority 4 conservation rating. It is expected that this taxon will be delisted on a Commonwealth level in the near future given its delisting in WA, but it is unclear when this will occur.

The entity recorded in the Survey Area was identified by Umwelt on morphological grounds to represent the now re-circumscribed *Seringia exastia*. The material is a good match for what was previously (prior to the genetic study by Binks et al. (2020)) formally recognised as *Seringia elliptica*; this corresponds with what was conventionally accepted prior to the genetic study by Binks et al. (2020), in that *Seringia elliptica* was known to be widespread in the Eremaean region. Genetic studies of the entity in the Survey Area have not been undertaken as part of the identification process. Identification on morphological grounds is the standard method of plant identification for flora and vegetation assessments (and is discussed by EPA in their *Technical Guidance for Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b)); it is also the same methodology used by taxonomic experts at the WA Herbarium. Large scale genomic testing of *Seringia exastia* in the Survey Area, or any other taxon present in a study area, is not feasible from a financial perspective unless supported with significant justification, and is considered unnecessary in this instance. Although it could be inferred that the somewhat unexpected results of the genetic study by Binks et al. (2020) may suggest that there are further hitherto unrecognised *Seringia* taxa that have been overlooked in the past on morphological grounds, this inference is purely hypothetical, and could theoretically be applied to any taxa recorded by surveys for the Project and identified on morphological grounds. Importantly, there is no morphological evidence to suggest that this population differs from the now synonymised *Seringia elliptica*, and by proxy, the currently accepted *Seringia exastia*, and this determination is in keeping with currently accepted taxonomic knowledge.

The State of WA recognised that the listed status of *Seringia exastia* as Threatened was an administrative anomaly, and that its delisting was a formality. As a result, it waived the requirement for any specific survey for, or assessment of impacts to, this species, in an environmental approvals context. Advice previously received by Umwelt from DBCA was that an Application for Authorisation under Section 40 of the BC Act to Take Threatened Flora was required for *Seringia exastia*, until such time as the taxon is formally delisted, but that Targeted surveys for the taxon were not required:

> *A nomination to delist the species due to no plausible significant threats to the species has been prepared and considered by the WA Threatened Species Scientific Committee (TSSC). We anticipate that at the next TSSC meeting recommendations will be made to the Minister to delist. However until changes are officially made to the threatened species list,* S. exastia *is still legally listed as threatened flora, and authorisation to take under section 40 of the Biodiversity Conservation Act 2016 is still required. Although some loss of plants is likely to have occurred and will continue to occur during mining and road works in some parts of the species' distribution, this is not expected to be significant in the context of the entire population. Therefore there should be no impediments to granting authorisation, following the standard process of application made to DBCA's Species and Communities Program.*
>
> *To reduce timeframes and costs associated with approvals under the BC Act, DBCA will not require the standard targeted surveys to be undertaken to inform the threatened flora authorisation impact assessment for* Seringa exastia*. However, survey reports should still consider* Seringia exastia *as a listed threatened species and note the presence of the species within a survey area when encountered. Authorisation applications with basic details that the species is known to occur within the applied project area will be accepted and fast-tracked for approval.*

Although no specific Targeted survey was undertaken for this taxon in the Survey Area, it has only been observed once, despite a significant number of sampling sites being surveyed in its habitat in the Survey Area. Additionally, several botanists familiar with this taxon did not observe any individuals while undertaking the current survey. *Seringia exastia* is therefore likely to be uncommon at best in the Survey Area, and relatively few individuals are likely to be impacted by the Project.

Crassula sp. nov. (Potentially Undescribed)

Two collections were made during the 2020 Assessment of a potentially undescribed *Crassula* entity. As part of that assessment, a representative specimen of the entity was sent to the WA Herbarium for identification, who remarked that the entity is likely undescribed (M. Hislop, pers. comm., 2021). The entity's affinities appeared to lie with *Crassula tetramera* and *Crassula extrorsa*, as it possessed the small flower size and smooth seeds of *Crassula tetramera* but lacked the saccate follicles of that taxon, and in addition had remarkably long styles. A collection of what is likely the same entity had been previously examined by Hellmut Toelken, a *Crassula* expert at the State Herbarium of South Australia, who believed it may represent an unrecognised taxon (H. Toelken, pers. comm. to Stephen Hopper, 2017). However, the collections made by the 2020 Assessment were very depauperate, and better material was required to confirm these differences before a phrase name for the entity could be raised and conservation assessment undertaken.

During Targeted searching in 2024, eight collections were made of a *Crassula* species that resembles *Crassula* sp. nov., in the same general area and same habitat as where *Crassula* sp. nov. was collected (granitic areas and near/on granite outcrops). However, all collections were determined by Umwelt to be *Crassula extrorsa*. A representative specimen was sent to the WA Herbarium for verification, with Mike Hislop confirming the identification of *Crassula extrorsa*, noting that the floral parts were on the small side, but otherwise fit the species well enough.

It is not clear why there were no collections made of the potentially undescribed *Crassula* entity in 2023 or 2024, particularly given the exceptional season and above-average winter rainfall received in 2024. It is possible that the entity is in fact *Crassula extrorsa*, with the original collection being either aberrant or under-developed. However, as a precaution, the *Crassula* entity is still considered to be a potentially undescribed taxon, and is therefore considered significant under the 'new species or species with anomalous features that indicate a potential new species' reason from EPA (2016a, 2016b) (**Section 3.9.1**). Further sampling is required in order to resolve the taxonomic status of this entity.

***Hemigenia* sp. aff. *botryphylla* (Potentially Undescribed)**

A collection was made in 2024 of an entity that has similarities to *Hemigenia botryphylla*, but that had pedicels ranging from 5-8 mm, which is considerably longer than the published range for *Hemigenia botryphylla* (0.7-1.2 mm) (Guerin, 2008). This collection was sent to the WA Herbarium for identification, with Kylie Sadgrove and Mike Hislop noting that the specimen resembles but is not a complete match for *Hemigenia botryphylla*, and does not resemble any of the other recognised taxa in WA. Therefore, this entity is considered to be significant under the 'new species or species with anomalous features that indicate a potential new species' reason from EPA (2016a, 2016b) (**Section 3.9.1**).

Hemigenia sp. aff. *botryphylla* was recorded in two locations approximately 17 km west of Weelhamby Lake, within the Yandanooka Pipeline area, 25 km east of the eastern-most boundary of the Karara Area. The locations occur within tall Acacia shrubland on gravelly brown clay loam flat (VT A), within 400 m of a large chain of saline playas and lakes. The identity and significance of this entity was not determined until after completion of the 2024 field survey, and therefore it was not searched for during the Targeted assessment. VT A was mapped widely in the Survey Area, including within the Targeted Survey Area (Mine Area only). It is unknown whether the entity could occur within the Mine Area, however it is unlikely given a lack of similar occurrences of VT A in the Mine Area (i.e. in proximity to large, highly saline areas). Suitable habitat for this entity is not considered to be present in the Wheatbelt Area.

***Tecticornia* sp. 'Karara 1' (Potentially Undescribed)**

A collection was made in 2024 of a *Tecticornia* that could not be matched by Umwelt to any currently recognised taxa. The specimen was sent to *Tecticornia* expert Kelly Shepherd for identification, who noted that the entity potentially represents an unrecognised taxon, but is likely part of the *Tecticornia* aff. *halocnemoides* 'tuberculate seed' species aggregate due to the specimen having the characteristic small vegetative articles of this group. Shepherd noted that she had seen a few specimens that have somewhat similar seeds to the Survey Area specimen (rounded with tuberculate bumps on the sides and top margin), but it cannot be confirmed at this stage whether they all represent a single taxon. According to Shepherd, DNA sequencing has confirmed that multiple genetically distinct, potentially new species are present within the *Tecticornia halocnemoides* aggregate. Thus, further collections and sequencing of the Survey Area entity '*Tecticornia* sp. 'Karara 1'' would be required to confirm its relationship to other collections (K. Shepherd, pers. comm., 2024). Thus, under the precautionary principle, this entity is considered to be significant under the 'new species or species with anomalous features that indicate a potential new species' reason from EPA (2016a, 2016b) (**Section 3.9.1**).

Tecticornia sp. 'Karara 1' was recorded at five locations in the Borefield Corridor area, within the chain of salt lakes south-southwest of Morawa. While the identity and significance of this entity was not determined until after completion of the 2024 field survey (and therefore it was not searched for during the Targeted assessment), there is no suitable habitat for this taxon within the Targeted Survey Area.

***Tecticornia* sp. 'Karara 2' (Potentially Undescribed)**

Similarly to *Tecticornia* sp. 'Karara 1', another *Tecticornia* entity was collected in 2024 that could not be identified by Umwelt. This specimen was also sent to Kelly Shepherd at the WA Herbarium, who stated it was also potentially undescribed. While sharing some features with *Tecticornia pruinosa* (thus placing it in the *Tecticornia* aff. *pruinosa* species aggregate), the *Tecticornia* sp. 'Karara 2' collection was distinct from the type specimen. The Survey Area entity had narrow and glaucous vegetative articles, but with mature fruits that were broader than the typical form of *Tecticornia pruinosa*. Shepherd stated that DNA sequencing has confirmed that there are several divergent and genetically distinct taxa that have previously been included in a broad concept of *Tecticornia pruinosa* that should be recognised as new species, but was uncertain whether there are other collections that match the Survey Area entity. An in-depth study with more collections and sequencing would be required to clarify its status (K. Shepherd, pers. comm., 2024). Under the precautionary principle, this entity is considered to be significant under the 'new species or species with anomalous features that indicate a potential new species' reason from EPA (2016a, 2016b) (**Section 3.9.1**).

Tecticornia sp. 'Karara 2' was recorded at five locations in the Borefield Corridor area; four within the chain of salt lakes south-southwest of Morawa, and a fifth 23 km east in a degraded transitional area between Eucalyptus woodland (VT G) and a saline chenopod/samphire flat (HMVT A). While the identity and significance of this entity was not determined until after completion of the 2024 field survey (and therefore it was not searched for during the Targeted assessment), there is no suitable habitat for this taxon within the Targeted Survey Area.

Table 5.7 Summary of Significant Flora Taxa of the Survey Area

Taxon	Status (WA)	Status (EPBC)	Longevity	Number of Individuals (Perennial Taxa) / *Number of Locations (Annual & Ephemeral Taxa)*						Grand Total	Location(s)	VTs*
				Targeted Survey Area			Survey Area (excluding Targeted Survey Area)					
				This Survey	Previous Surveys~	Total	This Survey	Previous Surveys~	Total			
Acacia karinae	P3	-	Perennial	489	2,496	2,985	1	2,060	2,061	**5,046**	Karara Area	A^, B, D, E, F, G, K, O^, P^, Q, R, S^
Acacia woodmaniorum	T	EN	Perennial	-	-	-	-	41[#]	41[#]	**41[#]**	Karara Area	NA – artificially introduced or growing in old mine pit
Allocasuarina tessellata	P3	-	Perennial	558	138	696	-	30	30	**726**	Karara Area	A^, B, D, F, K, O, P, Q, R, S^
***Baeckea* sp. Perenjori (J.W. Green 1516)**	P2	-	Perennial	-	-	-	-	29	29	**29**	Borefield Corridor	E^, G, AA^
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	-	Ephemeral	*215*	*1*	*216*	*18*	-	*18*	***234***	Yandanooka Pipeline; Karara Area	A^, D, E, F, G, H, K, O, P, Q, R, S^, T
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	-	Annual	*36*	*1*	*37*	*1*	-	*1*	***38***	Karara Area	A, D^, G^, H, K, O^, P, R
***Crassula* sp. nov.**	PU	-	Annual	-	*2*	*2*	-	*2*	*2*	***4***	Karara Area	B^, D, R
Drummondita fulva	P3	-	Perennial	131	-	131	3	345	348	**479**	Karara Area	G, O^, P^, Q, R^
Epitriche demissus	P2	-	Annual	-	-	-	*4*	-	*4*	***4***	Borefield Corridor	L, N^
Eucalyptus synandra	T	VU	Perennial	-	-	-	-	46	46	**46**	Karara Area	D, Q, R^
Fitzwillia axilliflora	P2	-	Annual	-	-	-	*1*	-	*1*	***1***	Borefield Corridor	N^
Gnephosis setifera	P1	-	Annual	-	-	-	*2*	-	*2*	***2***	Borefield Corridor; Yandanooka Pipeline	M^, N^
Grevillea globosa	P3	-	Perennial	127	248	375	1	320	321	**696**	Karara Area	A, D, G, H, P^, Q^, R^
Grevillea granulosa	P3	-	Perennial	-	-	-	11	-	11	**11**	Yandanooka Pipeline	R, S, T^
Grevillea scabrida	P3	-	Perennial	479	470	949	31	1	32	**981**	Karara Area	A^, D^, E, G, K^, R
Grevillea subtiliflora	P3	-	Perennial	-	-	-	-	1	1	**1**	Karara Area	F^
Gunniopsis divisa	P3	-	Annual	*19*	*2*	*21*	*2*	-	*2*	***23***	Borefield Corridor; Karara Area	A, D, G^, K^, L, N, R, S
Hemigenia* sp. aff. *botryphylla	PU	-	Perennial	-	-	-	2	-	2	**2**	Yandanooka Pipeline	A^
Hibbertia cockertoniana	P3	-	Perennial	-	-	-	-	1	1	**1**	Karara Area	Q^
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	-	Perennial	88	2,826	2,914	301	15,872	16,173	**19,087**	Yandanooka Pipeline; Karara Area	A, B, D, E, F, K, O^, P^, Q, R, S
Melaleuca barlowii	P3	-	Perennial	-	-	-	-	4	4	**4**	Yandanooka Pipeline; Karara Area	E, P^, T^
Menkea draboides	P3	-	Annual	-	-	-	*1*	*1*	*2*	***2***	Yandanooka Pipeline; Karara Area	A^, E^, S^
Micromyrtus acuta	P3	-	Perennial	-	-	-	-	1,931	1,931	**1,931**	Karara Area	O^, P
Micromyrtus trudgenii	P3	-	Perennial	-	28	28	-	616	616	**644**	Karara Area	F, O^, P, Q

Taxon	Status (WA)	Status (EPBC)	Longevity	Number of Individuals (Perennial Taxa) / *Number of Locations (Annual & Ephemeral Taxa)*						Grand Total	Location(s)	VTs*
				Targeted Survey Area			Survey Area (excluding Targeted Survey Area)					
				This Survey	Previous Surveys~	Total	This Survey	Previous Surveys~	Total			
Millotia dimorpha	P1	-	Annual	-	-	-	-	*11*	*11*	***11***	Karara Area	O^, Q
Nicotiana salina	P1	-	Annual	-	-	-	*1*	-	*1*	***1***	Borefield Corridor	L^
Persoonia pentasticha	P3	-	Perennial	99	278	377	3	122	125	**502**	Borefield Corridor; Karara Area	A, C, D^, E, F, G^, H^, K^, O, P, Q, R, S
Petrophile pauciflora	P3	-	Perennial	-	-	-	-	22	22	**22**	Karara Area	A, O^
Pityrodia viscida	P4	-	Perennial	-	-	-	-	1	1	**1**	Borefield Corridor	HMVT B^
Podotheca uniseta	P3	-	Annual	-	-	-	*1*	-	*1*	***1***	Borefield Corridor	L^
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	-	Perennial	8	1	9	-	-	-	**9**	Karara Area	P, Q^, R
Rhodanthe collina	P3	-	Annual	*313*	*76*	*389*	*15*	*54*	*69*	***458***	Karara Area	A^, D, E, F, G, K^, O^, P, Q, R, S
Roebuckiella halophila	P3	-	Annual	-	-	-	*13*	-	*13*	***13***	Borefield Corridor; Yandanooka Pipeline	A, E^, G^, L, O, P, R^
Seringia exastia	-	CR	Perennial	-	-	-	10	-	10	**10**	Karara Area	D^
Stenanthemum poicilum	P3	-	Perennial	-	-	-	-	22	22	**22**	Karara Area	D, E^
Stylidium scintillans	T	-	Ephemeral	-	-	-	-	*15*	*15*	***15***	Karara Area	O^, P, R
Swainsona picta	P1	-	Annual	-	-	-	*2*	-	*2*	***2***	Karara Area	B^
Tecticornia fimbriata	P3	-	Perennial	-	-	-	2	-	2	**2**	Borefield Corridor	L^, N^
***Tecticornia* sp. 'Karara 1'**	PU	-	Perennial	-	-	-	4	-	4	**4**	Borefield Corridor	L, N^
***Tecticornia* sp. 'Karara 2'**	PU	-	Perennial	-	-	-	5	-	5	**5**	Borefield Corridor	G, L, N^, HMVT G
Tricoryne soullierae	P3	-	Ephemeral	-	-	-	*1*	-	*1*	***1***	Yandanooka Pipeline	I^, T^

** Refer to **Section 5.2.6** for VT descriptions.*

*~ Data from the Karara–Mungada, Regional Mapping and 2020 Assessments (Umwelt, 2021; Woodman Environmental, 2008d, 2012) and DBCA databases (DBCA, 2023d). Note that the values presented here represent significant flora locations that occur in uncleared vegetation only (as per the mapping presented in this report; see **Section 5.2.6**) within the current Survey Area, and therefore may differ from the values presented in the original reports.*

'^' Designates preferred habitat (tentative), based on proportional location representation and landforms/soils.

Acacia woodmaniorum *(T) abundance current to October 2024 according to monitoring undertaken by KML at translocation sites (KML, 2024a). Taxon known in the Survey Area from two translocation sites and on the edge of an old mine pit only.*

Table 5.8 Detailed Information of Significant Flora Taxa Recorded in the Survey Area

Taxon	Status (WA)	Status (EPBC)	Plant Description	Habitat*	Endemic to WA^	Approximate Range*	WA Herbarium Records*	Approx. Regional Populations*~ (based on location records)	Approx. Regional Populations in Conservation Estate*~
Acacia karinae	P3	-	Woody, openly branched shrub to 3 m high with filiform terete phyllodes and light golden flowers in a simple or rudimentary raceme inflorescence.	Red-brown to yellowish red sandy clay loam, basalt and BIF. Plains, slopes and hills.	Yes	80 km Near Karara mine site in northwest to near Lake Moore in southeast.	40	26	2 Mungada Ridge National Park.
Acacia woodmaniorum	T	EN	Intricately branched, sprawling, harsh, prickly perennial shrub growing to 1–2 m high. Inflorescences simple or rudimentary racemes with light golden globular heads.	Red clay loam, silt over ironstone. Hill slopes, scattered among rocks.	Yes	8 km Jasper Hill in northeast to near Blue Hills Mine in southwest.	16	5	2 Mungada Ridge National Park.
Allocasuarina tessellata	P3	-	Dioecious shrub or tree growing to approximately 3–5 m high. Male spikes or female cones with sterile apices.	Red sandy loam over laterite and ironstone. Slopes and rocky basalt outcrops.	Yes	85 km Near Karara Airport in northwest to near Lake Moore in southeast.	50	20	0
***Baeckea* sp. Perenjori (J.W. Green 1516)**	P2	-	Woody round perennial shrub to 0.5 m high and 1 m wide. Leaves arranged in opposite pairs. Small pink flowers.	Red brown sandy loam or clay, or silty sands. Often with granite or ironstone on ridges and hills.	Yes	80 km Koolanooka Springs in northwest to near Maya in southeast.	20	14	1 Bowgarder Nature Reserve.
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	-	Perennial herb to 0.3 m high. Strappy leaves. Inflorescence with small yellow flowers.	Yellow, red clayey sand over granite or laterite, rocky banded ironstone. Moderately inclined slopes.	Yes	230 km Near Ex Warrieder in northwest to near North Kununoppin in southeast.	16	8	0
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	-	Low herb 5-20 cm high, occasionally prostrate. Red spiky heads.	Ridges and slopes with banded ironstone.	Yes	490 km Near Mount Narryer Airport in northwest to near Ullarring in southeast.	24	20	2 Mungada Ridge National Park.
***Crassula* sp. nov.**	PU	-	Erect annual herb to 15 cm high.	Granitic areas, granite outcrops.	Unknown but presumed	Unknown	Unknown	Unknown	Unknown
Drummondita fulva	P3	-	Erect branching shrub 0.5-1.5m high. Crowded fleshy leaves. Solitary red flowers.	Orange-brown sandy loam. Hillslopes.	Yes	60 km Yalgoo in northeast to near Weelhamby Lake Nature Reserve in southwest.	19	12	1 Mungada Ridge National Park.
Epitriche demissus	P2	-	Prostrate annual herb. White or red flowers.	Edges of saline lakes and depressions. Grey sands, occasionally with clay.	Yes	340 km Near Koolanooka Nature Reserve in northwest to near Bugin Nature Reserve in southeast.	17	9	2 Yarra Yarra Lakes Nature Reserve.
Eucalyptus synandra	T	VU	Smooth barked open mallee to 3.5-10 m high. Alternate leaves. Ovoid buds, cream to pink flowers, hemispherical-obconical to almost saucer-like pedicellate fruit.	Hills, flats and valleys. Yellow or light brown-orange, red sandy gravel, ironstone and laterite.	Yes	260 km Pindar in northwest to near Mollerin Rock in southeast.	68	33	5 Unnamed Nature Reserve R51564, Unnamed Timber Reserve O 1 10 , Karroun Hill Nature Reserve.
Fitzwillia axilliflora	P2	-	Ascending to erect annual herb 3-14 cm high. White flowers.	White saline sandy clay on low gypsum ridges or flats near or on salt lake edges.	Yes	530 km Near Kadji Kadji in northwest to near Chinocup Nature Reserve in southeast.	20	13	4 Chinocup Nature Reserve, Lake Magenta Nature Reserve.

Taxon	Status (WA)	Status (EPBC)	Plant Description	Habitat*	Endemic to WA^	Approximate Range*	WA Herbarium Records*	Approx. Regional Populations*~ (based on location records)	Approx. Regional Populations in Conservation Estate*~
Gnephosis setifera	P1	-	Small prostrate annual herb. Yellow flowers.	White to pale grey/brown sandy soil. Sandy flats or ridges fringing salt lakes.	Yes	170 km Tardun in northwest to near Wubin Golf Course in southeast.	15	11	0
Grevillea globosa	P3	-	Perennial spreading non-lignotuberous woody shrub 1-3 m high. Leaves pinnatipartite with 3-9 lobes. Axillary or terminal, erect conflorescence with cream to white, green/red-brown flowers.	Ridges, flats and plains. Red-brown sandy soil.	Yes	145 km Near Mappa Lake in northwest to near Lake Moore in southeast.	48	40	4 Barnong National Park, Mungada Ridge National Park, Dalgaranga National Park.
Grevillea granulosa	P3	-	Erect perennial compact woody shrub 0.4-1.5 m high. Leaves entire, linear. Axillary or cauline conflorescence with red flowers.	Slopes and margins of salt lakes. Yellow sand, red-brown saline clay-loam, lateritic or fluviatile gravel.	Yes	240 km South of South Murchison in north to near Watheroo train station in south.	50	37 (Excluding 1 cultivated population in Kings Park)	1 Wilroy Nature Reserve.
Grevillea scabrida	P3	-	Densely and irregularly branched perennial woody shrub 0.6-1.5 m high. Axillary or terminal erect conflorescence with green-white/green-yellow/white flowers.	Shallow red/brown sandy clay loam soils over dolerite and/or ironstone. Moderately inclined low to mid slopes.	Yes	85 km Near Ex Karara in northwest to near Mount Gibson Quartz Ridge Campgrounds in southeast.	46	29	0
Grevillea subtiliflora	P3	-	Erect to spreading perennial woody shrub 1-2.5 m high. Leaves pinnatisect with 3-11 primary lobes. Terminal and axillary, erect to decurved conflorescence with white flowers.	Shallow red/brown sandy clay loam soils. Moderately inclined low to mid slopes.	Yes	65 km Near Warriedar mine in northwest to near Lake Moore in southeast.	43	23	0
Gunniopsis divisa	P3	-	Low prostrate annual herb up to 20 cm wide. Leaves ovate, spathulate or oblong. White-cream flowers arranged in cymes.	Slopes with banded ironstone and chert, sandy clay loam soil.	Yes	410 km North of East Murchison in northwest to near Lake Moore in southeast.	28	25	0
Hemigenia* sp. aff. *botryphylla	PU		Erect spreading shrub to 1 m high.	Flat with gravelly brown clay loam flat.	Unknown but presumed	Unknown	Unknown	Unknown	Unknown
Hibbertia cockertoniana	P3	-	Spreading to erect perennial shrub 0.4-1 m high. Leaves sessile, spreading-erect and linear. Solitary yellow flowers.	Orange and brown rocky soils. Banded ironstone outcrops.	Yes	160 km Near Canna Nature Reserve in northwest to near Mount Gibson Sanctuary in southeast.	31	14	1 Canna Nature Reserve.
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	-	Erect sedge growing in clumps up to 0.7 m high. Flowers arranged in spikes.	Seasonally wet brown to red sandy loam at the base of granite outcrops or across moderate to steeply inclined hillslopes of rocky magnetite and laterite banded ironstone.	Yes	80 km Near Ex Warriedar in northeast to near Mongers Lake in southwest.	28	20	0
Melaleuca barlowii	P3	-	Erect open perennial woody shrub 1.5-1.8 m high. Mauve to purple flowers.	Slopes, flats and roadsides. Hard gravelly yellow or red or brown sandy clay loam, banded ironstone or laterite.	Yes	250 km West of Pindar in northwest to near Kalarnie train station in southeast.	34	18 (excluding 1 cultivated population in Girraween Farmhouse)	3 Buntine Nature Reserve, Biluny Wells Nature Reserve, Wilroy Nature Reserve.

Taxon	Status (WA)	Status (EPBC)	Plant Description	Habitat*	Endemic to WA^	Approximate Range*	WA Herbarium Records*	Approx. Regional Populations*~ (based on location records)	Approx. Regional Populations in Conservation Estate*~
Menkea draboides	P3	-	Small prostrate, spreading annual herb to 60 cm wide. Basal leaves obovate, entire with cauline leaves. White-cream flowers.	Granitic flats with brown clay loam or red soils.	Yes	710 km Near Peace Gorge in northwest to near Lake Cowan in southeast.	10	7	0
Micromyrtus acuta	P3	-	Erect perennial woody shrub 0.8-2 m high. Moderately to densely arranged, antrorse oblong-obovate leaves. White flowers.	Red and red-brown loam and rocky soils. Banded ironstone.	Yes	60 km Near Ex Warriedar in north to Charles Darwin Reserve in south.	19	15	3 Thundelarra Conservation Park, Mungada Ridge National Park.
Micromyrtus trudgenii	P3	-	Erect perennial open shrub 1-2 m high and up to 1 m wide. Leaves antrorse, narrowly to broadly obovate. Yellow flowers.	Shallow, rocky red to brown sandy clay loam over moderately inclined hillcrests of banded ironstone or basalt.	Yes	55 km Near Golden Grove Airport in northeast to near Rothsay Mine in southwest.	39	29	2 Mungada Ridge National Park.
Millotia dimorpha	P1	-	Erect or ascending annual herb to 10 cm high. Yellow-white flowers.	Rocky red to brown clay loam across moderately inclined slopes of banded (often laterised with haematite) ironstone.	Yes	115 km In Canna Nature Reserve in northwest to near Warriedar Mine in southeast.	23	15	1 Canna Nature Reserve.
Nicotiana salina	P1	-	Erect open annual herb to 40 cm high. Basal rosette leaves, smaller stem leaves. White flowers.	Slopes fringing major salt lakes and islands in salt lakes. Red-brown sandy loam to yellow clay.	Yes	710 km Near Morawa in northwest to Queen Victoria Spring Nature Reserve in southeast.	14	10	4 Barnabinmah Conservation Park, Queen Victoria Spring Nature Reserve, Unnamed Timber Reserve O 2 10.
Persoonia pentasticha	P3	-	Erect perennial spreading shrub 0.4-1.8 m high. Leaves linear. Yellow flowers.	Slope of low rises, sides of ridges and drainage lines. Rocky basalt outcrops with red-brown or orange shallow sandy clay soils, fragments of granite, haematite, ironstone, quartz or ochre.	Yes	250 km Near Noondamurra Pool in northwest to near Paynes Find Quartz Reef in southeast.	51	39	7 Mungada Ridge National Park, Unnamed Timber Reserve O 2 10, West Perenjori Nature Reserve, Barnong Conservation Park, East Yuna Nature Reserve.
Petrophile pauciflora	P3	-	Shrub to 1 m high. Leaves erect, sparse, terete and usually three-forked. Inflorescence globose, yellow flowers.	Breakaways with granite or laterite. Flats or slopes with loam and clay.	Yes	325 km Near Iron Ridge Mine Camp in northwest to west of Bimbijy in southeast.	24	24	0
Pityrodia viscida	P4	-	Erect, open, spreading, viscid shrub 0.3-0.6 m high. White flowers with brown spots.	Upper slopes and mid slopes with white or grey sand, sometimes over laterite.	Yes	270 km Near Kalbarri Airport in northwest to South Eneabba Nature Reserve in southeast.	28	24	2 Mingenew Nature Reserve, Wotto Nature Reserve.
Podotheca uniseta	P3	-	Ascending erect, annual succulent herb 5-25 cm high. Yellow flowers.	White/grey sand, sandy loam. Samphire flats.	Yes	230 km Near Mingenew in northwest to West of Mollerin in southeast.	29	26	5 Watheroo National Park, Pinjarrega National Park, Marchagee Nature Reserve, Gurdurdu Conservation Park.
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	-	Small shrub to 1 m high.	Red silty clay loam. Low to mid slopes of low rises.	Yes	15 km Northeast of Rothsay in northwest to west of Paynes Find in southeast.	7	6	0

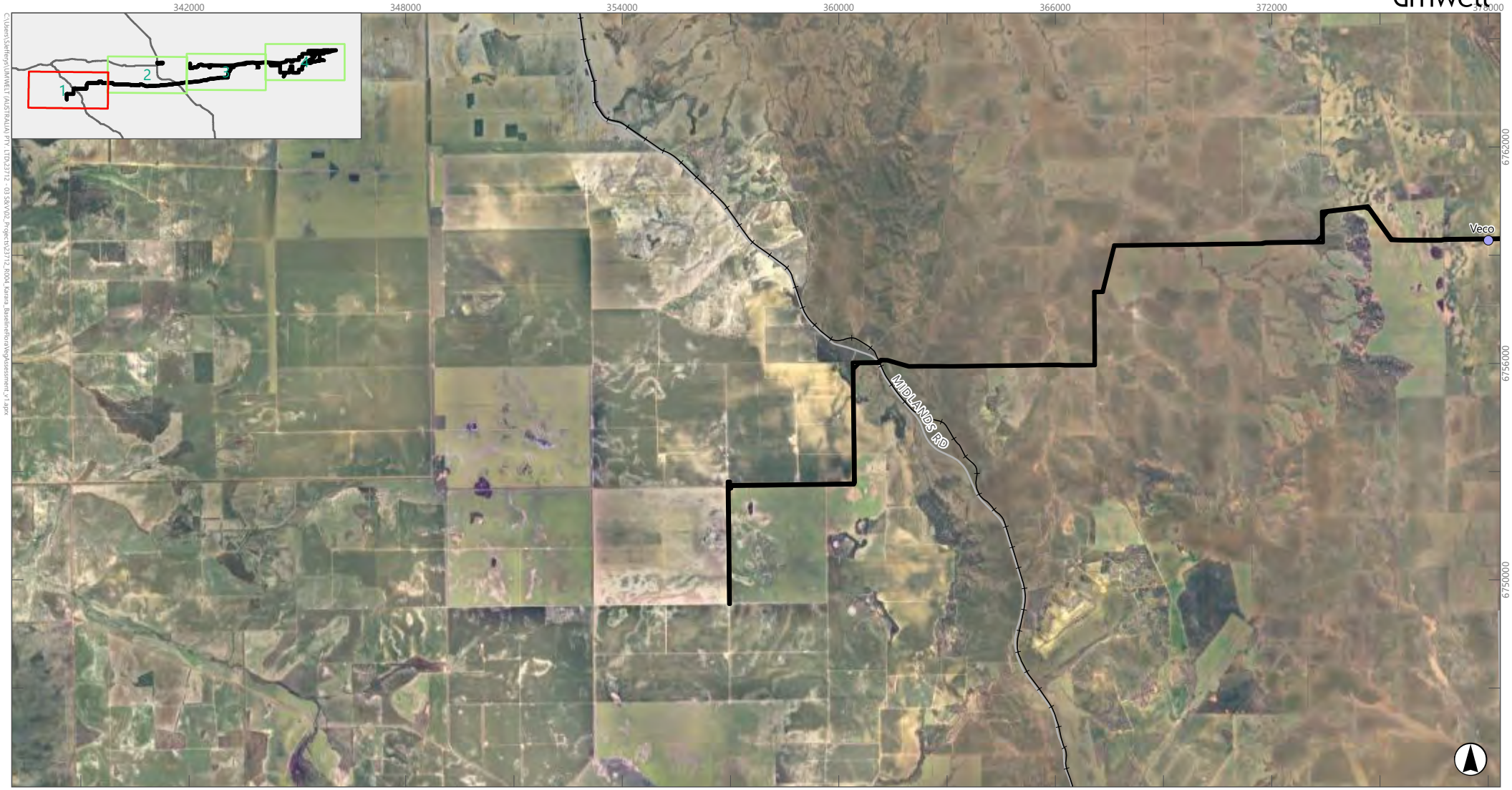
Taxon	Status (WA)	Status (EPBC)	Plant Description	Habitat*	Endemic to WA^	Approximate Range*	WA Herbarium Records*	Approx. Regional Populations*~ (based on location records)	Approx. Regional Populations in Conservation Estate*~
Rhodanthe collina	P3	-	Erect bushy annual herb 1-25 cm high. Narrow, spathulate leaves. White ray florets, yellow disc florets.	Rocky shallow red to brown sandy clay loam. Low to upper slopes of moderately inclined banded ironstone (often mixed with other minerals and rock).	Yes	155 km Near Jokers Tunnel in northwest to near Mount Gibson Sanctuary in southeast.	40	26	3 Thundelarra Conservation Park, Mungada Ridge National Park, Mingenew Nature Reserve.
Roebuckiella halophila	P3	-	Small erect, ascending annual herb to 15 cm high. White to mauve/purple ray florets, yellow disc florets.	Sand ridges in saline drainage lines or salty lake areas. Slightly to moderately saline brown-red sand or laterite clay.	Yes	135 km Near Wreath Flowers of Pindar in northeast to near Yarra Yarra Lakes in southeast.	25	13	1 Yarra Yarra Lakes Nature Reserve.
Seringia exastia	-	CR	Multi-stemmed, erect, compact shrub to 1.5 m high and 1.5 m wide. Leaves greyish-green arranged spirally around stem. Inflorescence 6–23-flowered, dichasial cyme with purple flowers.	Sandplains, desert dunes, rocky slopes, and plateaus of ironstone gorges or sandstone outcrops. Red to brown sand or clay loam.	No; also known from NT and SA	> 2,200 km Broome region in northwest, to north of Paynes Find in southwest, east into the NT to south of Tennant Creek and Alice Springs, then south to the northwest of SA.	298	> 150	> 35 Giralia (Jarralya) National Park, Cane River Conservation Park, Kennedy Range National Park, Mount Augustus National Park, Karijini National Park, Collier Range National Park, Karlamilyi National Park, Yawuru Nagulagun/ Roebuck Bay Marine Park, Pila Nature Reserve (Gibson Desert), Neale Junction Nature Reserve, Helena and Aurora Ranges National Park, Dalgaranga National Park, Wanjarri Nature Reserve
Stenanthemum poicilum	P3	-	Erect or decumbent twiggy shrub 0.15-0.5 m high. Broadly obovate leaves. White flowers.	Red to brown sand, clay or loam over basalt gravel or laterised banded ironstone often with haematite. Moderately inclined upper slopes.	Yes	170 km Near Wilroy Nature Reserve in northwest to Charles Darwin Nature Reserve in southeast.	26	20	0
Stylidium scintillans	T	-	Erect annual herb 3-8 cm high. White flowers with red-pink throat markings.	Brown clay loam or brown gravelly loam on mid to upper slopes of granite outcropping. Sometimes growing in cracks between rocks.	Yes	40 km Near Golden Grove Airport in north to near west of Mongers Lake in southeast. One population 74 km west of Golden Grove Airport.	23	18	2 Mungada Ridge National Park, Thundelarra Conservation Park.
Swainsona picta	P1	-	Ascending to erect annual herb to 15 cm high. Opposite leaves. Pink/purple flowers. Hairy fruit pods.	Red brown sandy loam. Granite outcrops and adjacent areas.	Yes	10 km Near Karara Airport in northeast to near John Forrest Lookout in southwest.	2	2	0

Taxon	Status (WA)	Status (EPBC)	Plant Description	Habitat*	Endemic to WA^	Approximate Range*	WA Herbarium Records*	Approx. Regional Populations*~ (based on location records)	Approx. Regional Populations in Conservation Estate*~
Tecticornia fimbriata	P3	-	Erect shrub 0.25-1 m high. Articles broadly obovoid, light green and/or flushed with red. Spikes short and initially terminal, but usually vegetative growth continues.	Saline sand and clayey soil. Shores of salt lakes.	Yes	360 km Lake Austin in northeast to near Ballidu Airport in southwest.	31	15	2 Unnamed Timber Reserve O 2 10, Lakeside Conservation Park.
***Tecticornia* sp. 'Karara 1'**	PU	-	Samphire shrub to 0.4 m.	Samphire salt lakes.	Unknown but presumed	Unknown	Unknown	Unknown	Unknown
***Tecticornia* sp. 'Karara 2'**	PU	-	Samphire shrub to 0.3 m.	Samphire salt lakes, saline flats.	Unknown but presumed	Unknown	Unknown	Unknown	Unknown
Tricoryne soullierae	P3	-	Rhizomatous low open straggly herb 0.2 m high and 0.2 m wide. Grass-like leaves. Yellow flowers.	Sand or yellow sand. On slopes.	Yes	340 km Depot Hill Reserve in northwest to southeast of Mount Observation in southeast.	10	9	2 Wandoo National Park, Unnamed Nature Reserve R 2360.

** Source: DBCA WA Herbarium Specimen Database, accessed via Florabase (WA Herbarium, 1998-). Total number of taxon specimens held at the WA Herbarium presented, which may be lower than the number of unique locations (due to multiple specimens sometimes being lodged from a particular location). However, it is worth noting that the coordinates entered into and stored in the WA Herbarium database do not always fully correspond with the collector's original location description, or the location was not given in sufficient detail, and as such often represent an approximation rather than an exact location.*

^ Source: Atlas of Living Australia (ALA, 2025).

~ Regional populations in this context use the DBCA (2017b) definition as a discrete group of individuals of a taxon separated by more than 500 m from the nearest discrete group of individuals. However, it is worthy of note that this definition can only be tentatively applied if the intervening 500 m has not been surveyed.



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway

Significant Flora Taxa

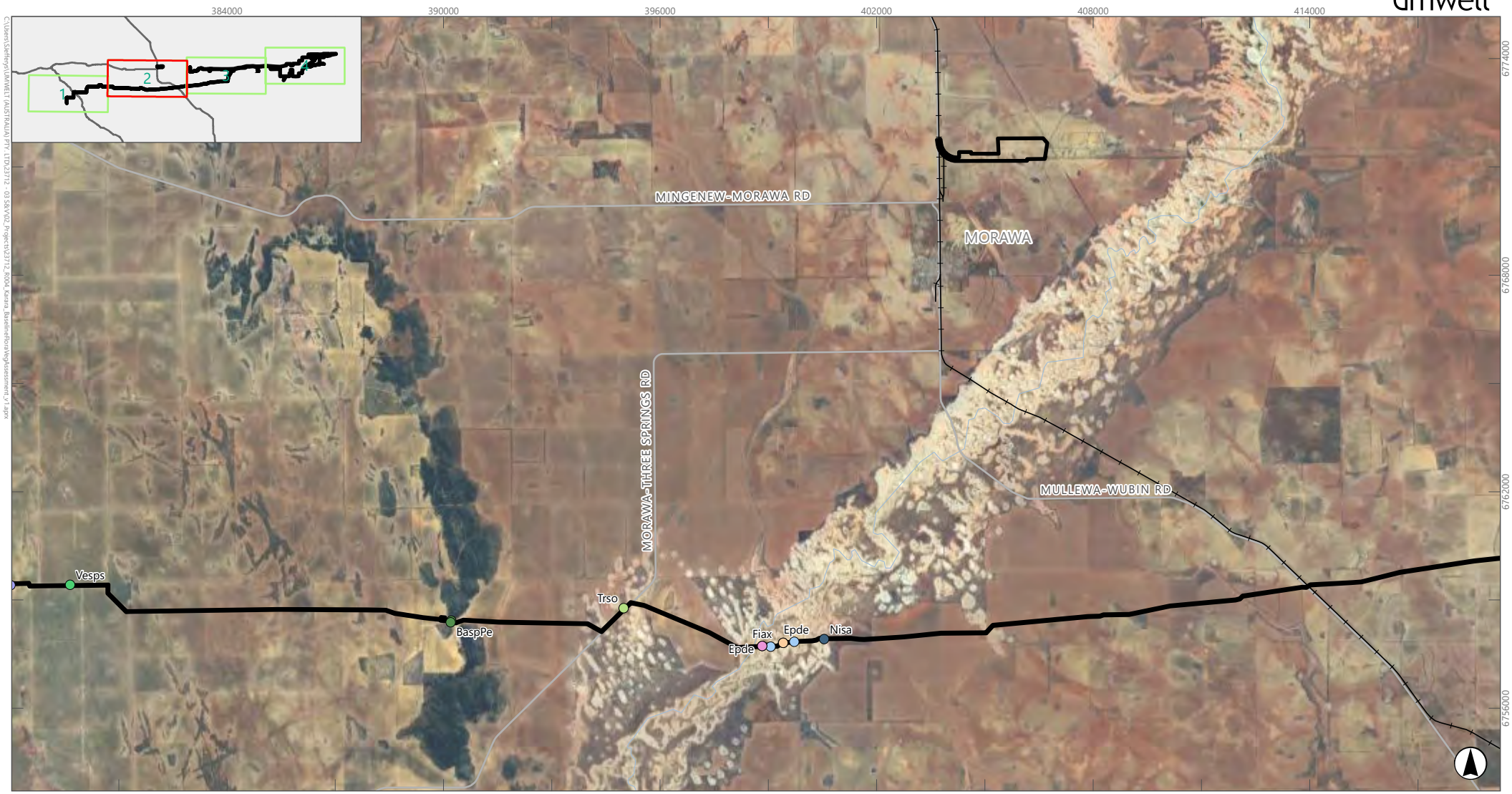
- Veco *Verticordia comosa* (P1)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (T, P1, P2)
Sheet 1

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Significant Flora Taxa

- BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)
- Epde *Epitriche demissus* (P2)
- Fiax *Fitzwillia axilliflora* (P2)
- Gnse *Gnephosis setifera* (P1)
- Nisa *Nicotiana salina* (P1)
- Trso *Tricoryne soullierae* (P1)
- Veco *Verticordia comosa* (P1)
- Vesps *Verticordia spicata* subsp. *squamosa* (T)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (T, P1, P2)
Sheet 2

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Legend

Survey Area

Major Watercourse

Significant Flora Taxa

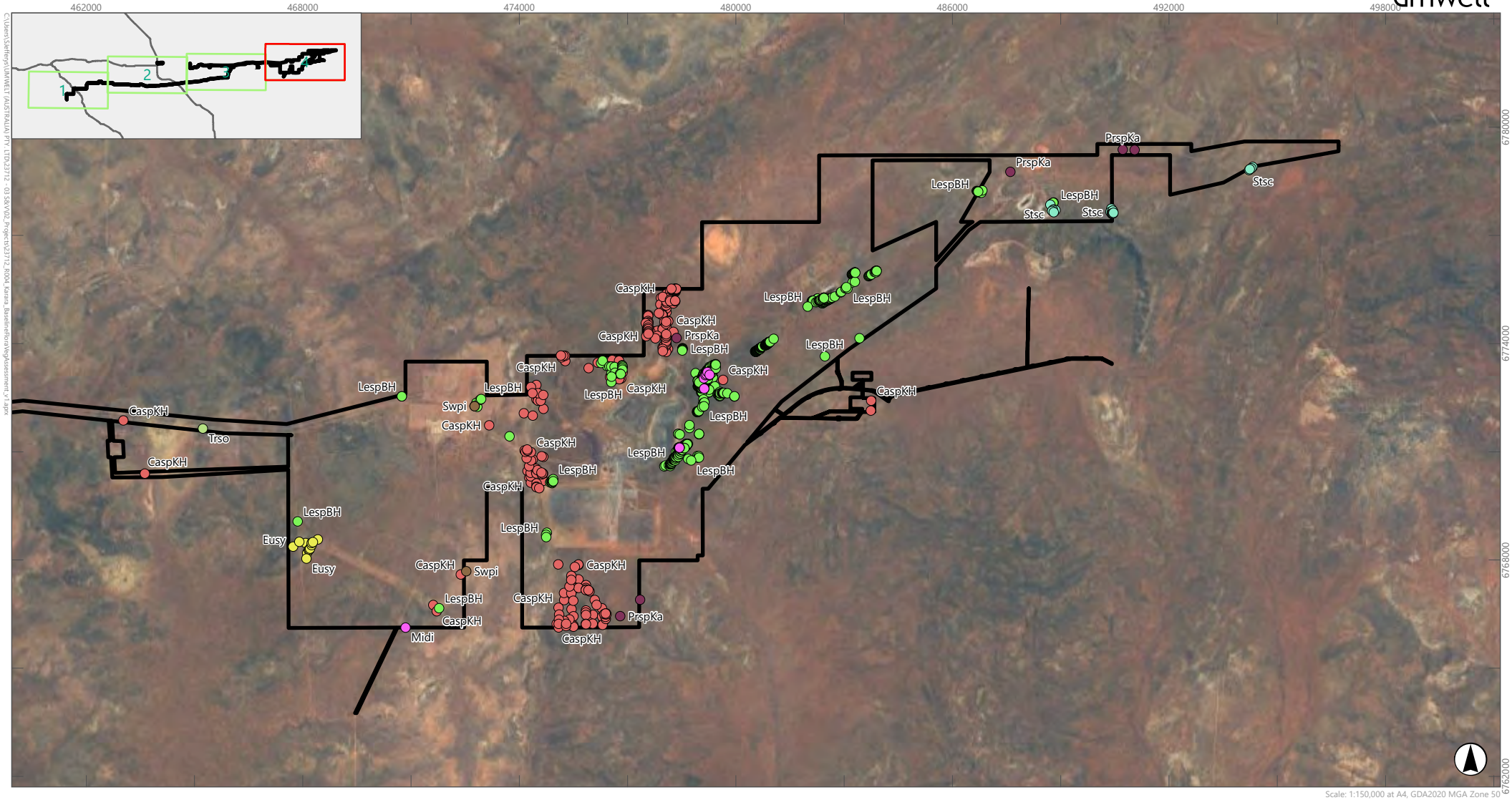
- BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Gnse *Gnephosis setifera* (P1)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Swpi *Swainsona picta* (P1)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (T, P1, P2)
Sheet 3

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Legend

Survey Area

Significant Flora Taxa

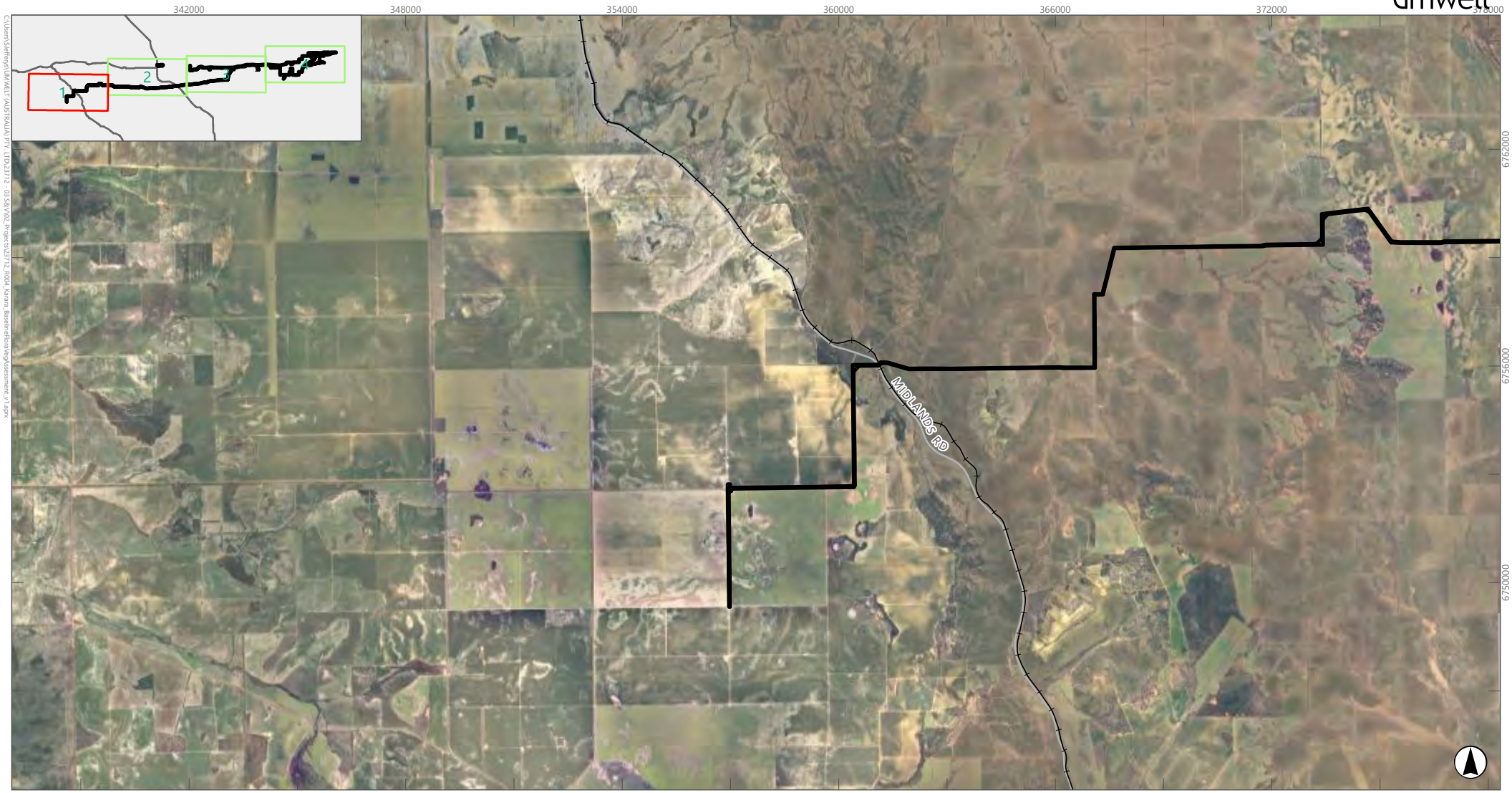
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Eusy *Eucalyptus synandra* (T)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Midi *Millotia dimorpha* (P1)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Stsc *Stylidium scintillans* (T)
- Swpi *Swainsona picta* (P1)
- Trso *Tricoryne soullierae* (P1)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (T, P1, P2)
Sheet 4

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

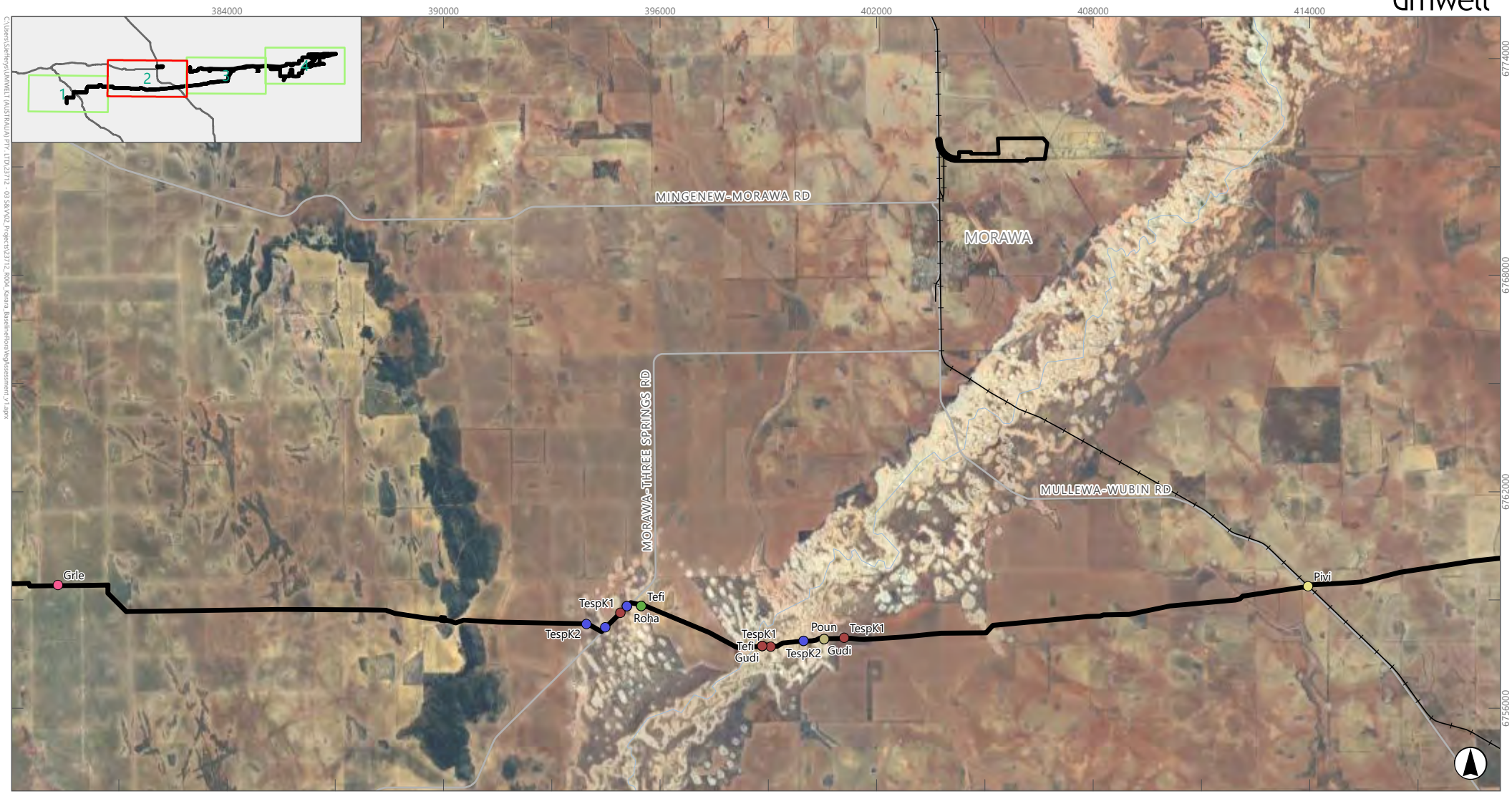
- Survey Area
- Road
- Railway

FIGURE 5.6

Significant Flora Taxa of the Survey Area (P3, P4, PU)
Sheet 1

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:150,000 at A4, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Significant Flora Taxa

- Grle *Grevillea leptopoda* (P3)
- Gudi *Gunniopsis divisa* (P3)
- Pivi *Pityrodia viscida* (P4)
- Poun *Podotheca uniseta* (P3)
- Roha *Roebuckiella halophila* (P3)
- Tefi *Tecticornia fimbriata* (P3)
- TespK1 *Tecticornia* sp. 'Karara 1' (PU)
- TespK2 *Tecticornia* sp. 'Karara 2' (PU)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (P3, P4, PU)
Sheet 2

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Legend

- Survey Area
- Major Watercourse

Significant Flora Taxa

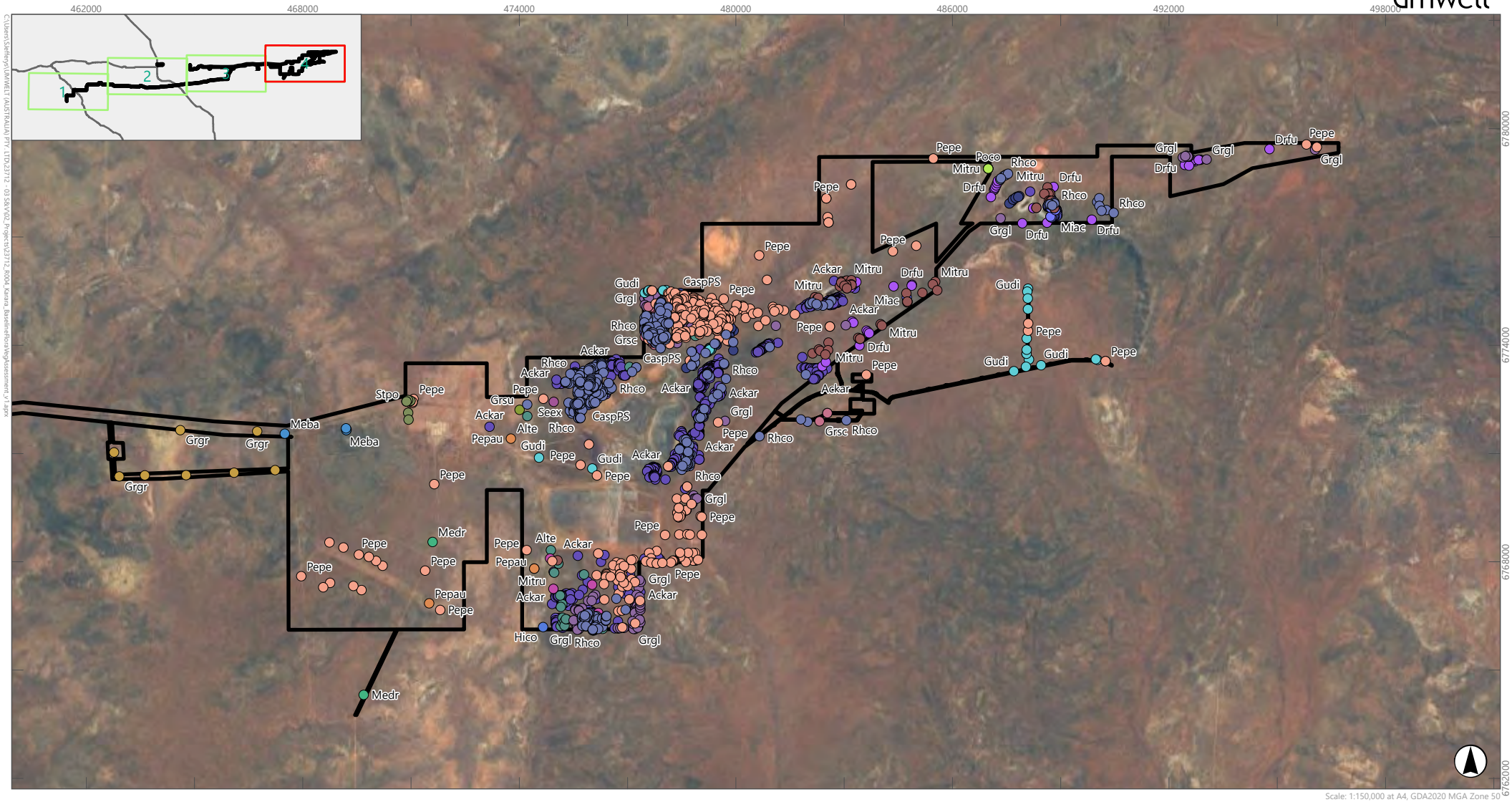
- Grgr *Grevillea granulosa* (P3)
- Hebo *Hemigenia* sp. aff. *botryphylla* (PU)
- Meba *Melaleuca barlowii* (P3)
- Medr *Menkea draboides* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Roha *Roebuckiella halophila* (P3)
- TespK2 *Tecticornia* sp. 'Karara 2' (PU)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (P3, P4, PU)
Sheet 3

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Legend

Survey Area

Significant Flora Taxa

- Ackar *Acacia karinae* (P3)
- Alte *Allocasuarina tessellata* (P3)
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Csn *Crassula* sp. nov. (PU)
- Drfu *Drummondita fulva* (P3)
- Grgl *Grevillea globosa* (P3)
- Grgr *Grevillea granulosa* (P3)
- Grsc *Grevillea scabrida* (P3)
- Grsu *Grevillea subtiliflora* (P3)
- Gudi *Gunniopsis divisa* (P3)
- Hico *Hibbertia cockertoniana* (P3)
- Meba *Melaleuca barlowii* (P3)
- Medr *Menkea draboides* (P3)
- Miac *Micromyrtus acuta* (P3)
- Mitru *Micromyrtus trudgenii* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Pepau *Petrophile pauciflora* (P3)
- Poco *Polianthion collinum* (P3)
- Rhco *Rhodanthe collina* (P3)
- Seex *Seringia exastia* (EPBC – CR)
- Stpo *Stenanthemum poicilum* (P3)

FIGURE 5.6

Significant Flora Taxa of the Survey Area (P3, P4, PU)
Sheet 4

0 3 6 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

5.2.3 Distribution Extensions and Distribution Gaps

Table 5.9 presents taxa where collections from the Survey Area made for the 2023 and 2024 survey represent extensions (greater than approximately 50 km) to the known distribution of such taxa, or otherwise fill gaps within their known distributions, according to Florabase (WA Herbarium, 1998-).

Collections of eight taxa made during the 2023 and 2024 survey represent range extensions or fill gaps within their known distributions. Specimen material from these taxa will be lodged at the WA Herbarium by Umwelt as per the requirements of EPA Technical Guidance (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 5.9** are considered to be significant taxa in this context (with the exception of the significant flora taxa discussed in **Section 5.2.2**). All such taxa have relatively wide distributions, and the recording of these taxa is considered to be a function of the limited previous survey undertaken in the Survey Area and surrounds, particularly in the Yandanooka Pipeline and Borefield Corridor areas.

Table 5.9 Taxa Where Collections Represent Range Extensions or Fill Distribution Gaps

Taxon	Comment
Blennospora phlegmatocarpa	Range extension of approx. 190 km to northwest
Centrolepis pilosa	Edge of range / fills locality hole of approx. 300 km
Drosera major	Edge of range / fills locality hole of approx. 245 km
Dysphania glandulosa	Range extension of approx. 50 m to west
Eragrostis falcata	Range extension of approx. 150 km to west
****Rumex vesicarius***	Fills a locality hole of approx. 60 km
Sebaea ovata	Range extension of approx. 200 km to north
Seringia exastia **(EPBC: CR)**	Range extension of approx. 90 km to west

5.2.4 Likelihood of Occurrence of Further Significant Flora Taxa

As discussed in **Section 5.1.5**, a total of 368 listed significant vascular flora taxa were returned by the desktop assessment, of which 35 have been recorded within the Survey Area. An additional taxon, *Seringia exastia* (EPBC: CR), was recorded during the 2023 and 2024 survey but was not returned by the desktop assessment, and four potentially undescribed taxa have been recorded in the Survey Area (**Section 5.2.2**).

An assessment of the likelihood of the remaining taxa occurring in the Survey Area (as the entire Survey Area was not subject to Targeted flora survey) is presented in **Appendix H**. The likelihood of occurrence assessment considered whether a taxon was theoretically identifiable at the time of survey, the known range of the taxon, proximity of known records to the Survey Area, and the potential presence of appropriate habitat within the Survey Area. It is worthy of note that suitable habitat has been determined using details recorded at known locations, according to the WA Herbarium (1998-). However, for many of the taxa known from the general vicinity of the Survey Area, suitable habitat is difficult to define, as available habitat information is often vague or very broad and difficult to interpret. For example, an area described as a plain with red-brown loam could feasibly occur almost anywhere in WA; or, relatively few

records are available and therefore the true nature of the habitat may not be known. Therefore, a precautionary approach has been adopted when assessing whether suitable habitat for a species is present in the Survey Area.

Theoretically, all but four significant flora taxa would have been identifiable during the 2023 and 2024 survey. These four taxa are *Paracaleana dixonii* (T), *Poranthera asybosca* (P1), *Stylidium tinkeri* (P2) and *Thysanotus glaucus* (P4), which are either annuals or ephemerals that are only detectible during a short period, with these periods not coinciding with the timing of the field surveys. However, these four taxa were considered unlikely to be present in the Survey Area, as the Survey Area is outside the known distribution of the taxa, and suitable habitat is unlikely to be present. All other taxa assessed for likelihood of occurrence were theoretically identifiable during the field surveys, either because the survey period coincides with the taxon's emergent or flowering period, or the taxon can be identified reliably when in fruit or sterile.

A summary of the results of the likelihood of occurrence assessment for significant flora taxa in the Survey Area is presented in **Table 5.10**. Of the 372 significant flora taxa assessed, 41 are known to occur, 3 are considered 'likely' to occur in the Survey Area, and a further 78 could 'possibly' occur, including 5 taxa that are listed as Threatened under the BC and/or EPBC Acts. This result is not unexpected, given no Targeted flora survey has been undertaken across the Yandanooka Pipeline or the Borefield Corridor (with the exception of the very western end of the latter).

Table 5.10 Summary of Significant Flora Taxa Likelihood of Occurrence for the Survey Area

Likelihood of Occurrence in Survey Area	Number of Taxa				Reasoning
	Potentially Undescribed	DBCA Priority	WA / EPBC Threatened	Total	
Known	4	33	4	**41**	Existing locations within Survey Area
Likely	-	3	-	**3**	Survey Area clearly within or in close proximity to known range of taxa, and habitat possibly present
Possible	-	73	5	**78**	Survey Area potentially within or in relatively close proximity to known range of taxa, and habitat possibly present
Unlikely	-	190	60	**250**	Survey Area not within or in close proximity to known range of taxa, and/or habitat unlikely to be present
Not considered to occur	-	-	-	**-**	Survey Area > 200 km from known range of taxa, and/or habitat not considered to be present

An additional likelihood of occurrence assessment was then undertaken for any taxa that were rated 'known', 'likely' or 'possible' for their occurrence in the Survey Area (as per **Table 5.10**). This additional assessment considered the likelihood of occurrence for such taxa specifically within the Mine Area and Wheatbelt Area parts of the Targeted Survey Area. The results of this assessment are also presented in **Appendix H**, and are summarised in **Table 5.11**.

In summary, no significant flora taxa are known or are considered likely to / possibly occur in the Wheatbelt Area, mostly because suitable habitat is unlikely to be present in this area. One taxon 'possibly' occurs in the Mine Area, being *Calandrinia kalanniensis* (P2); this taxon is a tuberous perennial that is only detectible from October to January, and thus was likely not detectible during the Targeted flora survey, however suitable habitat may be present within the Mine Area.

Table 5.11 Summary of Significant Flora Taxa Likelihood of Occurrence for the Targeted Survey Area

Likelihood of Occurrence in Targeted Survey Area	Number of Taxa				Reasoning
	Potentially Undescribed	DBCA Priority	WA / EPBC Threatened	Total	
Mine Area					
Known	1	13	-	**14**	Existing locations within Mine Area
Likely	-	-	-	**0**	Mine Area clearly within or in close proximity to known range of taxa, habitat possibly present, AND taxon likely not detectible during Targeted field survey
Possible	-	1	-	**1**	Mine Area potentially within or in relatively close proximity to known range of taxa, habitat possibly present, AND taxon likely not detectible during Targeted field survey
Unlikely	3	95	8	**106**	Mine Area not within or in close proximity to known range of taxa, and/or habitat unlikely to be present, OR habitat possibly present but taxon not recorded by Targeted field survey
Not considered to occur	-	-	-	**0**	Mine Area > 200 km from known range of taxa, and/or habitat not considered to be present
Wheatbelt Area					
Known	-	-	-	**0**	Existing locations within Wheatbelt Area
Likely	-	-	-	**0**	Wheatbelt Area clearly within or in close proximity to known range of taxa, habitat possibly present, AND taxon likely not detectible during Targeted field survey

Likelihood of Occurrence in Targeted Survey Area	Number of Taxa				Reasoning
	Potentially Undescribed	DBCA Priority	WA / EPBC Threatened	Total	
Possible	-	-	-	**0**	Wheatbelt Area potentially within or in relatively close proximity to known range of taxa, habitat possibly present, AND taxon likely not detectible during Targeted field survey
Unlikely	4	109	8	**121**	Wheatbelt Area not within or in close proximity to known range of taxa, and/or habitat unlikely to be present, OR habitat possibly present but taxon not recorded by Targeted field survey
Not considered to occur	-	-	-	**0**	Wheatbelt Area > 200 km from known range of taxa, and/or habitat not considered to be present

5.2.5 Introduced Flora Taxa

A total of 64 introduced flora taxa have been recorded in the Survey Area by the 2023 and 2024 survey and previous surveys. These taxa are listed in **Table 5.12**, along with comments regarding the significance of each taxon, including ecological impact and invasiveness ratings under DBCA's *Ecological Impact and Invasiveness Ratings from the Department of Parks and Wildlife* for the Midwest Region (DBCA, 2014). Two of the 43 introduced flora taxa are Declared Pests (s22(2)) listed under the BAM Act (**Echium plantagineum* and **Galium aparine*), but no WoNS have been recorded.

Introduced flora taxa were generally most abundant around areas associated with disturbance (recent and historical), grazing, and agricultural, or in areas that experience periodic inundation, including winter-wet flats and depressions.

A total of 14 of the 64 introduced taxa are rated as having 'Low' ecological impact (**Table 5.12**). Taxa with this ecological impact rating are typically cosmopolitan species that generally cause minimal disruption to ecological processes or loss of biodiversity (DBCA, 2014). Of the 64 introduced taxa of the Survey Area, 18 are rated as having 'High' ecological impact (**Table 5.12**). Taxa with this ecological impact rating are considered significant weeds capable of causing acute disruption of ecological processes, as well as dominating and/or significantly altering the vegetation structure, composition and function of ecosystems (DBCA, 2014).

A total of 50 introduced flora taxa are rated as having 'Rapid' invasiveness in native vegetation (**Table 5.12**) (DBCA, 2014). These taxa are typically disturbance opportunists and are relatively common around disturbance areas, and as well as along drainage lines and other areas of periodic inundation.

Table 5.12 Summary of Introduced Flora Taxa of the Survey Area

Taxon	Common Name	Significance	Ecological Impact*	Invasiveness*
Aira caryophyllea	Silvery Hairgrass	-	High	Rapid
Arctotheca calendula	Cape Weed, African Marigold	-	High	Rapid
Avena ?sativa	Common Oat	-	Low	Slow
Avena barbata	Bearded Oat	-	High	Rapid
Avena fatua	Wild Oat	-	High	Rapid
Brassica tournefortii	Mediterranean Turnip	-	High	Rapid
Briza maxima	Blowfly Grass	-	Unknown	Rapid
Bromus diandrus	Great Brome	-	High	Rapid
Bromus rubens	Red Brome	-	Unknown	Rapid
Carrichtera annua	Ward's Weed	-	Not assessed	Not assessed
Carthamus lanatus	Saffron Thistle	-	Unknown	Rapid
Centaurea melitensis	Maltese Cockspur	-	High	Rapid
Citrullus amarus	Pie Melon, Paddy melon	-	Low	Rapid
Cleretum papulosum* subsp. *papulosum	-	-	Unknown	Rapid
Cucumis myriocarpus	Prickly Paddy Melon, Paddy melon	-	Unknown	Rapid
Cuscuta epithymum	Lesser Dodder, Greater Dodder	-	Unknown	Rapid
Cuscuta planiflora	Red Dodder	-	Unknown	Rapid
Cynodon dactylon	Couch	-	High	Rapid
Echium plantagineum	Paterson's Curse	Declared Pest	High	Rapid
Ehrharta calycina	Perennial Veldt Grass	-	High	Rapid
Ehrharta longiflora	Annual Veldt Grass	-	Unknown	Rapid
Erodium cicutarium	Common Storksbill	-	Low	Rapid
Ficinia marginata	Coarse Clubrush	-	Unknown	Rapid
Galium aparine	Goosegrass	Declared Pest	Unknown	Rapid
Gazania linearis	Gazania	-	High	Rapid
Gorteria personata	Gorteria	-	Unknown	Rapid
Hordeum ?glaucum	Northern Barley Grass	-	Unknown	Rapid
Hordeum leporinum	Barley Grass	-	Unknown	Rapid
Hypochaeris glabra	Flatweed, Smooth Catsear	-	Low	Rapid
Juncus bufonius	Toadrush	-	Low	Rapid
Lamarckia aurea	Goldentop	-	Unknown	Rapid
Leontodon rhagadioloides	Cretan Weed	-	High	Rapid

Taxon	Common Name	Significance	Ecological Impact*	Invasiveness*
Limonium lobatum	Winged Sea Lavender, Statice	-	High	Rapid
Lolium perenne	Perennial Ryegrass	-	Unknown	Rapid
Lolium rigidum	Annual Ryegrass, Wimmera Ryegrass	-	Unknown	Rapid
Lupinus angustifolius	Narrowleaf Lupin	-	Medium	Moderate
Lupinus cosentinii	Sandplain Lupin	-	Medium	Moderate
Lysimachia arvensis	Scarlet Pimpernel, Blue Pimpernel	-	Low	Rapid
Medicago minima	Small Burr Medic	-	Low	Moderate
Medicago polymorpha	Burr Medic	-	Unknown	Rapid
Medicago ?truncatula	Barrel Medic	-	Low	Moderate
Mesembryanthemum nodiflorum	Slender Iceplant	-	High	Moderate
Monoculus monstrosus	Stinking Roger	-	Unknown	Rapid
Parapholis incurva	Coast Barbgrass	-	Medium	Rapid
Parentucellia latifolia	Red Bartsia, Common Bartsia	-	Medium	Rapid
Pentameris airoides* subsp. *airoides	False Hairgrass	-	Unknown	Rapid
Petrorhagia dubia	Hairy Pink	-	Low	Rapid
Phalaris ?minor	Lesser Canary Grass	-	Low	Slow
Plantago coronopus* subsp. *commutata	Buckshorn Plaintain	-	Unknown	Rapid
Polypogon monspeliensis	Annual Barbgrass, Annual Beardgrass	-	Medium	Moderate
Raphanus raphanistrum	Wild Radish	-	High	Rapid
Rostraria pumila	Rough Cat's Tail, Tiny Bristle-grass	-	Unknown	Unknown
Rumex hypogaeus	Double Gee	-	Low	Rapid
Rumex vesicarius	Rosy Dock, Ruby Dock	-	High	Rapid
Silene nocturna	Mediterranean Catchfly	-	Low	Rapid
Sisymbrium erysimoides	Smooth Mustard	-	Unknown	Unknown
Sisymbrium orientale	Indian Hedge Mustard	-	Unknown	Unknown
Sisymbrium runcinatum	African Turnip Weed	-	Unknown	Unknown
Sonchus oleraceus	Common Sowthistle	-	Unknown	Rapid
Spergula pentandra	Five Ather Spurrey	-	Low	Rapid

Taxon	Common Name	Significance	Ecological Impact*	Invasiveness*
Spergularia rubra	Red Sand Spurrey, Sand Spurry	-	Low	Rapid
Trifolium glomeratum	Ball Clover, Cluster Clover	-	High	Moderate
Ursinia anthemoides* subsp. *anthemoides	Ursinia	-	High	Rapid
Vulpia myuros* forma *myuros	Rat's Tail Fescue	-	Unknown	Rapid

** Source: Ecological Impact and Invasiveness Ratings from the Department of Parks and Wildlife for the Midwest Region (DBCA, 2014).*

5.2.6 Vegetation of the Survey Area

PCA and subsequent optimal number of clusters analyses of the Survey Area floristic dataset determined that six to ten clusters may be appropriate to capture the majority of the variation in the datasets; this broadly aligns with the 'elbow' of the scree plot as presented in **Appendix I**, indicating where the eigenvalues level off, and hence the principal components to the left of this point should be retained as significant. The 2D cluster plot, dendrogram, and taxon group matrix (also presented in **Appendix I**), were therefore initially examined using six clusters, to determine the plausibility of clusters with regard to taxon groups as well as field observations.

Upon review of aerial photography and quadrat species composition, as well other characteristics including topography, soils, and geographic location, it was determined that five clusters contained obvious subgrouping of quadrats. Inspection of these quadrats and the taxon group matrix found that these subgroups were worthy of distinction as discrete vegetation types. In addition, 10 quadrats were reallocated to different groups, as review of quadrat placement and taxon lists identified that they had been misclassified due to being species poor and/or being placed in ecotonal vegetation (and therefore possessing taxa common to both vegetation types). These quadrats were also manually reassigned to VTs that better reflected their topography, soil type and vegetation composition.

It was ultimately determined that there were 20 plausible quadrat groups that are considered to represent VTs in the Survey Area (VTs A to T). The final VT groupings, as well as the updated VT determination of the quadrats that were manually reallocated to different VTs, are labelled in the dendrogram in **Appendix I**.

VT U was defined in the Karara Area in an area with distinctive vegetation patterning on the edges of a saline claypan. No sample sites occur in that vegetation pattern within the Survey Area; however, the vegetation extends north of the Survey Area, where it is sampled by a historical quadrat and relevé approximately 500 m outside the Survey Area (GIND-79 and KM-028). Therefore, VT U was described using the information from these sample sites.

The review of the relevé data and vegetation mapping notes identified six additional VTs in the Survey Area (VTs V to AA). These VTs were mapped within the Yandanooka Pipeline and Borefield Corridor where there was limited opportunity for sampling via quadrats, due to the Survey Area being very narrow in these areas. These sample sites were assigned to VTs following detailed investigation of their species composition, topography, soils, and geographic location.

In addition, seven highly modified vegetation types were defined (HMVTs A to G). These HMVTs were mapped in the Borefield Corridor in areas with a long history of disturbance, where the vegetation still possessed tree or large shrub taxa, but were highly modified otherwise, with understoreys usually completely comprised of introduced taxa. In many cases, the trees or large shrubs were native species and are likely remnant, however no attempt was made to align any such areas with VTs. Occasionally, some areas contained a mixture of native trees and non-native trees that have presumably been planted or have escaped from nearby plantings. Areas that consisted only of planted, non-native or non-endemic tree or shrub taxa were mapped as Planted ('PL').

The final area of vegetation that was mapped in the Survey Area was VT CP. This VT was mapped in a playa lake claypan, which consists of bare clay and is completely devoid of vegetation when dry. However, it periodically fills with water, and in the subsequent weeks while water is still present (or when the clay is still waterlogged), a forbland of *Myriophyllum decussatum* establishes.

Areas where natural vegetation has been removed were mapped as 'Cleared Land' (CL) (where discernible at 1:5,000 scale). This includes roads (and associated infrastructure including culverts), tracks, and areas cleared for mining, infrastructure and agriculture. Cleared areas that were small in width and not discernible at 1:5,000 scale were mapped as parts of the VTs within which they occur. Areas mapped as CL may include occasional isolated native or introduced trees and shrubs, or vegetation that has regrown to some extent. Note that KML provided clearing disturbance footprint spatial data current to March 2025, which covered the majority of the Survey Area. These boundaries formed the basis of the areas mapped as CL, with only minor adjustments required in a small number of areas. Cleared areas that occurred outside the extent of this spatial dataset were mapped using the most up-to-date aerial imagery available (**Section 3.7**), using the same method as for VTs/HMVTs. Note that the figures presented in this report use Landgate WA Now Mosaic (LGATE-320) aerial imagery (**Section 3.7**); given the age of this imagery for the Survey Area (2014 to 2016), there may be some areas that appear to contain vegetation as per the Landgate image, but have been mapped as 'Cleared Land' using the more recent KML images (imagery from 2024, but only covering part of the Survey Area) and Google Satellite imagery (imagery from 2022 to 2024, and available for the entire Survey Area).

The locations of quadrats, relevés and vegetation mapping notes within each VT/HMVT were used in conjunction with examination of aerial photography to develop mapping polygon boundaries of VTs and HMVTs across the Survey Area. **Table 5.13** presents a description of each of the VTs/HMVTs including definition method (floristic or structural composition), location, area mapped, sampling regime, significant flora ('^' denotes preferred habitat for a significant taxon), average taxon richness (from quadrat data only), and a description of variation found within the VT. **Figure 5.7** presents an overview of the vegetation mapped in the Survey Area. Raw sample site data is presented in **Appendix E**. Detailed vegetation mapping, including locations of all sample sites in the Survey Area, is presented in **Appendix J**. A taxon-VT matrix is presented in **Appendix K**, and **Appendix L** presents the results of the indicator taxa analysis.

Table 5.13 Summary of Vegetation Types of the Survey Area

VT	Summary	Representative Photo
A	**Description:** Tall sparse shrubland to isolated shrubs of mixed species including *Acacia acuminata/Acacia burkittii*, *Acacia tetragonophylla*, *Melaleuca hamata* and/or *Acacia umbraculiformis* over mid sparse shrubland of mixed species including *Thryptomene costata* and *Malleostemon tuberculatus*, over low sparse shrubland of mixed species including *Mirbelia microphylla*, *Solanum lasiophyllum* and *Eremophila eriocalyx*, over low sparse forbland of mixed species including *Schoenia cassiniana*, *Borya sphaerocephala*, *Erodium cygnorum* and *Rhodanthe chlorocephala* subsp. *splendida*, on red-brown clay loam, sometimes with granite surface stones, on plains and gentle slopes **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara Area, and the Yandanooka Pipeline area west of Weelhamby Lake, generally in small, patchy occurrences **Area Mapped (Proportion of Survey Area):** 291.7 ha (2.2 %) **Sample Sites:** 11 quadrats (FAC-01, FAC-33, GINM-05, GINM-07, KIOP 220, KK04, MLEC09, MLED08, MLED09, MLED19, MLEM16), 14 relevés (HR05, HR06, HR07, HR22, KM-107, KM-108, KM-124, KM-125, MH-07, MH-09, MH-33, MH-44, MLEM17, RC 10), 2 mapping notes (CGMN01, MLEN-021) **Indicator Taxa:** *Mirbelia microphylla, Thryptomene costata* **Significant Taxa:** *Acacia karinae* (P3)^, *Allocasuarina tessellata* (P3)^, *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)^, *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3), *Grevillea globosa* (P3), *Grevillea scabrida* (P3)^, *Gunniopsis divisa* (P3), *Hemigenia* sp. aff. *botryphylla* (PU)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Menkea draboides* (P3)^, *Persoonia pentasticha* (P3), *Petrophile pauciflora* (P3), *Rhodanthe collina* (P3)^, *Roebuckiella halophila* (P3) **Average Taxon Richness per Quadrat:** 33.5 ± 17.4 (native 30.6 ± 13.8)	 **Photo 5.1 VT A (Quadrat KIOP 220)**

VT	Summary	Representative Photo
A cont.	**Variation:** This VT was generally relatively structurally consistent. One quadrat had significant exposed granite bedrock (**Photo 5.2**) and contained a few taxa unique to this VT, including *Acacia jibberdingensis*, *Melaleuca fulgens* subsp. *steedmanii*, *Hibbertia glomerosa* and *Grevillea levis.* This quadrat and MLED09 were located on the western end of the distribution of this VT, on the plains east of the Koolanooka Hills. These quadrats lacked a few taxa common in other VT A quadrats including *Melaleuca hamata* and *Mirbelia microphylla*, but were otherwise compositionally similar to other VT A quadrats **Similar VTs:** Not particularly similar to any other VTs. Has some taxa in common with VT F, but the latter is generally present in association with areas of significant granite sheet outcropping	 **Photo 5.2 VT A Variant (Quadrat MLED08)**

VT	Summary	Representative Photo
B	**Description:** Low open forbland of *Borya sphaerocephala* and other species including *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Calotis hispidula* and *Chthonocephalus pseudevax*, in pockets of red clayey sand on and immediately adjacent to granite sheet outcropping **Definition Method:** Floristic composition classification **Location:** Mapped on granite outcrops in the Karara Area in two main occurrences: between the camp and rail loop, and between the airstrip and tailings storage facility **Area Mapped (Proportion of Survey Area):** 112.3 ha (0.8 %) **Sample Sites:** 3 quadrats (KML25, MLEK04, MLEK05), 1 relevé (MLEKR1) **Indicator Taxa:** *Borya sphaerocephala, Tripogonella loliiformis* **Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Crassula* sp. nov. (PU)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Swainsona picta* (P1)^ **Average Taxon Richness per Quadrat:** 23.0 ± 13.2 (native 21.3 ± 11.5)	 **Photo 5.3 VT B (Quadrat MLEK05)**

VT	Summary	Representative Photo
B cont.	**Variation:** The sandy areas fringing granite sheet outcropping had greater cover of *Borya sphaerocephala*, as well as *Acacia* spp. including *Acacia kochii*, *Acacia burkittii*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla* and *Acacia umbraculiformis*, and shrubs including *Calycopeplus paucifolius*, *Solanum lasiophyllum* and *Ptilotus obovatus* (**Photo 5.4**). This vegetation almost always transitions into VT F **Similar VTs:** Not similar to any other VTs	 **Photo 5.4 VT B Variant (Quadrat KML25)**

VT	Summary	Representative Photo
C	**Description:** Low open woodland of *Eucalyptus kochii* subsp. *plenissima* or *Eucalyptus loxophleba* subsp. *supralaevis*, over occasional tall isolated clumps of shrubs of *Acacia ramulosa* var. *ramulosa*, *Melaleuca eleuterostachya*, *Acacia assimilis* subsp. *assimilis*, *Acacia burkittii*, and/or *Acacia colletioides*, over low isolated clumps of shrubs of *Ptilotus obovatus* and *Solanum lasiophyllum*, over low open tussock grassland of *Monachather paradoxus*, over low isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Crassula colorata* var. *colorata*, *Helipterum craspedioides*, *Cephalipterum drummondii* and *Chthonocephalus pseudevax*, on red clayey sand or clay loam, sometimes with ironstone or quartz surface stones, on flats and plains **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara area west of the mine site, with the exception of a small occurrence west of Terapod **Area Mapped (Proportion of Survey Area):** 327.2 ha (2.4 %) **Sample Sites:** 10 quadrats (FAC-14, FAC-16, FAC-18, FAC-19, FAC-20, FAC-21, FAC-24, FAC-28, GIND-51, KIOP 269), 2 relevés (C-090, RC 05) **Indicator Taxa:** *Acacia colletioides, Monachather paradoxus* **Significant Taxa:** *Persoonia pentasticha* (P3) **Average Taxon Richness per Quadrat:** 23.3 ± 12.8 (native 21.0 ± 11.1)	 **Photo 5.5 VT C (Quadrat KIOP 269)**

VT	Summary	Representative Photo
C cont.	**Variation:** Quadrats in areas of regrowth (east and north of camp) were much more open and lacked the upper *Eucalyptus* layer, generally comprising tall isolated shrubs of *Acacia* spp. over isolated low shrubs over forbs (**Photo 5.6**). It is not clear whether these areas would have lacked the *Eucalyptus* layer prior to the disturbance, or whether the *Eucalyptus* spp. have not regrown since, as the quadrats sampling this vegetation are all located at the northern end of the distribution of this VT while the quadrats containing *Eucalyptus* spp. are at the southern end of the VT's distribution **Similar VTs:** This VT is most similar to VT D compositionally, but is more species poor (in terms of native perennial taxa). All quadrats in VT C contained *Monachather paradoxus*, which was variably present in VT D	 **Photo 5.6 VT C Variant (Quadrat FAC-20)**

VT	Summary	Representative Photo
D	**Description:** Occasional low woodland to open woodland of *Eucalyptus kochii*, *Callitris columellaris*, and/or *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of mixed species including *Acacia tetragonophylla*, *Acacia ramulosa* var. *ramulosa*, *Acacia acuminata*, *Acacia obtecta* and *Exocarpos aphyllus*, over mid sparse shrubland of mixed species including *Hakea recurva* subsp. *recurva*, *Senna artemisioides* subsp. *filifolia*, *Eremophila clarkei* and *Acacia assimilis* subsp. *assimilis*, over low sparse shrubland of mixed species including *Rhagodia drummondii*, *Ptilotus obovatus* and *Olearia humilis*, over low sparse tussock grassland of *Austrostipa elegantissima* and *Monachather paradoxus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Cephalipterum drummondii* and *Gilruthia osbornei*, on red or red-brown sandy clay loam, sometimes with occasional ironstone or quartz surface stones, on flats and plains **Definition Method:** Floristic composition classification **Location:** Mapped widely in the Karara Area and extending west into the Yandanooka Pipeline area until Weelhamby Lake **Area Mapped (Proportion of Survey Area):** 2,443.7 ha (18.0 %) **Sample Sites:** 32 quadrats (FAC-07, FAC-08, FAC-12, FAC-23, FAC-25, FAC-29, GIND-01, GIND-02, GIND-03, GIND-06, GIND-08, GIND-09, GIND-11, GIND-76, GIND-77, GIND-82, GIND-84, GIND-98, KARA15, KARA18, KIOP 026, KIOP 217, KIOP 248, KIOP 265, KML36, KMLL04, MLEC03, MLEC07, MLEC11, MLEK18, MLEM02, MLEM11), 45 relevés (AIR-02, AIR-03, AIR-04, C-001, C-018, C-019, C-021, C-026, C-037, C-041, C-045, C-046, C-056, C-059, C-064, KM-002, KM-009, KM-021, KM-022, KM-036, KM-038, KM-039, KM-103, KM-110, KM-111, KM-114, KM-121, KM-122, KM-127, M-09, MH-01, MH-10, MH-14, MH-16, MH-19, MH-21, MH-23, MH-24, MH-29, MH-31, RC 09, RC 12, RC 18, RC 20, RC 21), 2 mapping notes (KMLN15, KMLN16) **Indicator Taxa:** *Callitris columellaris, Eucalyptus kochii, Olearia humilis*	 **Photo 5.7 VT D (Quadrat FAC-07)**

VT	Summary	Representative Photo
D cont.	**Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)^, *Crassula* sp. nov. (PU), *Eucalyptus synandra* (T), *Grevillea globosa* (P3), *Grevillea scabrida* (P3)^, *Gunniopsis divisa* (P3), *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Persoonia pentasticha* (P3)^, *Rhodanthe collina* (P3), *Seringia exastia* (EPBC: CR)^, *Stenanthemum poicilum* (P3) **Average Taxon Richness per Quadrat:** 27.1 ± 10.0 (native 26.6 ± 9.8) **Variation:** Some quadrats did not possess the low woodland layer (**Photo 5.8**); these quadrats were typically located on or near lateritic and/or ironstone crests where the soil profile may be more shallow **Similar VTs:** This VT is most similar to VT C; see that VT for discussion. This VT is also compositionally similar to VTs E and G, but the former was more species poor (in terms of native perennial taxa), generally occured closer to granitic areas, and was almost always lacking a tree stratum. Compared to VT D, VT G generally had a greater abundance of chenopod shrub species	 **Photo 5.8 VT D Variant (Quadrat GIND-08)**

VT	Summary	Representative Photo
E	**Description:** Tall open to sparse shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*, *Acacia assimilis* subsp. *assimilis* and *Eremophila clarkei*, over low isolated clumps of shrubs of mixed species including *Maireana planifolia*, *Ptilotus obovatus*, *Solanum lasiophyllum* and *Sida* sp. dark green fruits (S. van Leeuwen 2260), over low isolated clumps of grasses of *Austrostipa elegantissima*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Gilruthia osbornei*, *Cephalipterum drummondii*, *Calotis multicaulis* and *Panaetia lessonii*, on red clay loam, usually with ironstone, granite and/or quartz surface stones, on undulating plains and flats **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara Area west of the mine site, generally in proximity to granitic areas. Extends west into the Yandanooka Pipeline and Borefield Corridor as far as the western boundaries of Kadji Kadji Station and Bowgarder Nature Reserve **Area Mapped (Proportion of Survey Area):** 670.7 ha (5.0 %) **Sample Sites:** 14 quadrats (FAC-30, KIOP 226, KIOP 240, KIOP 266, MLEC08, MLED15, MLED18, MLED20, MLEK01, MLEK09, MLEK11, MLEK12, MLEK20, MLEM07), 17 relevés (C-006, GI-4, GI-6, GI-7, GI-8, HR03, MH-08, MH-37, MH-38, MLEKR2, MLEKR3, MLEM29, RC 06, RC 14, RC 27, RC 32, RC 51), 3 mapping notes (KMLN19, KMLN20, MLEDN36, MLEKN02) **Indicator Taxa:** *Acacia ramulosa, Maireana planifolia* **Significant Taxa:** *Acacia karinae* (P3), *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)^, *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Grevillea scabrida* (P3), *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Melaleuca barlowii* (P3), *Menkea draboides* (P3)^, *Persoonia pentasticha* (P3), *Rhodanthe collina* (P3), *Roebuckiella halophila* (P3)^, *Stenanthemum poicilum* (P3)^ **Average Taxon Richness per Quadrat:** 33.4 ± 12.3 (native 31.4 ± 11.4)	 **Photo 5.9 VT E (Quadrat MLEK01)**

VT	Summary	Representative Photo
E cont.	**Variation:** Two quadrats possessed a low woodland layer of *Eucalyptus loxophleba* subsp. *supralaevis* and *Eucalyptus clelandiorum* (**Photo 5.10**) **Similar VTs:** This VT is most similar to VT D; see that VT for discussion	 **Photo 5.10 VT E Variant (Quadrat MLEK09)**

VT	Summary	Representative Photo
F	**Description:** Tall sparse shrubland of *Acacia tetragonophylla*, *Acacia umbraculiformis*, *Acacia ramulosa* var. *ramulosa* and occasionally *Acacia burkittii* and *Thryptomene costata*, over mid isolated shrubs of mixed species including *Hakea recurva* subsp. *recurva* and *Acacia kochii*, over low sparse shrubland of *Solanum lasiophyllum* and *Ptilotus obovatus*, over low sparse forbland of mixed species including *Borya sphaerocephala*, *Rhodanthe chlorocephala*, *Myriocephalus gueriniae* and *Goodenia cycnopotamica*, on red or red-brown clay loam or silty loam, sometimes with small amounts of granite outcropping and granite surface stones, on simple slopes and plains **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara Area in proximity to granitic areas, with the main occurrences west of the mine site. An additional location was mapped in the Yandanooka Pipeline area north of Boiada Hill **Area Mapped (Proportion of Survey Area):** 366.8 ha (2.7 %) **Sample Sites:** 13 quadrats (GIND-92, KIOP 023, KIOP 031, KIOP 032, KIOP 223, KIOP 238, KIOP 239, MLEC02, MLEK02, MLEK03, MLEK06, MLEK10, MLEM09), 7 relevés (KM-003, KM-005, MH-06, RC 03, RC 50, RC 56, RC 57) **Indicator Taxa:** *Acacia umbraculiformis, Acacia tetragonophylla* **Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Grevillea subtiliflora* (P3)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1),*Micromyrtus trudgenii* (P3), *Persoonia pentasticha* (P3), *Rhodanthe collina* (P3) **Average Taxon Richness per Quadrat:** 26.6 ± 13.8 (native 23.9 ± 12.4) **Variation:** This VT was generally quite structurally and compositionally uniform **Similar VTs:** Not particularly similar to any other VTs, but has some taxa in common with VT A; see that VT for discussion	 **Photo 5.11 VT F (Quadrat MLEK10)**

VT	Summary	Representative Photo
G	**Description:** Mid to low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis* and occasionally *Eucalyptus kochii*, over tall sparse shrubland of mixed species including *Acacia tetragonophylla* and occasionally *Acacia ramulosa* var. *ramulosa*, *Exocarpos aphyllus*, *Acacia obtecta* and *Acacia burkittii*, over an occasional mid sparse shrubland of *Senna* sp. Austin (A. Strid 20210), *Scaevola spinescens* and/or *Dodonaea inaequifolia*, over low isolated clumps of shrubs of mixed species including *Senna artemisioides* subsp. *filifolia*, *Ptilotus obovatus* and *Pimelea microcephala* subsp. *microcephala*, over low isolated clumps of chenopod shrubs of mixed species including *Rhagodia drummondii*, *Sclerolaena fusiformis*, *Maireana georgei*, *Maireana carnosa* and *Enchylaena lanata*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including **Mesembryanthemum nodiflorum*, *Cephalipterum drummondii*, *Erodium cygnorum* and *Gilruthia osbornei*, on red or red-brown clay loam or silty clay loam, usually with ironstone and/or granite and/or quartz surface stones, on flats and plains **Definition Method:** Floristic composition classification **Location:** Mapped widely in the Karara Area and Yandanooka Pipeline, with some small occurrences in the Borefield Corridor and Tilley Siding roughly east of Morawa **Area Mapped (Proportion of Survey Area):** 1,575.2 ha (11.6 %) **Sample Sites:** 27 quadrats (FAC-27, GIND-15, GIND-21, GIND-46, GIND-52, GIND-78, GIND-83, KARA20, KARA21, KIOP 224, KIOP 241, KK01, KMLL03, KMLL05, KMLL06, KMLL07, MLED06, MLED07, MLED10, MLED13, MLED22, MLEM05, MLEM19, MLEM30, MLEQ-001, MLEQ-007, MLEQ-013), 29 relevés (C-011, C-012, C-047, C-067, C-069, C-089, GI-5, HR02, HR04, HR09, HR12, KM-037, MH-26, MH-34, MH-36, MH-39, MH-43, MH-46, MLEM10, MLEM12, MLEM14, MLEM21, MLEM27, MLEM28, MLER-008, RC 16, RC 17, RC 58, SLU01), 7 mapping notes (KMLN22, MLEDN13, MLEDN20, MLEDN32, MLEDN33, MLEDN34, MLEN-002) **Indicator Taxa:** *Eucalyptus loxophleba* subsp. *supralaevis, Maireana trichoptera, Senna artemisioides* subsp. *filifolia*	 **Photo 5.12 VT G (Quadrat MLEM05)**

VT	Summary	Representative Photo
G cont.	**Significant Taxa:** *Acacia karinae* (P3), *Baeckea* sp. Perenjori (J.W. Green 1516) (P2), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)^, *Drummondita fulva* (P3), *Grevillea globosa* (P3), *Grevillea scabrida* (P3), *Gunniopsis divisa* (P3)^, *Persoonia pentasticha* (P3)^, *Rhodanthe collina* (P3), *Roebuckiella halophila* (P3)^, *Tecticornia* sp. 'Karara 2' (PU) **Average Taxon Richness per Quadrat:** 31.1 ± 21.0 (native 27.9 ± 17.3) **Variation:** This VT was generally quite structurally consistent, but quadrats east of Wheelhamby lake typically had a lower native perennial species richness than those west of Wheelhamby Lake. There was also evidence of salinisation in some occurrences in the Borefield Corridor where the vegetation was fragmentated within large expanses of agriculture **Similar VTs:** This VT is most similar to VT D; see that VT for discussion. This VT is also compositionally similar to VTs H and K, however VT H generally had a lower native perennial species richness and a much more open structure that was dominated by tall *Acacia* shrubs rather than *Eucalyptus* spp., while VT K had more compositional variation in the woodland stratum, generally had fewer *Acacia* spp. and more *Eremophila* spp., and potentially occurs in slightly more water-gaining areas than VT G	

VT	Summary	Representative Photo
H	**Description:** Occasional low open woodland to isolated trees of mixed species including *Eucalyptus loxophleba* subsp. *supralaevis*, *Eucalyptus salubris*, *Eucalyptus clelandiorum* or *Eucalyptus kochii* subsp. *amaryssia*, over tall open to sparse shrubland of mixed species including *Acacia obtecta*, *Acacia ramulosa* var. *ramulosa*, *Acacia latior* and *Melaleuca leiocarpa*, over mid isolated shrubs of mixed species including *Acacia tetragonophylla*, *Exocarpos aphyllus* and *Acacia exocarpoides*, over occasional low isolated clumps of shrubs of *Ptilotus obovatus*, *Senna charlesiana*, *Persoonia pentasticha* (P3) and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of mixed species dominated by *Rhagodia drummondii* and *Sclerolaena fusiformis* and occasionally *Maireana georgei* and *Enchylaena lanata*, on red-brown clay loam, with occasional ironstone surface stones, on flats and plains **Definition Method:** Floristic composition classification **Location:** Mapped in six moderately small occurrences in the eastern half of the Karara Area **Area Mapped (Proportion of Survey Area):** 139.8 ha (1.0 %) **Sample Sites:** 6 quadrats (GIND-45, GIND-56, GIND-58, KK03, MLEC06, MLEQ-015), 3 relevés (C-020, KM-004, MLER-009) **Indicator Taxa:** *Acacia obtecta* **Significant Taxa:** *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3), *Grevillea globosa* (P3), *Persoonia pentasticha* (P3)^ **Average Taxon Richness per Quadrat:** 15.7 ± 7.8 (native 15.5 ± 7.4) **Variation:** With the exception of the low woodland stratum which was only present in 50 % of quadrats, this VT was generally quite structurally and compositionally consistent **Similar VTs:** This VT has similarities to VTs G; see that VT for discussion	 **Photo 5.13 VT H (Quadrat KK03)**

VT	Summary	Representative Photo
I	**Description:** Low open woodland of *Eucalyptus horistes* and *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Melaleuca stereophloia*, over mid sparse shrubland of mixed species including *Acacia acuaria* and *Scholtzia uniovulata*, over mid sparse tussock grassland of *Austrostipa elegantissima*, over low isolated forbs of mixed species including *Goodenia rosea*, *Rhodanthe chlorocephala* subsp. *splendida*, *Lawrencella davenportii*, *Podolepis aristata* subsp. *aristata* and *Waitzia acuminata* var. *acuminata*, on red sandy clay, on plains and low rises **Definition Method:** Floristic composition classification **Location:** Mapped in two small occurrences in the Yandanooka Pipeline area in Kadji Kadji Station, and in association with the salt lakes southwest of Morawa in the Borefield Corridor area **Area Mapped (Proportion of Survey Area):** 10.4 ha (0.1 %) **Sample Sites:** 1 quadrat (MLED03), 3 relevés (LIC 020, SLU41, SLU57), 1 mapping notes (MLEDN31) **Indicator Taxa:** NA (represented by only 1 quadrat) **Significant Taxa:** *Tricoryne soullierae* (P3)^ **Average Taxon Richness per Quadrat:** 75 (native 62) **Variation:** There was little structural and compositional variation in this VT based on the limited area mapped in the Survey Area **Similar VTs:** Not particularly similar to any other VTs	 **Photo 5.14 VT I (Quadrat MLED03)**

VT	Summary	Representative Photo
J	**Description:** Occasional tall to mid isolated shrubs of *Acacia obtecta*, *Duma florulenta*, *Exocarpos aphyllus* and *Eremophila glabra*, over low sparse shrubland of *Ptilotus obovatus* and *Corchorus* sp., over mid open to sparse samphire shrubland of *Tecticornia disarticulata*, over low sparse chenopod shrubland of mixed species including *Maireana carnosa*, *Sclerolaena diacantha*, *Sclerolaena fusiformis*, *Atriplex semilunaris* and *Maireana brevifolia*, on brown or red-brown clay loam or silty clay loam, in saline claypans **Definition Method:** Floristic composition classification **Location:** Mapped only in the saline clay pan northeast of the mine site in the Karara Area **Area Mapped (Proportion of Survey Area):** 99.3 ha (0.7 %) **Sample Sites:** 2 quadrats (GIND-80, GIND-81), 3 relevés (KM-011, KM-012, KM-013) **Indicator Taxa:** *Atriplex semilunaris, Corchorus* sp.*, Duma florulenta, Eremophila glabra, Maireana brevifolia, Maireana carnosa, Roepera aurantiaca* subsp. *aurantiaca, Sclerolaena diacantha, Sclerolaena fusiformis, Tecticornia disarticulata* **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** 14.5 ± 2.1 (native 13.0 ± 1.4) **Variation:** There was little structural and compositional variation in this VT based on the limited area mapped in the Survey Area **Similar VTs:** Not similar to any other VTs	 **Photo 5.15 VT J (Quadrat GIND-80)**

VT	Summary	Representative Photo
K	**Description:** Occasional low woodland to open woodland of mixed species including *Eucalyptus clelandiorum*, *Eucalyptus loxophleba* subsp. *supralaevis* and/or *Eucalyptus salubris*, over tall sparse shrubland of mixed species including *Eremophila oppositifolia* subsp. *angustifolia*, *Acacia erinacea*, *Exocarpos aphyllus* and *Eremophila pantonii*, over low isolated clumps of shrubs of mixed species including *Senna stowardii*, *Scaevola spinescens*, *Ptilotus obovatus* and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of *Sclerolaena fusiformis*, *Rhagodia drummondii*, *Maireana thesioides*, *Maireana georgei* and *Maireana marginata*, on red-brown silty clay loam or clay loam, sometimes with ironstone surface stones, on plains **Definition Method:** Floristic composition classification **Location:** Mapped in broad areas in the eastern part of the Karara Area **Area Mapped (Proportion of Survey Area):** 313.6 ha (2.3 %) **Sample Sites:** 5 quadrats (GIND-12, GIND-13, GIND-62, GINM-01, MLEK08), 8 relevés (C-003, C-004, C-005, KM-008, KM-010, KM-019, KM-126, M-24) **Indicator Taxa:** *Acacia erinacea, Eremophila oppositifolia* subsp*. angustifolia, Eremophila pantonii, Eucalyptus clelandiorum, Maireana thesioides, Senna stowardii* **Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3), *Grevillea scabrida* (P3)^, *Gunniopsis divisa* (P3)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Persoonia pentasticha* (P3)^, *Rhodanthe collina* (P3)^ **Average Taxon Richness per Quadrat:** 19.2 ± 5.2 (native 19.2 ± 5.2) **Variation:** This VT was generally quite structurally and compositionally consistent **Similar VTs:** This VT has similarities to VTs G; see that VT for discussion	 **Photo 5.16 VT K (Quadrat GIND-12)**

VT	Summary	Representative Photo
L	**Description:** Tall sparse shrubland of *Melaleuca acutifolia* and occasionally *Melaleuca eleuterostachya*, *Acacia eremaea* and *Melaleuca stereophloia*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Rhagodia drummondii*, *Maireana eriosphaera*, *Enchylaena tomentosa* var. *tomentosa* and *Sclerolaena diacantha*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including *Gunniopsis quadrifida*, *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Gnephosis angianthoides* and **Mesembryanthemum nodiflorum*, on slightly saline brown sandy clay, on flats and lower slopes **Definition Method:** Floristic composition classification **Location:** Mapped in the Yandanooka Pipeline area on the eastern fringe of Weelhamby Lake, in the Tilley Siding area, and in association with the salt lakes southwest of Morawa in the Borefield Corridor area **Area Mapped (Proportion of Survey Area):** 50.9 ha (0.4 %) **Sample Sites:** 3 quadrats (MLED05, MLED16, MLEM26), 10 relevés (LIC 018, RC 19, SLU38, SLU39, SLU40, SLU42, SLU43, SLU45, SLU47, SLU48), 5 mapping notes (MLEDN10, MLEDN12, MLEDN23, MLEDN25, MLEDN29) **Indicator Taxa:** *Acacia eremaea, Acanthocarpus canaliculatus, Atriplex vesicaria, Didymanthus roei, Enchylaena tomentosa* var. *tomentosa, Frankenia setosa, Gunniopsis quadrifida, Maireana amoena, Maireana eriosphaera, Maireana tomentosa* subsp. *tomentosa, Melaleuca acutifolia, Ptilotus halophilus, Rhagodia drummondii* **Significant Taxa:** *Epitriche demissus* (P2), *Gunniopsis divisa* (P3), *Nicotiana salina* (P1)^, *Podotheca uniseta* (P3)^, *Roebuckiella halophila* (P3), *Tecticornia fimbriata* (P3)^, *Tecticornia* sp. 'Karara 2' (PU) **Average Taxon Richness per Quadrat:** 48.0 ± 12.1 (native 35.3 ± 9.1)	 **Photo 5.17 VT L (Quadrat MLEM26)**

VT	Summary	Representative Photo
L cont.	**Variation:** The species composition varied slightly depending on the soil salinity, with quadrat MLED05 sampling a slightly more saline area where *Tecticornia fimbriata* (P3) was present (**Photo 5.18**), while MLEM26 sampled a less saline area (**Photo 5.17**) **Similar VTs:** VT L has some similarity to VT U, but has a higher native perennial species richness, and occurs much further west than VT U	 **Photo 5.18 VT L Variant (Quadrat MLED05)**

VT	Summary	Representative Photo
M	**Description:** Occasional low isolated clumps of shrubs of *Lawrencia squamata* and *Frankenia pauciflora*, over low open to sparse samphire shrubland of mixed species including *Tecticornia disarticulata*, *Tecticornia loriae*, *Tecticornia* sp. 'Karara 4' and *Tecticornia peltata*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Maireana eriosphaera*, *Maireana glomerifolia* and *Maireana atkinsiana*, over isolated clumps of forbs of mixed species including *Senecio lacustrinus*, *Pogonolepis muelleriana*, *Stenopetalum salicola*, *Lawrencia squamata*, *Siemssenia capillaris* and *Cotula cotuloides*, on brown or orange sandy clay, in saline depressions **Definition Method:** Floristic composition classification **Location:** Mapped in the Yandanooka Pipeline area on the western fringe of Weelhamby Lake **Area Mapped (Proportion of Survey Area):** 18.2 ha (0.1 %) **Sample Sites:** 2 quadrats (MLEM18, MLEM23), 5 relevés (MH-30, MH-32, MH-47, MLEM24, RC 23), 1 mapping note (MLEMN03) **Indicator Taxa:** *Lawrencia squamata, Maireana atkinsiana, Maireana glomerifolia* **Significant Taxa:** *Gnephosis setifera* (P1)^, *Tecticornia* sp. 'Karara 1' (PU) **Average Taxon Richness per Quadrat:** 27.0 ± 4.2 (native 24.0 ± 2.8) **Variation:** This VT was generally quite structurally and compositionally uniform **Similar VTs:** Most similar to VT N, however VT N occurs in slightly more saline areas, and had greater diversity in the samphire stratum and less diversity in the chenopod stratum	 **Photo 5.19 VT M (Quadrat MLEM25)**

VT	Summary	Representative Photo
N	**Description:** Low sparse samphire shrubland of mixed species, including *Tecticornia indica* subsp. *bidens*, *Tecticornia* sp. 'Karara 1' (PU), *Tecticornia* sp. 'Karara 2' (PU), and occasionally *Tecticornia peltata*, over low isolated clumps of forbs of mixed species including *Triglochin mucronata*, *Senecio lacustrinus*, *Cotula cotuloides*, **Parapholis incurva* and *Gunniopsis septifraga*, on grey-brown or brown sandy clay, in saline depressions **Definition Method:** Floristic composition classification **Location:** Mapped in small occurrences in the Yandanooka Pipeline area on the eastern fringe of Weelhamby Lake, in an area of regrowth southwest of Kadji Kadji Station, and in association with the salt lakes southwest of Morawa in the Borefield Corridor area **Area Mapped (Proportion of Survey Area):** 10.7 ha (0.1 %) **Sample Sites:** 5 quadrats (MLED01, MLED02, MLED04, MLED17, MLEM25), 10 relevés (LIC 016, LIC 017, LIC 019, LIC 021, LIC 022, RC 22, SLU28, SLU29, SLU30, SLU56), 5 mapping notes (MLEDN02, MLEDN08, MLEDN09, MLEDN14, MLEDN28) **Indicator Taxa:** *Frankenia pauciflora, Tecticornia* ?*halocnemoides* / *Tecticornia* sp. 'Karara 1' (PU), *Tecticornia indica* subsp. *bidens* **Significant Taxa:** *Epitriche demissus* (P2)^, *Fitzwillia axilliflora* (P2)^, *Gnephosis setifera* (P1)^, *Gunniopsis divisa* (P3), *Tecticornia fimbriata* (P3)^, *Tecticornia* sp. 'Karara 1' (PU)^, *Tecticornia* sp. 'Karara 2' (PU)^ **Average Taxon Richness per Quadrat:** 21.2 ± 6.8 (native 16.8 ± 5.5) **Variation:** This VT was generally quite structurally and compositionally uniform, however quadrat MLEM25, located further east than all other VT N quadrats near Weelhamby Lake, shared some species in common with VT M including *Atriplex vesicaria* and *Lawrencia squamata* **Similar VTs:** This VT is most similar to VT M; see that VT for discussion	 **Photo 5.20 VT N (Quadrat MLED01)**

VT	Summary	Representative Photo
O	**Description:** Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall sparse shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Calycopeplus paucifolius*, *Melaleuca nematophylla*, and/or *Acacia ramulosa* var. *ramulosa*, over mid sparse shrubland of mixed species including *Eremophila clarkei*, *Philotheca brucei* subsp. *brucei*, *Philotheca sericea*, *Aluta aspera* subsp. *aspera* and *Eremophila latrobei* subsp. *latrobei*, over low isolated shrubs of *Xanthosia kochii*, *Sida* sp. dark green fruits (S. van Leeuwen 2260) and *Hibbertia arcuata*, over low isolated clumps of forbs of mixed species including *Waitzia acuminata* var. *acuminata*, *Podolepis lessonii* and *Lawrencella rosea*, on red-brown silty loam or silty clay loam with ironstone, BIF or granite stones, and sometimes with ironstone, BIF or granite outcropping, on slopes and crests **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara Area, predominately on BIF and ironstone but with some occurrences on granite in the western part of the Karara Area. Additional occurrences in the Yandanooka Pipeline area on ironstone near Ninghanboun Hill, and near the southeast boundary of Bowgarder Nature Reserve on granite **Area Mapped (Proportion of Survey Area):** 546.2 ha (4.0 %) **Sample Sites:** 34 quadrats (FAC-02, GIND-04, GIND-05, GIND-18, GIND-19, GIND-28, GIND-43, GIND-44, GIND-53, GIND-54, GIND-55, GINM-02, GINM-06, GINM-13, KARA01, KARA02, KARA03, KARA04, KARA05, KARA06, KARA07, KARA08, KARA09, KARA10, KARA11, KARA12, KARA14, KARA16, KARA17, KARA19, KIOP 025, KIOP 213, MLED21, MLEQ-014), 46 relevés, (C-013, C-022, C-023, C-028, C-030, C-031, C-032, C-033, C-034, C-035, C-036, C-038, C-039, C-040, C-042, C-043, C-044, C-049, C-050, C-051, C-052, C-053, C-054, C-061, C-062, C-063, C-066, GI-2, GI-3, KM-025, KM-109, KM-115, KM-116, KM-117a, KM-123, KM-128, MH-02, MLER-011, RC 02, RC 53, RC 62, RC 63, W01, W02, W03, WA2), 3 mapping notes (KMLN25, MLEN-005, MLEN-020) **Indicator Taxa:** *Eremophila clarkei, Eremophila latrobei* subsp. *latrobei, Mirbelia* sp. Bursarioides (T.R. Lally 760), *Philotheca brucei* subsp. *brucei, Philotheca sericea, Prostanthera magnifica, Xanthosia kochii*	 **Photo 5.21 VT O (Quadrat GIND-04)**

VT	Summary	Representative Photo
O cont.	**Significant Taxa:** *Acacia karinae* (P3)^, *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)^, *Drummondita fulva* (P3)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)^, *Micromyrtus acuta* (P3)^, *Micromyrtus trudgenii* (P3)^, *Millotia dimorpha* (P1)^, *Persoonia pentasticha* (P3), *Petrophile pauciflora* (P3)^, *Rhodanthe collina* (P3)^, *Roebuckiella halophila* (P3), *Stylidium scintillans* (T)^ **Average Taxon Richness per Quadrat:** 34.1 ± 16.4 (native 33.0 ± 15.4) **Variation:** Structurally, this VT graded towards a sparse shrubland or having isolated clumps of shrubs in areas with significant rock outcrop at the surface, as was observed at quadrat KIOP 213 (**Photo 5.22**). Quadrats that straddled crests also had tall and mid shrubland strata that were more open than those situated on upper slopes There was also some minor compositional variation between areas underlain by ironstone/BIF and granite; for example, taxa including *Borya sphaerocephala* and *Prostanthera patens* were only recorded in granitic areas **Similar VTs:** This VT is most similar to VT P, but VT O generally occurs higher in the landscape and/or in rockier areas, has a much higher native perennial taxon richness, and almost always contains *Eremophila clarkei* and *Eremophila latrobei* subsp*. latrobei* (the former being absent from any VT P quadrats and the latter being recorded in only one)	 **Photo 5.22 VT O Variant (Quadrat KIOP 213)**

VT	Summary	Representative Photo
P	**Description:** Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall shrubland to open shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Melaleuca nematophylla*, *Acacia latior*, *Calycopeplus paucifolius* and *Acacia sibina*, over mid shrubland to open shrubland dominated by *Aluta aspera* subsp. *hesperia* and occasionally with *Philotheca sericea*, *Hibbertia arcuata* and/or *Grevillea paradoxa*, over occasional low open shrubland of mixed species including *Philotheca deserti* subsp. *deserti* and *Xanthosia kochii*, over low isolated clumps of tussock grasses of *Monachather paradoxus* and *Amphipogon caricinus* var. *caricinus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Bellida graminea*, *Trachymene ornata*, *Cheilanthes sieberi* subsp. *sieberi* and *Lawrencella rosea*, on red or red-brown clay loam or silty loam with ironstone or BIF surface stones, and occasionally with ironstone or BIF outcropping, on lower to upper slopes **Definition Method:** Floristic composition classification **Location:** Mapped widely in the Karara Area, predominately on the slopes below VT O. A small occurrence was mapped in the Yandanooka Pipeline area in Kadji Kadji Station **Area Mapped (Proportion of Survey Area):** 619.8 ha (4.6 %) **Sample Sites:** 16 quadrats (FAC-03, FAC-04, GIND-07, GIND-16, GIND-17, GIND-20, GIND-23, GIND-25, GIND-27, KARA13, KIOP 028, KIOP 430, KK05, MLEC01, MLED14, MLEK16), 11 relevés (C-008, C-014, C-015, C-024, C-029, C-068, C-092, KM-117, MLER-006, RC 29, RC 54), 1 mapping note (MLETN01) **Indicator Taxa:** *Aluta aspera* subsp*. hesperia, Melaleuca nematophylla* **Significant Taxa:** *Acacia karinae* (P3)^, *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3), *Drummondita fulva* (P3)^, *Grevillea globosa* (P3)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)^, *Melaleuca barlowii* (P3)^, *Micromyrtus acuta* (P3), *Micromyrtus trudgenii* (P3), *Persoonia pentasticha* (P3), *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1), *Rhodanthe collina* (P3), *Roebuckiella halophila* (P3) **Average Taxon Richness per Quadrat:** 15.8 ± 8.6 (native 15.6 ± 8.5)	 **Photo 5.23 VT P (Quadrat KIOP 028)**

VT	Summary	Representative Photo
P cont.	**Variation:** This VT was generally compositionally uniform, however the density of the shrubland strata varied. For example, quadrat GIND-07 had only isolated tall and medium shrubs (**Photo 5.24**). Quadrats located in areas long unburnt generally possessed a dense tall shrubland stratum that tended towards being closed **Similar VTs:** This VT is most similar to VT O; see that VT for discussion	 **Photo 5.24 VT P Variant (Quadrat GIND-07)**

VT	Summary	Representative Photo
Q	**Description:** Occasional low open woodland of *Eucalyptus arctata* and/or *Eucalyptus kochii* subsp. *amaryssia*, over tall shrubland to open shrubland of mixed species dominated by *Acacia latior*, *Acacia sibina*, and occasionally *Melaleuca leiocarpa*, *Acacia longispinea* and *Melaleuca hamata*, over occasional mid isolated shrubs of mixed species including *Aluta aspera* subsp. *hesperia* and *Hakea recurva* subsp. *recurva*, over low isolated shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Cryptandra imbricata*, *Prostanthera prostantheroides* and *Enekbatus stowardii*, over low sparse tussock grassland of *Monachather paradoxus*, *Amphipogon caricinus* var. *caricinus* and occasionally *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Bellida graminea*, *Erodium cygnorum*, *Dianella revoluta* var. *divaricata* and *Cheilanthes sieberi* subsp. *sieberi*, on brown or red clay loam, sandy clay loam or silty loam with ironstone surface stones, on lower slopes, plains and flats **Definition Method:** Floristic composition classification **Location:** Mapped widely in the Karara Area. Extends west into the Yandanooka Pipeline area as far as the eastern boundary of Kadji Kadji Station, and with a small occurrence at Tilley Siding **Area Mapped (Proportion of Survey Area):** 1,688.2 ha (12.5 %) **Sample Sites:** 29 quadrats (FAC-05, FAC-06, FAC-10, FAC-15, FAC-17, FAC-31, FAC-34, GIND-26, GIND-57, GIND-59, GIND-97, GIND-99, GINM-03, KIOP 029, KIOP 218, KIOP 219, KIOP 242, KIOP 243, KK02, KML21, KML27, MLEM08, MLEM13, MLEM15, MLEQ-002, MLEQ-003, MLEQ-009, MLEQ-012, MLEQ-018), 32 relevés (AIR-01, BP03-1, C-002, C-009, C-010, C-016, C-017, C-048, C-055, C-057, C-058, C-060, C-091, GI-1, KM-020, KM-104, KM-105, MH-11, MH-25, MH-28, MH-35, MLEC12, MLEM20, MLEM22, MLER-001, MLER-003, MLER-005, RC 15, RC 24, RC 25, RC 26, W14), 7 mapping notes (KMLN14, MLEDN11, MLEN-006, MLEN-007, MLEN-010, MLEN-011, MLEN-012) **Indicator Taxa:** *Acacia coolgardiensis* / *Acacia effusifolia* / *Acacia incognita, Eucalyptus arctata*	 **Photo 5.25 VT Q (Quadrat FAC-06)**

VT	Summary	Representative Photo
Q cont.	**Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Drummondita fulva* (P3), *Eucalyptus synandra* (T), *Grevillea globosa* (P3)^, *Hibbertia cockertoniana* (P3)^, *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Micromyrtus trudgenii* (P3), *Millotia dimorpha* (P1), *Persoonia pentasticha* (P3), *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)^, *Rhodanthe collina* (P3) **Average Taxon Richness per Quadrat:** 14.1 ± 6.8 (native 14.1 ± 6.7) **Variation:** This VT exhibited reasonable compositional and structural variation, particularly in the mid and low shrubland strata. This is likely a reflection of natural variation across the large mapping area and amount of sampling within the Survey Area. However, despite the observed compositional variation, the species in the *Acacia coolgardiensis* group (indicator taxa for this VT) were present in all VT Q quadrats across its range. Quadrats missing the upper *Eucalyptus* layer tended to be situated lower in the landscape and had less of an ironstone influence **Similar VTs:** This VT is most similar to VT R, but VT Q generally occurred lower in the landscape than VT R. In addition, VT Q quadrats contained a number of highly faithful species that were uncommon in VT R, including *Acacia sibina*, *Monachather paradoxus*, *Dianella revoluta* var. *divaricata*, and VT R quadrats generally had a higher diversity of *Acacia* spp. and a greater overall native perennial species richness	

VT	Summary	Representative Photo
R	**Description:** Occasional low open woodland of *Allocasuarina acutivalvis* subsp. *prinsepiana* and/or *Eucalyptus kochii*, over tall shrubland to open shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Melaleuca hamata*, *Acacia latior*, *Acacia incognita* and *Acacia sibina*, over mid sparse shrubland to isolated clumps of shrubs of mixed species including *Eremophila clarkei*, *Acacia tetragonophylla*, *Eremophila eriocalyx*, *Aluta aspera* subsp. *hesperia* and *Eremophila latrobei* subsp. *latrobei*, over low sparse shrubland to isolated clumps of shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), *Hibbertia arcuata*, and occasionally *Chamelaucium pauciflorum* subsp. Perenjori (B.J. Conn 2181) and *Olearia humilis*, over low sparse tussock grassland of *Amphipogon caricinus* var. *caricinus*, over low sparse forbland to isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Waitzia acuminata* var. *acuminata* and *Gilruthia osbornei*, on red or red-brown clay loam with ironstone and sometimes quartz surface stones, on plains and simple slopes **Definition Method:** Floristic composition classification **Location:** Mapped relatively widely in the Karara Area. Extends west into the Yandanooka Pipeline area as far as the western boundary of Kadji Kadji Station **Area Mapped (Proportion of Survey Area):** 785.4 ha (5.8 %) **Sample Sites:** 23 quadrats (FAC-09, FAC-32, GIND-10, GIND-73, KML22, KML23, KMLL01, KMLL02, MLEC04, MLEC05, MLEC16, MLEC17, MLED11, MLED12, MLEK15, MLEQ-004, MLEQ-005, MLEQ-006, MLEQ-008, MLEQ-010, MLEQ-011, MLEQ-016, MLEQ-017),27 relevés (C-025, C-027, C-065, C-086, HR01, KM-106, KM-112, KM-113, MH-03, MH-04, MH-15, MH-20, MH-40, MH-41, MH-42, MH-45, MLEC10, MLER-002, MLER-007, MLER-010, MLER-012, RC 11, RC 13, RC 28, RC 30, RC 31, RC 59), 8 mapping notes (MLEDN15, MLEDN16, MLEDN17, MLEN-008, MLEN-009, MLEN-013, MLEN-016, MLEN-017) **Indicator Taxa:** *Philotheca deserti* subsp. *deserti*	 **Photo 5.26 VT R (Quadrat MLEC16)**

VT	Summary	Representative Photo
R cont.	**Significant Taxa:** *Acacia karinae* (P3), *Allocasuarina tessellata* (P3), *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3), *Crassula* sp. nov. (PU), *Drummondita fulva* (P3)^, *Eucalyptus synandra* (T)^, *Grevillea globosa* (P3)^, *Grevillea granulosa* (P3), *Grevillea scabrida* (P3), *Gunniopsis divisa* (P3), *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Persoonia pentasticha* (P3), *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1), *Rhodanthe collina* (P3), *Roebuckiella halophila* (P3)^, *Stylidium scintillans* (T) **Average Taxon Richness per Quadrat:** 17.8 ± 10.3 (native 17.8 ± 10.2) **Variation:** This VT exhibited reasonable compositional variation, likely a reflection of natural variation across the large mapping area and amount of sampling within the Survey Area. Generally, quadrats were compositionally most similar to those situated in close proximity. For example, *Chamelaucium pauciflorum* subsp. Perenjori (B.J. Conn 2181) and *Hemigenia* sp. Yalgoo (A.M. Ashby 2624) were only recorded in the easternmost quadrats of this VT, while *Melaleuca nematophylla* and *Olearia humilis* were only recorded in the westernmost quadrats. However, this variation is considered to be relatively minor in the context of this VT **Similar VTs:** This VT is most similar to VT Q; see that VT for discussion	

VT	Summary	Representative Photo
S	**Description:** Tall sparse shrubland to isolated clumps of shrubs of mixed species including *Acacia sibina*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva* and *Acacia burkittii*, over mid shrubland to sparse shrubland of mixed species including *Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*, *Malleostemon tuberculatus* and *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), over low sparse shrubland to isolated clumps of shrubs of mixed species including *Pimelea spiculigera* var. *thesioides*, *Mirbelia microphylla*, *Hibbertia arcuata* and *Grevillea pityophylla*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, *Monachather paradoxus* and/or *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Chthonocephalus pseudevax*, *Bellida graminea*, *Goodenia rosea*, *Brachyscome ciliocarpa* and *Podolepis lessonii*, on red or brown clay loam, sandy clay loam or silty loam with ironstone or BIF surface stones, on flats, plains and slopes **Definition Method:** Floristic composition classification **Location:** Mapped in the western and central part of the Karara Area, with some small occurrences in the Yandanooka Pipeline area east of Weelhamby Lake **Area Mapped (Proportion of Survey Area):** 452.7 ha (3.3 %) **Sample Sites:** 13 quadrats (FAC-11, FAC-13, FAC-22, FAC-26, GINM-04, KIOP 024, KIOP 027, KIOP 030, KIOP 221, KIOP 222, MLEK07, MLEK17, MLEM06), 7 relevés (KM-001, MH-05, MH-27, RC 07, RC 08, RC 52, RC 55) **Indicator Taxa:** *Amphipogon caricinus* var. *caricinus, Eremophila forrestii* subsp. *forrestii, Pimelea spiculigera* var. *thesioides* **Significant Taxa:** *Acacia karinae* (P3)^, *Allocasuarina tessellata* (P3)^, *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)^, *Grevillea granulosa* (P3), *Gunniopsis divisa* (P3), *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1), *Menkea draboides* (P3)^, *Persoonia pentasticha* (P3), *Rhodanthe collina* (P3) **Average Taxon Richness per Quadrat:** 23.9 ± 8.9 (native 23.8 ± 8.8)	 **Photo 5.27 VT S (Quadrat FAC-11)**

VT	Summary	Representative Photo
S cont.	**Variation:** This VT had a moderately variable structure and composition across the Survey Area. However, despite the observed compositional variation, *Amphipogon caricinus* var. *caricinus* (an indicator taxon for this VT) was present in all VT S quadrats across its range **Similar VTs:** Not especially similar to any other VTs	

VT	Summary	Representative Photo
T	**Description:** Tall open to sparse shrubland of mixed species including *Acacia sibina*, *Melaleuca hamata*, *Acacia latior*, *Acacia acuminata* and *Hysterobaeckea setifera* subsp. *setifera*, over mid isolated shrubs of mixed species including, *Malleostemon tuberculatus*, *Philotheca glabra*, *Philotheca deserti* subsp. *deserti* and *Allocasuarina acutivalvis* subsp. *prinsepiana*, over low isolated clumps of shrubs of mixed species including *Grevillea granulosa* (P3), *Hibbertia stenophylla*, *Darwinia capitella* and *Malleostemon roseus*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, over low sparse sedgeland of *Ecdeiocolea monostachya*, over low sparse forbland of mixed species including *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Trachymene cyanopetala*, *Borya sphaerocephala* and *Lawrencella davenportii*, on orange, brown or red sandy loam or sandy clay loam, occasionally with ironstone and quartz surface stones, on plains and flats **Definition Method:** Floristic composition classification **Location:** Mapped in the Karara Area and Yandanooka Pipeline between the intersection of Karara and Mungada Roads and the eastern boundary of Kadji Kadji Station **Area Mapped (Proportion of Survey Area):** 187.3 ha (1.4 %) **Sample Sites:** 10 quadrats (MLEC13, MLEC14, MLEC15, MLEC18, MLEC19, MLEK13, MLEK14, MLEK19, MLEM03, MLEM04) 7 relevés (BP04-1, MH-12, MH-13, MH-17, MH-18, MH-22, RC 60) **Indicator Taxa:** *Darwinia capitellata, Ecdeiocolea monostachya, Grevillea granulosa* (P3), *Hakea invaginata, Hibbertia stenophylla* **Significant Taxa:** *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1), *Grevillea granulosa* (P3)^, *Melaleuca barlowii* (P3)^, *Tricoryne soullierae* (P3)^ **Average Taxon Richness per Quadrat:** 18.8 ± 6.3 (native 18.6 ± 6.0) **Variation:** This VT was generally quite structurally and compositionally consistent **Similar VTs:** Not especially similar to any other VTs	 **Photo 5.28 VT T (Quadrat MLEK19)**

VT	Summary	Representative Photo
U	**Description:** Low woodland of *Eucalyptus clelandiorum* or tall shrubland of *Melaleuca acutifolia*, over low sparse chenopod shrubland of mixed species dominated by *Maireana thesioides*, *Maireana carnosa*, *Sclerolaena diacantha* and *Maireana georgei*, on red-brown silty clay loam, occasionally with calcrete stones, in drainage depressions and on the edges of saline claypans **Definition Method:** Structural vegetation classification (from historic sites approx. 500 m outside Survey Area) **Location:** Mapped on the fringes of the saline clay pan northeast of the mine site in the Karara Area, with another small occurrence north of the Blue Hills North mine site **Area Mapped (Proportion of Survey Area):** 64.3 ha (0.5 %) **Sample Sites:** 1 quadrat (GIND-79), 1 relevé (KM-028) **Indicator Taxa:** NA (represented by only 1 quadrat) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** 7 (native 7) **Variation:** This VT was recorded with a low woodland of *Eucalyptus clelandiorum* on the edge of a saline claypan, while in an area of drainage depression the VT instead had a tall shrubland of *Melaleuca acutifolia.* However, the understorey layers were similar in composition and structure between these two variants **Similar VTs:** This VT is most similar to VT L; see that VT for discussion	 **Photo 5.29 VT U (Quadrat GIND-79)**

VT	Summary	Representative Photo
V	**Description:** Tall open shrubland to shrubland of *Acacia tetragonophylla*, *Acacia quadrimarginea* and occasionally *Allocasuarina dielsiana*, *Acacia ramulosa* var. *ramulosa* and *Hakea recurva* subsp. *recurva*, over mid open shrubland of mixed species including *Dodonaea inaequifolia*, *Grevillea paradoxa*, *Senna glutinosa* subsp. *chatelainiana* and *Acacia kochii*, occasionally over low isolated shrubs of *Solanum cleistogamum* and *Ptilotus obovatus*, over low open forbland dominated by *Borya sphaerocephala*, on red or brown silty soil with ironstone and granite surface stones, on low to mid slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in small occurrences in the Yandanooka Pipeline area along Koolanooka Spring Road, south of Koolanooka Springs **Area Mapped (Proportion of Survey Area):** 0.4 ha (0.003 %) **Sample Sites:** 3 relevés (HR08, HR10, HR11) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	No photo available

VT	Summary	Representative Photo
W	**Description:** Low woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis*, over tall shrubland to open shrubland of mixed species including *Senna charlesiana*, *Acacia ramulosa* var. *ramulosa*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia burkittii*, over low open shrubland of mixed species including *Acacia acanthoclada* subsp. *glaucescens*, *Cryptandra apetala* var. *apetala*, *Eremophila clarkei* and *Acacia* ?*nigripilosa* subsp. *nigripilosa*, on red-brown silty-sands with ironstone surface stones, on low to mid slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in small occurrences in the Yandanooka Pipeline area along Koolanooka Spring Road, on the slopes below Koolanooka Hills **Area Mapped (Proportion of Survey Area):** 0.6 ha (0.004 %) **Sample Sites:** 2 relevés (HR13, HR16) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	No photo available

VT	Summary	Representative Photo
X	**Description:** Occasional low isolated trees of *Eucalyptus arctata*, over tall shrubland dominated by *Senna charlesiana* and occasionally *Acacia stereophylla* var. *stereophylla*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Melaleuca cordata*, over mid to low open to sparse shrubland of *Aluta aspera* subsp. *hesperia*, *Eremophila clarkei*, *Hakea multilineata*, *Hemigenia botryphylla* and *Ptilotus obovatus*, on red-brown silty loam with ironstone and granite surface stones, on low to mid slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in one occurrence in the Yandanooka Pipeline area along Koolanooka Spring Road, on the western footslopes of Koolanooka Hills **Area Mapped (Proportion of Survey Area):** 0.2 ha (0.002 %) **Sample Sites:** 2 relevés (HR14, HR15) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	No photo available

VT	Summary	Representative Photo
Y	**Description:** Low woodland to open woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* and/or *Eucalyptus arctata*, over tall open shrubland of *Acacia ramulosa* var. *ramulosa*, *Acacia stereophylla* var. *stereophylla*, *Acacia acanthoclada* subsp. *glaucescens* and occasionally *Grevillea obliquistigma* subsp. *obliquistigma* and *Senna charlesiana*, over occasional mid sparse shrubland of *Senna glutinosa* subsp. *chatelainiana*, *Hakea recurva* subsp. *recurva*, *Ptilotus schwartzii* and *Chenopodium gaudichaudianum*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima* and *Monachather paradoxus*, on red, brown or orange loam or silty-sands with ironstone surface stones, on plains and lower slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in the Yandanooka Pipeline area along Koolanooka Spring Road and Fallon Road, west of Koolanooka Hills **Area Mapped (Proportion of Survey Area):** 1.8 ha (0.01 %) **Sample Sites:** 3 relevés (HR17, HR18, HR23) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	No photo available

VT	Summary	Representative Photo
Z	**Description:** Low open woodland of *Eucalyptus kochii* subsp. *plenissima* and occasionally *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Acacia anthochaera*, *Acacia ramulosa* var. *ramulosa*, *Hakea recurva* subsp. *recurva* and *Bursaria occidentalis*, over low open chenopod shrubland of *Chenopodium gaudichaudianum*, *Maireana brevifolia*, *Maireana georgei* and *Maireana* ?*planifolia*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, on red-brown sandy loam, on flats and plains **Definition Method:** Structural vegetation classification **Location:** Mapped in the Yandanooka Pipeline area near the intersection of Koolanooka Spring Road and Fallon Road, west of Koolanooka Hills **Area Mapped (Proportion of Survey Area):** 0.7 ha (0.005 %) **Sample Sites:** 2 relevés (HR20, HR21) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	No photo available

VT	Summary	Representative Photo
AA	**Description:** Occasional low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis*, over tall closed shrubland to open shrubland of *Allocasuarina campestris* with *Acacia acuminata*, *Acacia tetragonophylla*, *Melaleuca nematophylla* and/or *Hakea scoparia*, over mid open to sparse shrubland of mixed species including *Baeckea* sp. Perenjori (J.W. Green 1516) (P2), *Ricinocarpos velutinus* and *Solanum ellipticum*, on rocky brown clay-silt with heavy quartz, on slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in a small occurrence in the Borefield Corridor area between Mount Nunn Nature Reserve and Mount Campbell **Area Mapped (Proportion of Survey Area):** 0.2 ha (0.002 %) **Sample Sites:** 3 relevés (SLU60, SLU61, SLU62) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)^ **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.30 VT AA (Relevé SLU61)**

VT	Summary	Representative Photo
HMVT A	**Description:** Low open chenopod shrubland of mixed species dominated by *Maireana brevifolia* and *Tecticornia pergranulata* subsp. *pergranulata* and occasionally *Enchylaena tomentosa* var. *tomentosa*, over low forbland of **Mesembryanthemum nodiflorum*, on saline red-brown sandy loam on flats **Definition Method:** Structural vegetation classification **Location:** Mapped in two small occurrences in the Borefield Corridor area southeast of Morawa **Area Mapped (Proportion of Survey Area):** 0.1 ha (0.001 %) **Sample Sites:** 2 relevés (SLU18, SLU26) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.31 HMVT A**

VT	Summary	Representative Photo
HMVT B	**Description:** Low open woodland to isolated trees of *Eucalyptus arctata*, over tall shrubland of mixed species including *Acacia sibina*, *Grevillea obliquistigma* subsp. *obliquistigma*, *Melaleuca* ?*atroviridis* and *Acacia prainii*, over mid sparse shrubland of *Acacia dielsii* and *Grevillea extorris*, over low open sedgeland of *Ecdeiocolea monostachya*, on yellow sand on flats **Definition Method:** Structural vegetation classification **Location:** Mapped in one small occurrence in the Borefield Corridor area along Mullewa-Wubin Road southeast of Morawa **Area Mapped (Proportion of Survey Area):** 0.2 ha (0.001 %) **Sample Sites:** 1 relevé (SLU22) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** *Pityrodia viscida* (P4)^ **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.32 HMVT B (Relevé SLU22)**

VT	Summary	Representative Photo
HMVT C	**Description:** Tall open shrubland of mixed species including *Acacia anthochaera*, *Acacia acuminata*, *Acacia* ?*inceana* subsp. *conformis* and *Melaleuca eleuterostachya*, over low open chenopod shrubland of mixed species including *Enchylaena tomentosa* var. *tomentosa*, *Maireana brevifolia*, *Salsola australis* and *Rhagodia drummondii*, over low isolated clumps of tussock grasses of *Aristida* ?*contorta*, *Austrostipa elegantissima* and *Austrostipa nodosa*, on slightly saline red sand on flats **Definition Method:** Structural vegetation classification **Location:** Mapped in one small occurrence in the Borefield Corridor area along Morawa South Road south of Morawa **Area Mapped (Proportion of Survey Area):** 0.1 ha (0.0004 %) **Sample Sites:** 1 relevé (SLU31) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.33 HMVT C**

VT	Summary	Representative Photo
HMVT D	**Description:** Mid forest to low open woodland of *Eucalyptus camaldulensis* and/or *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open to sparse shrubland of mixed species including *Hakea preissii*, *Acacia rostellifera* and/or *Acacia acuminata*, over occasional low sparse chenopod shrubland of mixed species including *Maireana brevifolia*, *Salsola australis*, *Enchylaena tomentosa* var. *tomentosa* and **Mesembryanthemum nodiflorum*, over low tussock grassland of mixed species including **Avena barbata*, **Ehrharta calycina*, **Cynodon dactylon* and **Bromus diandrus*, on red-brown sandy clay loam, on drainage lines and flats **Definition Method:** Structural vegetation classification **Location:** Mapped in multiple occurrences in the far western part of the Borefield Corridor area, south and east of Yandanooka **Area Mapped (Proportion of Survey Area):** 4.7 ha (0.03 %) **Sample Sites:** 8 relevés (MLEM01, YAN004, YAN013, YAN018, YAN055, YAN062, YAN063, YAN064b), 2 mapping notes (MLEDN04, MLEDN05) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.34 HMVT D (Relevé MLEM01)**

VT	Summary	Representative Photo
HMVT E	**Description:** Mid to low open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open shrubland of mixed species including *Acacia acuminata*, *Acacia tetragonophylla*, *Acacia aestivalis* and *Hakea recurva* subsp. *recurva*, over low isolated chenopod shrubs of *Maireana brevifolia*, *Chenopodium gaudichaudianum* and *Rhagodia drummondii*, over low open tussock grassland dominated by **Avena barbata* and **Bromus diandrus*, on red sandy loam or clay loam, on lower to upper slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in three occurrences in the far western part of the Borefield Corridor area, south and east of Yandanooka **Definition Method:** Structural vegetation classification **Area Mapped (Proportion of Survey Area):** 1.7 ha (0.01 %) **Sample Sites:** 5 relevés (YAN005, YAN006, YAN007, YAN008, YAN061) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats) **Similar VTs:** G	 **Photo 5.35 HMVT E (Relevé YAN005)**

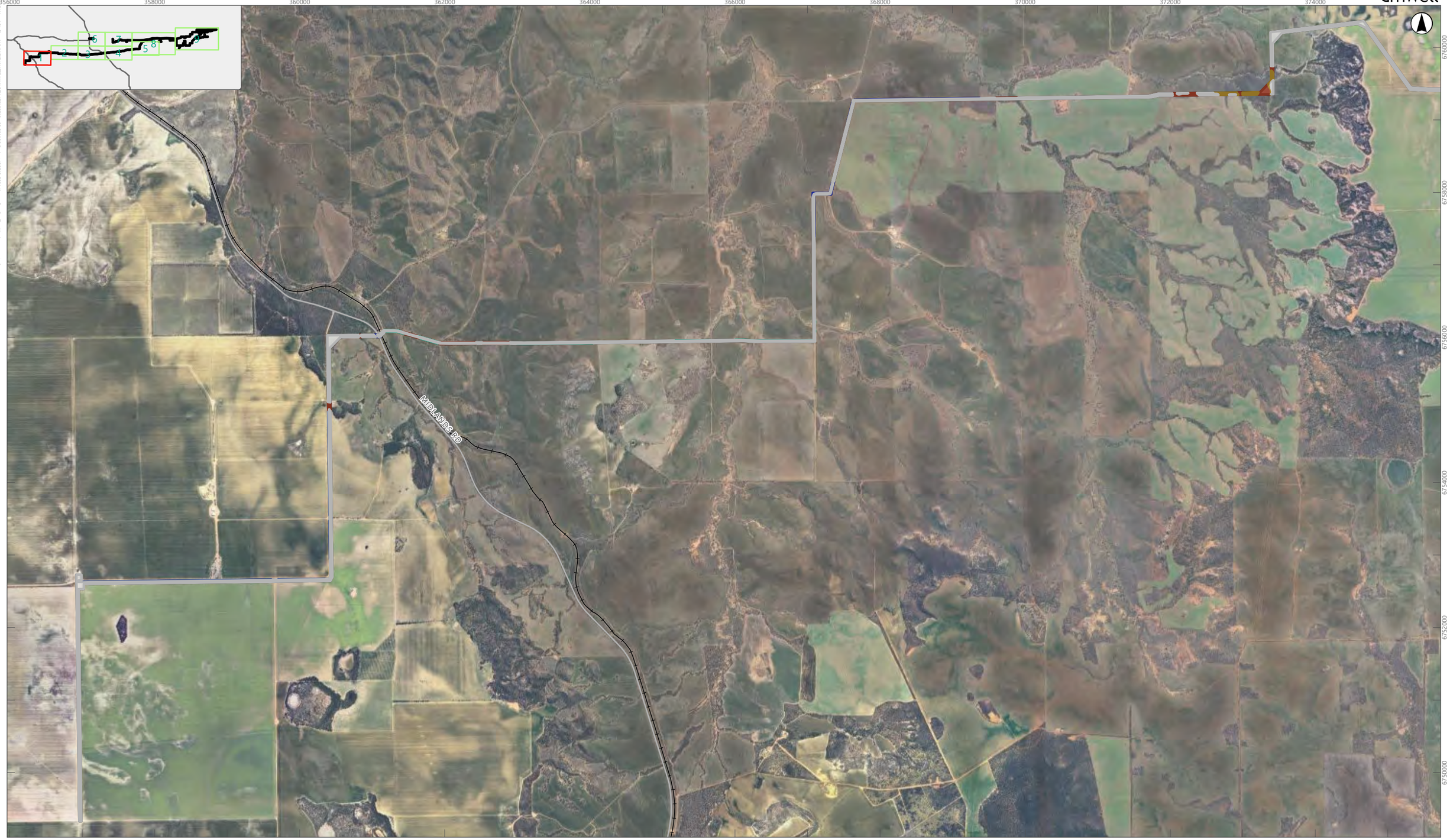
VT	Summary	Representative Photo
HMVT F	**Description:** Mid open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall shrubland to open shrubland of *Acacia colletioides* and *Acacia acuminata*, over low open to sparse chenopod shrubland of mixed species including **Mesembryanthemum nodiflorum*, *Rhagodia drummondii*, *Maireana brevifolia*, *Atriplex semibaccata* and *Salsola australis*, over low open tussock grassland dominated by **Avena barbata*, **Bromus diandrus*, **Lolium* ?*rigidum* and **Hordeum* ?*glaucum*, on red loamy clay on lower slopes **Definition Method:** Structural vegetation classification **Location:** Mapped in multiple occurrences in the far western part of the Borefield Corridor area, predominately along Enokurra Road east of Yandanooka **Definition Method:** Structural vegetation classification **Area Mapped (Proportion of Survey Area):** 2 ha (0.01 %) **Sample Sites:** 2 relevés (YAN010, YAN011) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.36 HMVT F (Relevé YAN011)**

VT	Summary	Representative Photo
HMVT G	**Description:** Mid isolated shrubs of *Acacia acuminata*, *Acacia tetragonophylla* and *Hakea recurva* subsp. *recurva*, over mid to low closed tussock grassland and forbland of agricultural weeds, on red-brown loam on gently undulating plains **Definition Method:** Structural vegetation classification **Location:** Mapped in two main occurrences in the western part of the Borefield Corridor area: west of the salt lakes along Three Springs-Morawa Road, and east of the eastern end of Willis Road in Yandanooka **Area Mapped (Proportion of Survey Area):** 3.3 ha (0.02 %) **Sample Sites:** 3 mapping notes (MLEDN03, MLEDN06, MLEDN07) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** *Tecticornia* sp. 'Karara 2' (PU) **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.37 HMVT G (Mapping Note MLEDN03)**

VT	Summary	Representative Photo
CP	**Description:** Occasional low open forbland of *Myriophyllum decussatum* on red clay in claypans. Bare clay that is completely devoid of vegetation when dry. It periodically fills with water, and in the subsequent weeks while water is still present (or when the clay is still waterlogged), *Myriophyllum decussatum* is present **Definition Method:** Structural vegetation classification **Location:** Mapped in the clay pan north of Terapod in the Karara Area **Area Mapped (Proportion of Survey Area):** 6.7 ha (0.05 %) **Sample Sites:** NA **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.38 VT CP**

VT	Summary	Representative Photo
PL	**Description:** Planted trees and shrubs, predominately *Eucalyptus* spp., on plains in pasture and road verges **Definition Method:** Structural vegetation classification **Location:** Mapped in areas cleared for pasture along the Borefield Corridor south of Koolanooka, and in the far western part of the Borefield Corridor area south of Yandanooka **Area Mapped (Proportion of Survey Area):** 3.9 ha (0.03 %) **Sample Sites:** 1 relevé (YAN019) **Indicator Taxa:** NA (VT defined structurally) **Significant Taxa:** None recorded **Average Taxon Richness per Quadrat:** NA (not sampled by any quadrats)	 **Photo 5.39 VT PL (Relevé YAN019)**
Water	Water in salt lakes and clay pans **Location:** Mapped in Lake Weelhamby in the Yandanooka Pipeline area **Area Mapped (Proportion of Survey Area):** 1.6 ha (0.01 %)	No photo available
CL	Land cleared for roads, tracks, mining, infrastructure and agriculture. May contain occasional isolated native or introduced plants **Area Mapped (Proportion of Survey Area):** 2,754.4 ha (20.3 %)	No photo available

^ Designates preferred habitat (tentative) for significant flora taxon, based on proportional location representation and landforms/soils.



Legend

- Survey Area
- Road
- Railway

Vegetation Type

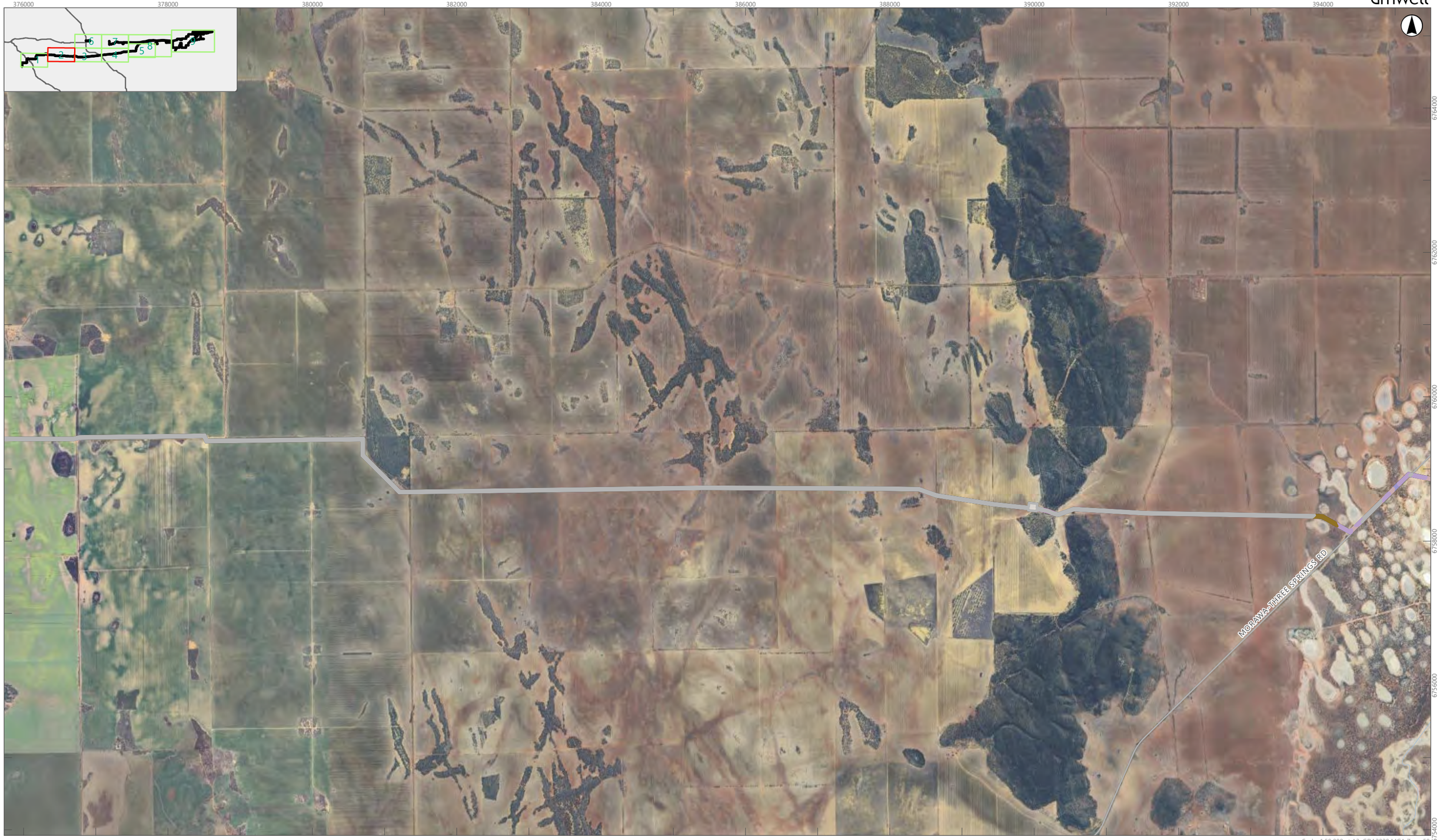
- HMVT D
- HMVT E
- HMVT F
- HMVT G
- PL
- CL

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 1

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Major Watercourse

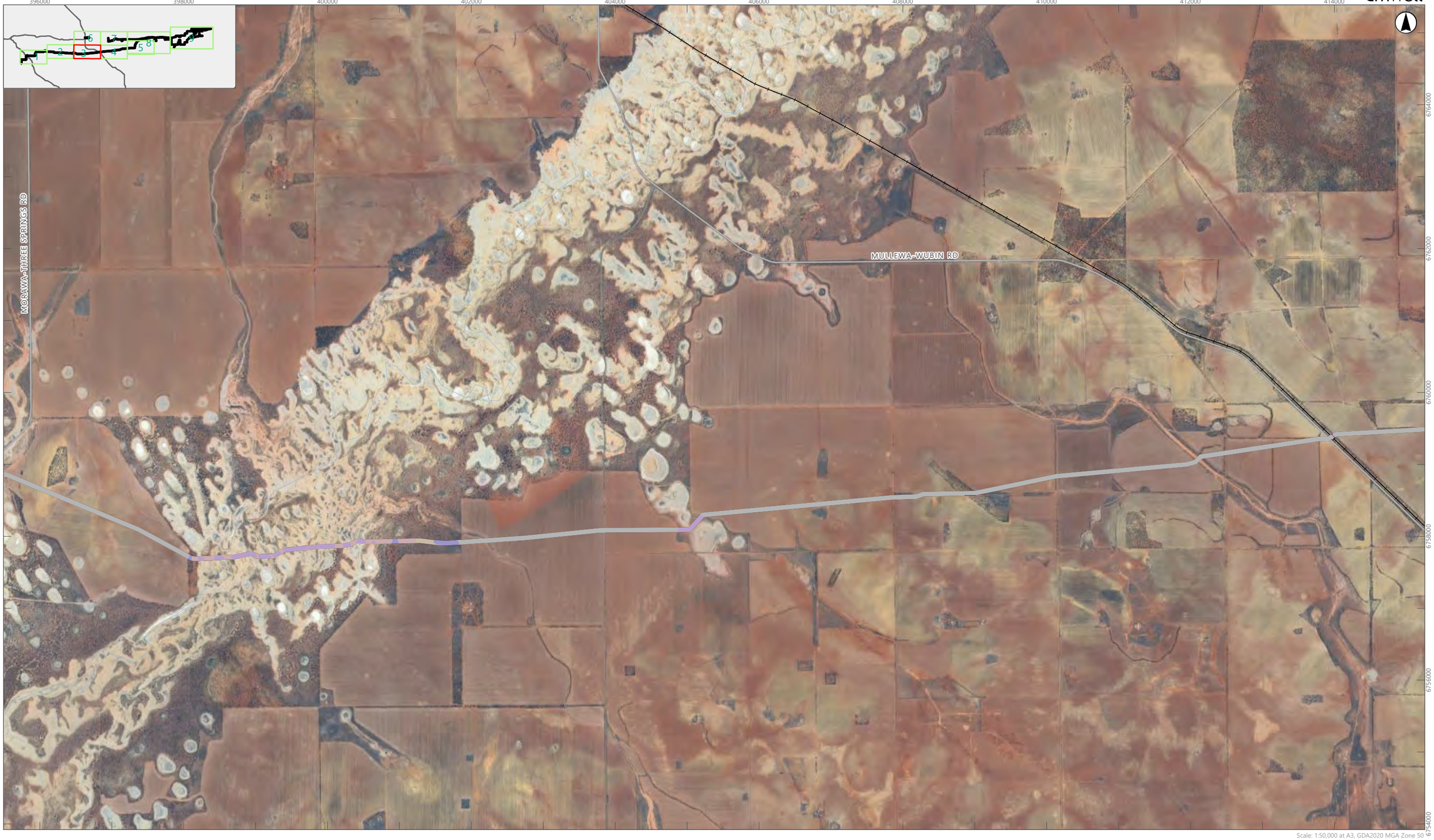
Vegetation Type

- I
- L
- N
- AA
- HMVT G
- CL

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 2

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Vegetation Type

- G
- I
- L
- N
- HMVT A
- HMVT B
- HMVT C
- PL
- CL

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

0 1 2 km

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 3

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area
Road
Railway

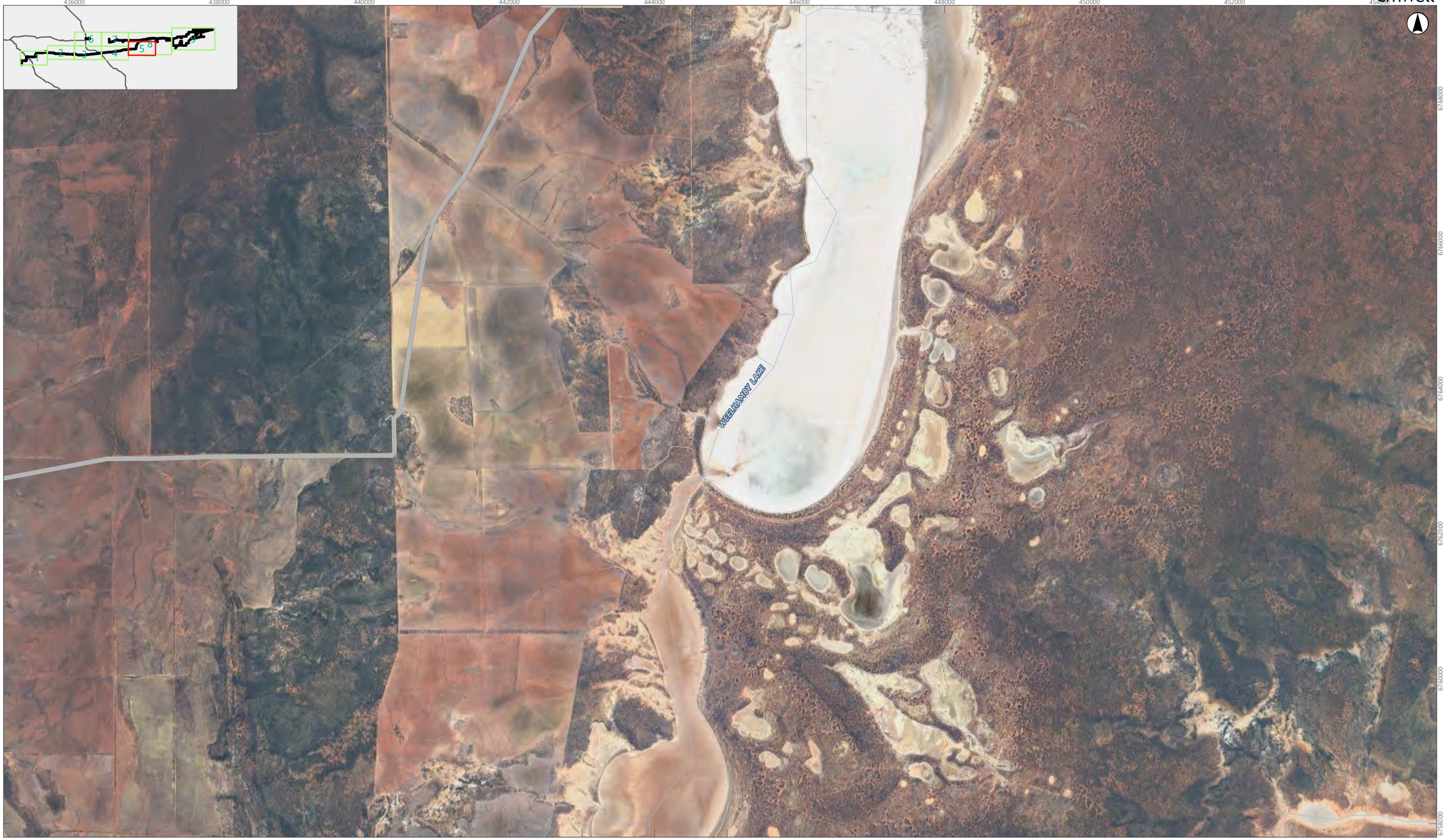
Vegetation Type

G
HMVT A
PL
CL

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 4

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



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Legend

- Survey Area
- Major Watercourse

Vegetation Type

- E
- G
- O
- R
- CL

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

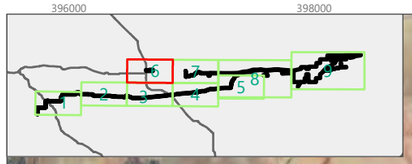
FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 5

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6776000 6774000 6772000 6770000 6768000 6766000



MULLEWA-WUBIN RD

MINGENEW-MORAWA RD

MORAWA

MORAWA-THREE SPRINGS RD

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Vegetation Type

- G
- L
- Q
- CL

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 6

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

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Legend

- Survey Area
- Major Watercourse

Vegetation Type

- A
- E
- G
- I
- N
- P
- R
- V
- W
- X
- Y
- Z
- CL

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

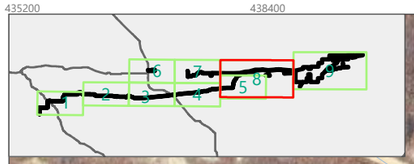
FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 7

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

435200 438400 441600 444800 448000 451200 454400 457600 460800 464000

6774400 6771200 6768000 6764800 6761600



WEELHAMBY LAKE

Legend

Survey Area
Major Watercourse

Vegetation Type

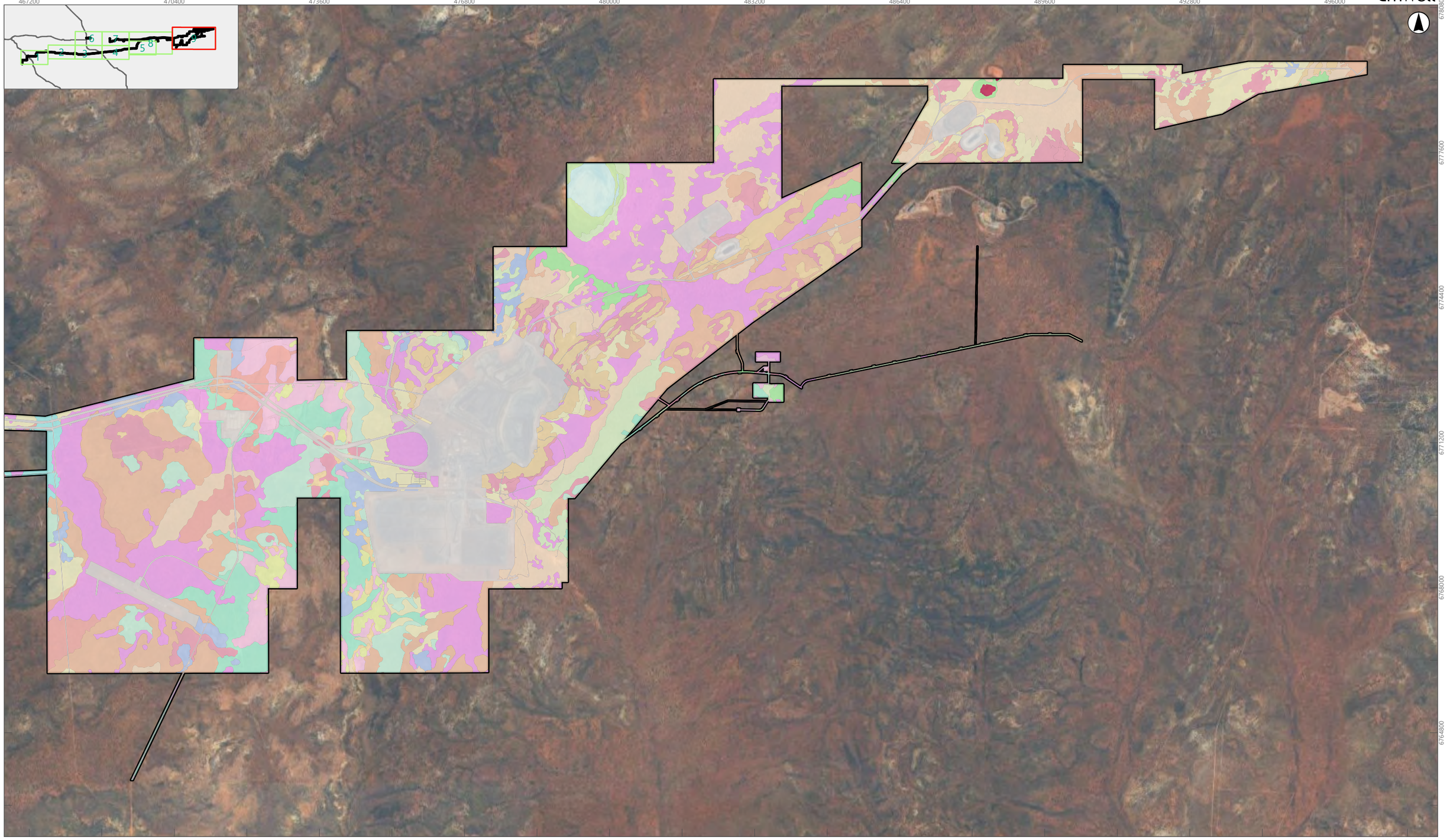
A
D
E
F
G
I
L
M
N
O
P
Q
R
S
T
Water
CL

Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 8

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation Type

A
B
C
D
E
F
G
H
J
K
O
P
Q
R
S
T
U
CP
CL

FIGURE 5.7
Overview of Vegetation Types of the Survey Area
Sheet 9

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Vegetation Type

A — Tall sparse shrubland to isolated shrubs of mixed species including *Acacia acuminata/Acacia burkittii*, *Acacia tetragonophylla*, *Melaleuca hamata* and/or *Acacia umbraculiformis* over mid sparse shrubland of mixed species including *Thryptomene costata* and *Malleostemon tuberculatus*, over low sparse shrubland of mixed species including *Mirbelia microphylla*, *Solanum lasiophyllum* and *Eremophila eriocalyx*, over low sparse forbland of mixed species including *Schoenia cassiniana*, *Borya sphaerocephala*, *Erodium cygnorum* and *Rhodanthe chlorocephala* subsp. *splendida*, on red-brown clay loam, sometimes with granite surface stones, on plains and gentle slopes

B — Low open forbland of *Borya sphaerocephala* and other species including *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Calotis hispidula* and *Chthonocephalus pseudevax*, in pockets of red clayey sand on and immediately adjacent to granite sheet outcropping

C — Low open woodland of *Eucalyptus kochii* subsp. *plenissima* or *Eucalyptus loxophleba* subsp. *supralaevis*, over occasional tall isolated clumps of shrubs of *Acacia ramulosa* var. *ramulosa*, *Melaleuca eleuterostachya*, *Acacia assimilis* subsp. *assimilis*, *Acacia burkittii*, and/or *Acacia colletioides*, over low isolated clumps of shrubs of *Ptilotus obovatus* and *Solanum lasiophyllum*, over low open tussock grassland of *Monachather paradoxus*, over low isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Crassula colorata* var. *colorata*, *Helipterum craspedioides*, *Cephalipterum drummondii* and *Chthonocephalus pseudevax*, on red clayey sand or clay loam, sometimes with ironstone or quartz surface stones, on flats and plains

D — Occasional low woodland to open woodland of *Eucalyptus kochii*, *Callitris columellaris*, and/or *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of mixed species including *Acacia tetragonophylla*, *Acacia ramulosa* var. *ramulosa*, *Acacia acuminata*, *Acacia obtecta* and *Exocarpos aphyllus*, over mid sparse shrubland of mixed species including *Hakea recurva* subsp. *recurva*, *Senna artemisioides* subsp. *filifolia*, *Eremophila clarkei* and *Acacia assimilis* subsp. *assimilis*, over low sparse shrubland of mixed species including *Rhagodia drummondii*, *Ptilotus obovatus* and *Olearia humilis*, over low sparse tussock grassland of *Austrostipa elegantissima* and *Monachather paradoxus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Cephalipterum drummondii* and *Gilruthia osbornei*, on red or red-brown sandy clay loam, sometimes with occasional ironstone or quartz surface stones, on flats and plains

E — Tall open to sparse shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*, *Acacia assimilis* subsp. *assimilis* and *Eremophila clarkei*, over low isolated clumps of shrubs of mixed species including *Maireana planifolia*, *Ptilotus obovatus*, *Solanum lasiophyllum* and *Sida* sp. dark green fruits (S. van Leeuwen 2260), over low isolated clumps of grasses of *Austrostipa elegantissima*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Gilruthia osbornei*, *Cephalipterum drummondii*, *Calotis multicaulis* and *Panaetia lessonii*, on red clay loam, usually with ironstone, granite and/or quartz surface stones, on undulating plains and flats

F — Tall sparse shrubland of *Acacia tetragonophylla*, *Acacia umbraculiformis*, *Acacia ramulosa* var. *ramulosa* and occasionally *Acacia burkittii* and *Thryptomene costata*, over mid isolated shrubs of mixed species including *Hakea recurva* subsp. *recurva* and *Acacia kochii*, over low sparse shrubland of *Solanum lasiophyllum* and *Ptilotus obovatus*, over low sparse forbland of mixed species including *Borya sphaerocephala*, *Rhodanthe chlorocephala*, *Myriocephalus gueriniae* and *Goodenia cycnopotamica*, on red or red-brown clay loam or silty loam, sometimes with small amounts of granite outcropping and granite surface stones, on simple slopes and plains

G — Mid to low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis* and occasionally *Eucalyptus kochii*, over tall sparse shrubland of mixed species including *Acacia tetragonophylla* and occasionally *Acacia ramulosa* var. *ramulosa*, *Exocarpos aphyllus*, *Acacia obtecta* and *Acacia burkittii*, over an occasional mid sparse shrubland of *Senna* sp. Austin (A. Strid 20210), *Scaevola spinescens* and/or *Dodonaea inaequifolia*, over low isolated clumps of shrubs of mixed species including *Senna artemisioides* subsp. *filifolia*, *Ptilotus obovatus* and *Pimelea microcephala* subsp. *microcephala*, over low isolated clumps of chenopod shrubs of mixed species including *Rhagodia drummondii*, *Sclerolaena fusiformis*, *Maireana georgei*, *Maireana carnosa* and *Enchylaena lanata*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including **Mesembryanthemum nodiflorum*, *Cephalipterum drummondii*, *Erodium cygnorum* and *Gilruthia osbornei*, on red or red-brown clay loam or silty clay loam, usually with ironstone and/or granite and/or quartz surface stones, on flats and plains

H — Occasional low open woodland to isolated trees of mixed species including *Eucalyptus loxophleba* subsp. *supralaevis*, *Eucalyptus salubris*, *Eucalyptus clelandiorum* or *Eucalyptus kochii* subsp. *amaryssia*, over tall open to sparse shrubland of mixed species including *Acacia obtecta*, *Acacia ramulosa* var. *ramulosa*, *Acacia latior* and *Melaleuca leiocarpa*, over mid isolated shrubs of mixed species including *Acacia tetragonophylla*, *Exocarpos aphyllus* and *Acacia exocarpoides*, over occasional low isolated clumps of shrubs of *Ptilotus obovatus*, *Senna charlesiana*, *Persoonia pentasticha* (P3) and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of mixed species dominated by *Rhagodia drummondii* and *Sclerolaena fusiformis* and occasionally *Maireana georgei* and *Enchylaena lanata*, on red-brown clay loam, with occasional ironstone surface stones, on flats and plains

I — Low open woodland of *Eucalyptus horistes* and *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Melaleuca stereophloia*, over mid sparse shrubland of mixed species including *Acacia acuaria* and *Scholtzia uniovulata*, over mid sparse tussock grassland of *Austrostipa elegantissima*, over low isolated forbs of mixed species including *Goodenia rosea*, *Rhodanthe chlorocephala* subsp. *splendida*, *Lawrencella davenportii*, *Podolepis aristata* subsp. *aristata* and *Waitzia acuminata* var. *acuminata*, on red sandy clay, on plains and low rises

J — Occasional tall to mid isolated shrubs of *Acacia obtecta*, *Duma florulenta*, *Exocarpos aphyllus* and *Eremophila glabra*, over low sparse shrubland of *Ptilotus obovatus* and *Corchorus* sp., over mid open to sparse samphire shrubland of *Tecticornia disarticulata*, over low sparse chenopod shrubland of mixed species including *Maireana carnosa*, *Sclerolaena diacantha*, *Sclerolaena fusiformis*, *Atriplex semilunaris* and *Maireana brevifolia*, on brown or red-brown clay loam or silty clay loam, in saline claypans

K — Occasional low woodland to open woodland of mixed species including *Eucalyptus clelandiorum*, *Eucalyptus loxophleba* subsp. *supralaevis* and/or *Eucalyptus salubris*, over tall sparse shrubland of mixed species including *Eremophila oppositifolia* subsp. *angustifolia*, *Acacia erinacea*, *Exocarpos aphyllus* and *Eremophila pantonii*, over low isolated clumps of shrubs of mixed species including *Senna stowardii*, *Scaevola spinescens*, *Ptilotus obovatus* and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of *Sclerolaena fusiformis*, *Rhagodia drummondii*, *Maireana thesioides*, *Maireana georgei* and *Maireana marginata*, on red-brown silty clay loam or clay loam, sometimes with ironstone surface stones, on plains

L — Tall sparse shrubland of *Melaleuca acutifolia* and occasionally *Melaleuca eleuterostachya*, *Acacia eremaea* and *Melaleuca stereophloia*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Rhagodia drummondii*, *Maireana eriosphaera*, *Enchylaena tomentosa* var. *tomentosa* and *Sclerolaena diacantha*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including *Gunniopsis quadrifida*, *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Gnephosis angianthoides* and **Mesembryanthemum nodiflorum*, on slightly saline brown sandy clay, on flats and lower slopes

M — Occasional low isolated clumps of shrubs of *Lawrencia squamata* and *Frankenia pauciflora*, over low open to sparse samphire shrubland of mixed species including *Tecticornia disarticulata*, *Tecticornia loriae*, *Tecticornia* sp. 'Karara 4' and *Tecticornia peltata*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Maireana eriosphaera*, *Maireana glomerifolia* and *Maireana atkinsiana*, over isolated clumps of forbs of mixed species including *Senecio lacustrinus*, *Pogonolepis muelleriana*, *Stenopetalum salicola*, *Lawrencia squamata*, *Siemssenia capillaris* and *Cotula cotuloides*, on brown or orange sandy clay, in saline depressions

FIGURE 5.7

LEGEND: Overview of Vegetation Types of the Survey Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Vegetation Type

N Low sparse samphire shrubland of mixed species, including *Tecticornia indica* subsp. *bidens*, *Tecticornia* sp. 'Karara 1' (PU), *Tecticornia* sp. 'Karara 2' (PU), and occasionally *Tecticornia peltata*, over low isolated clumps of forbs of mixed species including *Triglochin mucronata*, *Senecio lacustrinus*, *Cotula cotuloides*, **Parapholis incurva* and *Gunniopsis septifraga*, on grey-brown or brown sandy clay, in saline depressions

O Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall sparse shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Calycopeplus paucifolius*, *Melaleuca nematophylla*, and/or *Acacia ramulosa* var. *ramulosa*, over mid sparse shrubland of mixed species including *Eremophila clarkei*, *Philotheca brucei* subsp. *brucei*, *Philotheca sericea*, *Aluta aspera* subsp. *aspera* and *Eremophila latrobei* subsp. *latrobei*, over low isolated shrubs of *Xanthosia kochii*, *Sida* sp. dark green fruits (S. van Leeuwen 2260) and *Hibbertia arcuata*, over low isolated clumps of forbs of mixed species including *Waitzia acuminata* var. *acuminata*, *Podolepis lessonii* and *Lawrencella rosea*, on red-brown silty loam or silty clay loam with ironstone, BIF or granite stones, and sometimes with ironstone, BIF or granite outcropping, on slopes and crests

P Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall shrubland to open shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Melaleuca nematophylla*, *Acacia latior*, *Calycopeplus paucifolius* and *Acacia sibina*, over mid shrubland to open shrubland dominated by *Aluta aspera* subsp. *hesperia* and occasionally with *Philotheca sericea*, *Hibbertia arcuata* and/or *Grevillea paradoxa*, over occasional low open shrubland of mixed species including *Philotheca deserti* subsp. *deserti* and *Xanthosia kochii*, over low isolated clumps of tussock grasses of *Monachather paradoxus* and *Amphipogon caricinus* var. *caricinus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Bellida graminea*, *Trachymene ornata*, *Cheilanthes sieberi* subsp. *sieberi* and *Lawrencella rosea*, on red or red-brown clay loam or silty loam with ironstone or BIF surface stones, and occasionally with ironstone or BIF outcropping, on lower to upper slopes

Q Occasional low open woodland of *Eucalyptus arctata* and/or *Eucalyptus kochii* subsp. *amaryssia*, over tall shrubland to open shrubland of mixed species dominated by *Acacia latior*, *Acacia sibina*, and occasionally *Melaleuca leiocarpa*, *Acacia longispinea* and *Melaleuca hamata*, over occasional mid isolated shrubs of mixed species including *Aluta aspera* subsp. *hesperia* and *Hakea recurva* subsp. *recurva*, over low isolated shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Cryptandra imbricata*, *Prostanthera prostantheroides* and *Enekbatus stowardii*, over low sparse tussock grassland of *Monachather paradoxus*, *Amphipogon caricinus* var. *caricinus* and occasionally *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Bellida graminea*, *Erodium cygnorum*, *Dianella revoluta* var. *divaricata* and *Cheilanthes sieberi* subsp. *sieberi*, on brown or red clay loam, sandy clay loam or silty loam with ironstone surface stones, on lower slopes, plains and flats

R Occasional low open woodland of *Allocasuarina acutivalvis* subsp. *prinsepiana* and/or *Eucalyptus kochii*, over tall shrubland to open shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Melaleuca hamata*, *Acacia latior*, *Acacia incognita* and *Acacia sibina*, over mid sparse shrubland to isolated clumps of shrubs of mixed species including *Eremophila clarkei*, *Acacia tetragonophylla*, *Eremophila eriocalyx*, *Aluta aspera* subsp. *hesperia* and *Eremophila latrobei* subsp. *latrobei*, over low sparse shrubland to isolated clumps of shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), *Hibbertia arcuata*, and occasionally *Chamelaucium pauciflorum* subsp. Perenjori (B.J. Conn 2181) and *Olearia humilis*, over low sparse tussock grassland of *Amphipogon caricinus* var. *caricinus*, over low sparse forbland to isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Waitzia acuminata* var. *acuminata* and *Gilruthia osbornei*, on red or red-brown clay loam with ironstone and sometimes quartz surface stones, on plains and simple slopes

S Tall sparse shrubland to isolated clumps of shrubs of mixed species including *Acacia sibina*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva* and *Acacia burkittii*, over mid shrubland to sparse shrubland of mixed species including *Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*, *Malleostemon tuberculatus* and *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), over low sparse shrubland to isolated clumps of shrubs of mixed species including *Pimelea spiculigera* var. *thesioides*, *Mirbelia microphylla*, *Hibbertia arcuata* and *Grevillea pityophylla*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, *Monachather paradoxus* and/or *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Chthonocephalus pseudevax*, *Bellida graminea*, *Goodenia rosea*, *Brachyscome ciliocarpa* and *Podolepis lessonii*, on red or brown clay loam, sandy clay loam or silty loam with ironstone or BIF surface stones, on flats, plains and slopes

T Tall open to sparse shrubland of mixed species including *Acacia sibina*, *Melaleuca hamata*, *Acacia latior*, *Acacia acuminata* and *Hysterobaeckea setifera* subsp. *setifera*, over mid isolated shrubs of mixed species including, *Malleostemon tuberculatus*, *Philotheca glabra*, *Philotheca deserti* subsp. *deserti* and *Allocasuarina acutivalvis* subsp. *prinsepiana*, over low isolated clumps of shrubs of mixed species including *Grevillea granulosa* (P3), *Hibbertia stenophylla*, *Darwinia capitella* and *Malleostemon roseus*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, over low sparse sedgeland of *Ecdeiocolea monostachya*, over low sparse forbland of mixed species including *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Trachymene cyanopetala*, *Borya sphaerocephala* and *Lawrencella davenportii*, on orange, brown or red sandy loam or sandy clay loam, occasionally with ironstone and quartz surface stones, on plains and flats

U Low woodland of *Eucalyptus clelandiorum* or tall shrubland of *Melaleuca acutifolia*, over low sparse chenopod shrubland of mixed species dominated by *Maireana thesioides*, *Maireana carnosa*, *Sclerolaena diacantha* and *Maireana georgei*, on red-brown silty clay loam, occasionally with calcrete stones, in drainage depressions and on the edges of saline claypans

V Tall open shrubland to shrubland of *Acacia tetragonophylla*, *Acacia quadrimarginea* and occasionally *Allocasuarina dielsiana*, *Acacia ramulosa* var. *ramulosa* and *Hakea recurva* subsp. *recurva*, over mid open shrubland of mixed species including *Dodonaea inaequifolia*, *Grevillea paradoxa*, *Senna glutinosa* subsp. *chatelainiana* and *Acacia kochii*, occasionally over low isolated shrubs of *Solanum cleistogamum* and *Ptilotus obovatus*, over low open forbland dominated by *Borya sphaerocephala*, on red or brown silty soil with ironstone and granite surface stones, on low to mid slopes

W Low woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis*, over tall shrubland to open shrubland of mixed species including *Senna charlesiana*, *Acacia ramulosa* var. *ramulosa*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia burkittii*, over low open shrubland of mixed species including *Acacia acanthoclada* subsp. *glaucescens*, *Cryptandra apetala* var. *apetala*, *Eremophila clarkei* and *Acacia ?nigripilosa* subsp. *nigripilosa*, on red-brown silty-sands with ironstone surface stones, on low to mid slopes

X Occasional low isolated trees of *Eucalyptus arctata*, over tall shrubland dominated by *Senna charlesiana* and occasionally *Acacia stereophylla* var. *stereophylla*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Melaleuca cordata*, over mid to low open to sparse shrubland of *Aluta aspera* subsp. *hesperia*, *Eremophila clarkei*, *Hakea multilineata*, *Hemigenia botryphylla* and *Ptilotus obovatus*, on red-brown silty loam with ironstone and granite surface stones, on low to mid slopes

Y Low woodland to open woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* and/or *Eucalyptus arctata*, over tall open shrubland of *Acacia ramulosa* var. *ramulosa*, *Acacia stereophylla* var. *stereophylla*, *Acacia acanthoclada* subsp. *glaucescens* and occasionally *Grevillea obliquistigma* subsp. *obliquistigma* and *Senna charlesiana*, over occasional mid sparse shrubland of *Senna glutinosa* subsp. *chatelainiana*, *Hakea recurva* subsp. *recurva*, *Ptilotus schwartzi* and *Chenopodium gaudichaudianum*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima* and *Monachather paradoxus*, on red, brown or orange loam or silty-sands with ironstone surface stones, on plains and lower slopes

FIGURE 5.7

LEGEND: Overview of Vegetation Types of the Survey Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Vegetation Type

Z	Low open woodland of *Eucalyptus kochii* subsp. *plenissima* and occasionally *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Acacia anthochaera*, *Acacia ramulosa* var. *ramulosa*, *Hakea recurva* subsp. *recurva* and *Bursaria occidentalis*, over low open chenopod shrubland of *Chenopodium gaudichaudianum*, *Maireana brevifolia*, *Maireana georgei* and *Maireana* ?*planifolia*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, on red-brown sandy loam, on flats and plains
AA	Occasional low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis*, over tall closed shrubland to open shrubland of *Allocasuarina campestris* with *Acacia acuminata*, *Acacia tetragonophylla*, *Melaleuca nematophylla* and/or *Hakea scoparia*, over mid open to sparse shrubland of mixed species including *Baeckea* sp. Perenjori (J.W. Green 1516) (P2), *Ricinocarpos velutinus* and *Solanum ellipticum*, on rocky brown clay-silt with heavy quartz, on slopes
HMVT A	Low open chenopod shrubland of mixed species dominated by *Maireana brevifolia* and *Tecticornia pergranulata* subsp. *pergranulata* and occasionally *Enchylaena tomentosa* var. *tomentosa*, over low forbland of **Mesembryanthemum nodiflorum*, on saline red-brown sandy loam on flats
HMVT B	Low open woodland to isolated trees of *Eucalyptus arctata*, over tall shrubland of mixed species including *Acacia sibina*, *Grevillea obliquistigma* subsp. *obliquistigma*, *Melaleuca* ?*atroviridis* and *Acacia prainii*, over mid sparse shrubland of *Acacia dielsii* and *Grevillea extorris*, over low open sedgeland of *Ecdeiocolea monostachya*, on yellow sand on flats
HMVT C	Tall open shrubland of mixed species including *Acacia anthochaera*, *Acacia acuminata*, *Acacia* ?*inceana* subsp. *conformis* and *Melaleuca eleuterostachya*, over low open chenopod shrubland of mixed species including *Enchylaena tomentosa* var. *tomentosa*, *Maireana brevifolia*, *Salsola australis* and *Rhagodia drummondii*, over low isolated clumps of tussock grasses of *Aristida* ?*contorta*, *Austrostipa elegantissima* and *Austrostipa nodosa*, on slightly saline red sand on flats
HMVT D	Mid forest to low open woodland of *Eucalyptus camaldulensis* and/or *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open to sparse shrubland of mixed species including *Hakea preissii*, *Acacia rostellifera* and/or *Acacia acuminata*, over occasional low sparse chenopod shrubland of mixed species including *Maireana brevifolia*, *Salsola australis*, *Enchylaena tomentosa* var. *tomentosa* and **Mesembryanthemum nodiflorum*, over low tussock grassland of mixed species including **Avena barbata*, **Ehrharta calycina*, **Cynodon dactylon* and **Bromus diandrus*, on red-brown sandy clay loam, on drainage lines and flats
HMVT E	Mid to low open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open shrubland of mixed species including *Acacia acuminata*, *Acacia tetragonophylla*, *Acacia aestivalis* and *Hakea recurva* subsp. *recurva*, over low isolated chenopod shrubs of *Maireana brevifolia*, *Chenopodium gaudichaudianum* and *Rhagodia drummondii*, over low open tussock grassland dominated by **Avena barbata* and **Bromus diandrus*, on red sandy loam or clay loam, on lower to upper slopes
HMVT F	Mid open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall shrubland to open shrubland of *Acacia colletioides* and *Acacia acuminata*, over low open to sparse chenopod shrubland of mixed species including **Mesembryanthemum nodiflorum*, *Rhagodia drummondii*, *Maireana brevifolia*, *Atriplex semibaccata* and *Salsola australis*, over low open tussock grassland dominated by **Avena barbata*, **Bromus diandrus*, **Lolium* ?*rigidum* and **Hordeum* ?*glaucum*, on red loamy clay on lower slopes
HMVT G	Mid isolated shrubs of *Acacia acuminata*, *Acacia tetragonophylla* and *Hakea recurva* subsp. *recurva*, over mid to low closed tussock grassland and forbland of agricultural weeds, on red-brown loam on gently undulating plains
CP	Occasional low open forbland of *Myriophyllum decussatum* on red clay in claypans. Bare clay that is completely devoid of vegetation when dry. It periodically fills with water, and in the subsequent weeks while water is still present (or when the clay is still waterlogged), *Myriophyllum decussatum* is present.
PL	Planted trees and shrubs, predominately *Eucalyptus* spp., on plains in pasture and road verges
Water	Water in salt lakes and clay pans
CL	Land cleared for roads, infrastructure and agriculture. May contain occasional isolated native or introduced plants.

FIGURE 5.7

LEGEND: Overview of Vegetation Types of the Survey Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

5.2.7 Comparison of Current Survey VTs to Previous Studies

5.2.7.1 Karara–Mungada Assessment and 2020 Assessment

The quadrat clustering from the classification analyses conducted as part of the Karara–Mungada Assessment (Woodman Environmental, 2008d) and the 2020 Assessment (Umwelt, 2021) were generally maintained in the current analysis classification. However, there was migration of a small number of quadrats from their original cluster positions to other clusters in the current analysis classification. Many quadrats from the Karara–Mungada Assessment FCTs and 2020 Assessment VUs that migrated in the current analysis contain high proportions of taxa that were common throughout the Survey Area.

Some quadrats that classified on the outer fringes of clusters in the previous dendrograms (i.e. those that were least similar to other quadrats in the cluster) migrated to new clusters. This was to be expected given the addition of new quadrat data in the current classification analysis, resulting in a re-definition of relationships between quadrats. In addition, there have been a number of taxonomic changes that relate to taxa in the area since both previous analyses, necessitating changes to the original quadrat data. The migration of quadrats between clusters may also have been a result of quadrat positioning with respect to community boundaries, where edge effects (ecotones) influenced the species composition of the quadrat. In addition, quadrats located on sites with characteristics that do not support the full complement of indicator species for a given VT would be expected to migrate more readily. For example, quadrats established on small outcrops may not contain all indicator species typical of larger landforms with more extensive outcropping.

It is important to note that the original quadrat groupings that formed the basis of the original 2020 VUs and KM FCTs are not maintained in the current analysis dendrogram. A changing of relationship between quadrats from the analysis originally conducted for these prior assessments is to be expected due to addition of new data to the dataset as well as taxonomic changes relating to taxa in the area necessitating changes to the original quadrat data. As a result, there is inherent ambiguity in inferences made from examination of the dendrogram alone.

A comparison of the Survey Area VTs with the Karara–Mungada Assessment FCTs ('KM FCT') and 2020 Assessment VUs ('2020 VUs') is presented in **Table 5.14** (remnant vegetation only; i.e. excluding areas mapped as PL, Water and CL). These comparisons have been informed by the FCTs/VUs that contributed the predominant number or proportion of quadrats to the VT, as well as comparison of mapping boundaries of the Survey Area VTs with those from the previous assessments, and consideration of landform and geology characteristics. Previous allocations of quadrats in these two assessments ('KM FCT' and '2020 VUs') are also delineated in the dendrogram in **Appendix I**. Karara–Mungada Assessment FCTs and 2020 Assessment VUs in **Table 5.14** have been underlined where those FCTs/VUs were considered by these previous assessments to potentially be of regional significance (conservation significance ranking of 4 or 5 in the case of Karara–Mungada Assessment FCTs (Woodman Environmental, 2008d)).

A total of 19 Survey Area VTs have no potentially equivalent Karara–Mungada Assessment FCTs or 2020 Assessment VUs given the VTs occur well outside the study areas of those previous two assessments. However, 15 Survey Area VTs have potentially equivalent Karara–Mungada Assessment FCTs or 2020 Assessment VUs based on the classification analysis results, and comparison of landform, geology, species composition and mapped extents. Potentially equivalent FCTs/VUs could not be found for two Survey Area VTs; VT B on granite sheet outcropping was mapped as parts of other granitic FCTs/VUs instead of being considered a discrete vegetation community in the earlier assessments, while VT H may not have an equivalent FCT or VU due to the migration of quadrats in the current assessment's classification dendrogram (**Table 5.14**).

Table 5.14 Comparison of Survey Area VTs to those Described and Mapped for the Karara–Mungada Assessment and 2020 Assessment

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
A	5a	17, 18	VT A included two quadrats that also represent KM FCT 5a, and two each from 2020 VUs 17 and 18. The mapping boundaries and compositions of the FCTs and VUs broadly match those of VT A, although some areas mapped as VU 17 are now represented by VT F, and most of VU 18 was mapped outside the current Survey Area.
B	-	-	No quadrats that form VT B were assessed for the Karara–Mungada Assessment. The area mapped as VT B mostly occurs west of the area assessed for the Karara–Mungada Assessment, however a small part was mapped as KM FCT 5a. This FCT comprises areas underlain by granite, rather than areas of granite sheet outcropping. Therefore, there are no potentially equivalent KM FCTs for VT B, as the sampling for the Karara–Mungada Assessment was insufficient to capture this VT. VT B included one quadrat representing 2020 VU 17; this VU includes areas with 'occasional granite outcropping'. However, the boundaries of VU 17 broadly encompass areas mapped as VT A or VT F, so the sampling for the 2020 Assessment was similarly insufficient to capture this VT.
C	6	11	One quadrat representing VT C also represents KM FCT 6 and 2020 VU 11; however, this quadrat (GIND-51) was manually allocated to VT C. Quadrat GIND-51 was the only quadrat representing KM FCT 6 and 2020 VU 11. There is some similarity between the floristic composition of VT C as whole, and KM FCT 6 / 2020 VU 11. It is worthy of note that the area mapped as VT C within which GIND-51 occurs is very small, and disjunct from all other mapped occurrences of VT C. These occurrences are west of the areas assessed for the Karara–Mungada Assessment and 2020 Assessment.
D	1b	1, 10	A total of eight and five quadrats representing VT D also represent KM FCTs 1b and 3, respectively, and ten and four quadrats also represent 2020 VUs 1 and 10, respectively. The mapping boundaries and compositions of the FCT 1a and VUs 1 and 10 broadly match those of VT D, while FCT 3 is a better match for VT G. The previous studies recognised the forms of VT D with and without the upper tree stratum as separate communities, while in the current assessment they are considered variants of VT D.

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
E	-	16	No quadrats that form VT E were assessed for the Karara–Mungada Assessment. The area mapped as VT E mostly occurs west of the area assessed for the Karara–Mungada Assessment, however the eastern-most parts of VT E were mapped variously as KM FCT 3, 5a and 16. Review of floristic and geological information for these FCTs indicates relatively low similarity to each of the FCTs, so it is likely that the VT E has no potentially equivalent KM FCT due to it occurring predominately outside the area assessed for the Karara–Mungada Assessment. One quadrat representing VT E also represents 2020 VU 16. The mapped boundaries and composition of this VU generally correlate well with those of VT E, where the current Survey Area and the 2020 Assessment study area intersects.
F	5b	3, 17	One quadrat representing VT F also represents KM FCT 5b, and the mapped boundaries of this FCT and VT correlate well in the disjunct, eastern-most occurrence of the VT. Only very small slivers of VT F intersect the area assessed for the Karara–Mungada Assessment at its western edge, where further west near the camp, TSF and airstrip, large areas have been mapped as VT F. Therefore, VT F may have some similarity to KM FCT 5b, but it is likely that the Karara–Mungada Assessment did not sample this VT sufficiently due to its main distribution occurring outside the study area for that assessment. A total of three, one and one quadrats representing VT F also represent 2020 VUs 17, 3 and 16, respectively. The mapped boundaries and composition of VUs 3 and 17 generally correlate well with those of VT F, with the exception of the granite sheet outcropping areas within VU 17 that have been mapped by this current assessment as VT B. The areas mapped as VU 16 are generally represented by VT E.
G	1a and mosaics of 1a/2, 3	2, 5, 6, 8, 14	Multiple quadrats representing VT G also represent KM FCTs 1a and 2. There is some overlap in the mapped boundaries of KM FCTs 2 and VU G, but the majority of this vegetation has been mapped by this current assessment as VT K. The Karara–Mungada Assessment mapped large areas as mosaics of KM FCTs 1a and 2, and while most of this has been mapped as VT G, some areas have instead been mapped as VT D, H or K. There composition and geology and landform characteristics of VT G and KM FCT 1a are highly similar. Finally, while no quadrats that represent KM FCT 3 grouped with VT G quadrats, the composition and boundaries of FCT 3 are a good match for VT G. Multiple quadrats representing VT G also represent 2020 VUs 2, 5, 6, and 14. The mapped boundaries and compositions of VT G and these VUs generally correlate well, although some areas of VU 5 have been mapped by this current assessment as VT D, and some of VU 2 as VT K. Finally, while no quadrats that represent 2020 VU 8 were included in the current analysis, but the composition and mapping boundaries are a good match for VT G.

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
H	-	-	The quadrats representing this VT include those that also represent a variety of KM FCTs and 2020 VUs. No one FCT or VU was represented more than once. The mapped areas of VT H overlap vegetation previously mapped as KM FCTs 1a, 1a/2 mosaic, 5a, 5b; and 2020 VUs 1, 2, 5, 10, 17 and 18. Therefore, VT H may not have an equivalent KM FCT or 2020 VU due to the migration of quadrats in the current assessment's classification dendrogram.
I	-	-	This Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
J	7a, 7d	7	The two quadrats forming VT J also represent KM FCT 7a and 2020 VU 7. The mapping boundaries and compositions of the FCTs and VUs are a good match to those of VT J. No quadrats that represent KM FCT 7d were included in the current analysis, but the composition and mapping boundaries are also a good match for VT J.
K	2	2, 4	VT K included three quadrats that also represent KM FCT 2, and two from 2020 VU 4. The mapping boundaries and compositions of the FCTs and VUs are a good match to those of VT K. As discussed for VT G, there is also similarity between the composition of 2020 VU 2 and VT K. One quadrat forming part of VT K is also representative of VU 2, and some areas mapped as VU 2 have been mapped by this current assessment as VT K.
L	-	-	This Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
M	-	-	This Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
N	-	-	This Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
O	8, 9, 10a, 10b, 13, 14	19, 21, 23, 24, 28	The quadrats representing VT O include multiple that also represent KM FCTs 3, 8, 13 and 14, as well as one each from FCTs 4, 10a, 10b. The mapping boundaries and compositions of FCTs 8, 10a, 10b, 13 and 14 are a good match to those of VT O, while KM FCT 3 is better represented by VT D, and FCT 4 by VT P. No quadrats that represent KM FCT 9 were included in the current analysis, but the composition and mapping boundaries are also a good match for VT O. Multiple quadrats representing VT O also represent 2020 VUs 19, 23, 24, 27 and 28. The mapped boundaries and compositions of VT O and VUs 19, 23, 24 and 28 generally correlate well, while VU 27 is a better match for VT R. Finally, one quadrat representing 2020 VU 21 is also representative of VT K (GINM-01); however, as a whole, VU 21 correlates better with VT O than K, with only the area sampled by GINM-01 being representative of VT K.

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
P	4, 11, 12, some parts of 15 and mosaics of 15/16/17	25, 26, 31	A total of five quadrats representing VT P also represent KM FCT 12, while one quadrat each also represent FCTs 11, 13 and 15. As discussed for VT O, KM FCT 13 is a better match for that VT. The mapped boundaries and composition of FCT 11 generally correlate well with those of VT P, while FCT 15 was mapped much more widely than VT P, including as mosaics of FCTs 15, 16 and 17; these areas were variously mapped by this current assessment as VTs P, Q, R, and less commonly VTs E and G. No quadrats that represent KM FCTs 4 or 12 were included in the VT P grouping, but the compositions and mapping boundaries of these FCTs are also a good match for VT P. The quadrats representing VT O include multiple that also represent 2020 VUs 26, 28, and one each from 10, 25, 29 and 31. As discussed above, VU 10 is better represented by VT G, VU 28 by VT O, and VU 29 is better represented by VT R. Comparison of compositions and mapping boundaries of 2020 VUs 25, 26 and 31 with VT P show broad correlations.
Q	16 and mosaics of 15/16/17	30	VT Q included five quadrats that also represent KM FCT 16, and nine from 2020 VU 30. The mapping boundaries and compositions of the FCTs and VUs broadly match those of VT Q, although as discussed above, the Karara–Mungada Assessment also mapped areas as mosaics of KM FCTs 15, 16 and 17, parts of which correlate with areas mapped as VT Q.
R	-	27, 29	Two VT R quadrats also represent KM FCTs; one quadrat each for FCTs 3 and 15. As discussed above, FCT 3 is a better match for VT G, however while the composition of FCT 15 and VT R share some common taxa, the mapped areas of KM FCT 15 overlap vegetation mapped by the current assessment as various VTs including VT P, Q, R, S, and less commonly A. Therefore, VT R may not have an equivalent KM FCT due to the migration of quadrats in the current assessment's classification dendrogram. A total of three, two and one quadrat representing 2020 VUs 29, 27 and 10 also represent VT R. As previously discussed, VU 10 is better representative of VT D, however the compositions and boundaries of FCTs 27 and 29 broadly correlate with those of VT R.
S	15	32	VT S included one quadrat that also represents KM FCT 15, and three from 2020 VU 32. The composition of VT S and FCT 15 are similar, and while the mapped extents of the VT and FCT broadly correlate in the western part of the Karara Area, in the eastern part of the Karara Area FCT 15 is better represented by VTs P and Q. The compositions and mapped boundaries of 2020 VU 32 and VT S generally correlate well.
T	-	-	This Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
U	7c	12	This vegetation community was not sampled by quadrats in the Survey Area (representative quadrats located 500 m outside the Survey Area), but the composition and boundaries of VT U correspond to those of KM FCTs 7c and 2020 VUs 12.

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
V	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
W	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
X	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
Y	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
Z	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs/
AA	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT A	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT B	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT C	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT D	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.

Current Survey VT	Potentially Equivalent KM FCT(s)*	Potentially Equivalent 2020 VU(s)*	Comments
HMVT E	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT F	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
HMVT G	-	-	This VT was not sampled by quadrats and was therefore not included in the classification analysis. However, this Survey Area VT was mapped well outside the areas assessed for the Karara–Mungada Assessment and 2020 Assessment, and therefore there are no potentially equivalent FCTs/VUs.
CP	Claypan	Claypan	This vegetation community was not sampled by quadrats, but the composition and boundaries of VT CP match the areas described as 'Claypan' by both the Karara–Mungada Assessment and 2020 Assessment.

** Karara–Mungada Assessment FCTs and 2020 Assessment VUs have been underlined where those FCTs/VUs were considered by these previous assessments to potentially be of regional significance (conservation significance ranking of 4 or 5 in the case of Karara–Mungada Assessment FCTs).*

5.2.7.2 Regional Mapping Assessment

As described in **Section 3.6.2**, an additional floristic analysis was undertaken to assess possible relationships and similarities between Survey Area VTs with the regional FCTs described by the Regional Mapping Assessment (Woodman Environmental, 2012). The aim of this analysis was to determine the potential regional distribution and significance of Survey Area VTs. Additionally, taxon lists of quadrats from the current analysis were also compared to the typical and common taxa lists for Regional FCTs, as well as soils, topography and geographical distribution data from both assessments. The resultant dendrogram is presented in **Appendix M**, and **Table 5.15** presents an overall summary of the results of this process (for remnant vegetation only; i.e. excluding areas mapped as PL, Water and CL). Regional FCTs in **Table 5.15** have been underlined where those FCTs were considered by the Regional Mapping Assessment to potentially be of significance.

With the addition of quadrat data from the current survey to the Regional Mapping Assessment dataset, there was significant migration of quadrats from their original cluster positions. As discussed in the previous section, this is to be expected, especially considering the Regional Mapping dataset has a significantly larger number of quadrats than the current survey dataset, and taxonomic changes that have occurred that necessitated changes to the original quadrat data. In addition, the Regional Mapping Assessment defined and described FCTs at a higher-level regional scale in comparison to that presented in this report for the Survey Area. As a result, multiple VTs have shown similarity to several Regional FCTs; in addition, many VTs have shown similarity to more than one Regional FCT (**Table 5.15**).

A total of 19 Survey Area VTs have no potentially equivalent Regional FCTs given the VTs occur well outside the study area of the Regional Mapping Assessment. However, the remaining 16 VTs were able to be assigned one or more potentially equivalent Regional FCTs, following review of the classification analysis results, and landform, geology, species composition and mapped extents.

Table 5.15 Comparison of Survey Area VTs to those Described and Mapped for the Regional Mapping Assessment

Current Survey VT	Potentially Equivalent Regional FCT(s)*	Comments
A	32; 29, 31	Quadrats from VT A showed greatest similarity to Regional FCT 32 quadrats, with similarity also to quadrats from Regional FCTs 29 and 31
B	16	Quadrats from VT B classified with the single quadrat representing Regional FCT 16, which also occurs on granite sheet outcropping
C	24; 21b	Quadrats from VT C showed greatest similarity to Regional FCT 24 quadrats, and to a lesser extent Regional FCTs 21b and 23, although the latter is better represented by VT E
D	25, 26, 27	Quadrats from VT D classified with quadrats from a variety of Regional FCT, but mostly those from FCTs 25, 26 and 27
E	23; 28	Quadrats from VT E were scattered throughout the dendrogram but predominately classified with Regional FCT 23 quadrats throughout. Based on review of species lists, mapping boundaries, and landform and geology characteristics, VT E may also have some lesser similarity to Regional FCT 28
F	32, 23	Quadrats from VT F were somewhat split across the dendrogram, with some classifying with Regional FCT 32 quadrats, and the remainder showing similarity to Regional FCT 23 quadrats, and to a lesser extent Regional FCT 26
G	19a; 15	Quadrats from VT G generally showed high similarity to Regional FCT 19a quadrats. In addition, the area mapped as Regional FCT 15 in the Survey Area corresponds to that mapped as VT G by this current assessment, as well as the species composition and landform characteristics
H	24, 25, 26, 27	Quadrats from VT H were scattered throughout the dendrogram and classified with quadrats from Regional FCTs 24, 25, 26 and 27
I	-	VT I was mapped well outside the area assessed for the Regional Mapping Assessment. The single quadrat from VT I classified in a small cluster, with two of three quadrats representing Regional FCT 15. However, there was little similarity in the species compositions of this VT and FCT. Therefore, there are no potentially equivalent Regional FCTs
J	19b	The two VT J quadrats classified in a small cluster with quadrats from the Regional FCT 19 group. The VT J quadrats also represent Regional FCT 19b
K	19a; 21a	Quadrats from VT K generally showed high similarity to Regional FCT 19a quadrats, and to a lesser extent FCT 21a
L	-	VT L was mapped well outside the area assessed for the Regional Mapping Assessment. The quadrats from VT L classified in cluster consisting only of quadrats newly established for the 2023 and 2024 survey in the area near and west of Weelhamby Lake (VTs L, M and N). Therefore, there are no potentially equivalent Regional FCTs

Current Survey VT	Potentially Equivalent Regional FCT(s)*	Comments
M	-	VT M was mapped well outside the area assessed for the Regional Mapping Assessment. The quadrats from VT M classified in cluster consisting only of quadrats newly established for the 2023 and 2024 survey in the area near and west of Weelhamby Lake (VTs L, M and N). Therefore, there are no potentially equivalent Regional FCTs
N	-	VT N was mapped well outside the area assessed for the Regional Mapping Assessment. The quadrats from VT N classified in cluster consisting only of quadrats newly established for the 2023 and 2024 survey in the area near and west of Weelhamby Lake (VTs L, M and N). Therefore, there are no potentially equivalent Regional FCTs
O	1, 2, 3, 4; 12	Quadrats from VT O were scattered throughout a large cluster in the dendrogram, but predominately classified with quadrats from Regional FCTs 1, 2, 3, 4, with some lesser similarity to FCT 12
P	10; 6, 8	Quadrats from VT P showed greatest similarity to Regional FCT 10 quadrats, and a lesser extent FCTs 6 and 8, with similarity also to quadrats from Regional FCT 2
Q	7, 9; 13	Quadrats from VT P showed greatest similarity to Regional FCT 7 and 9 quadrats, with some lesser similarity to FCT 13
R	-	Quadrats from VT R were scattered throughout the dendrogram and classified with quadrats from Regional FCTs 7, 17, 18, 23, 26, and to a lesser extent FCTs 2 and 11. It is possible that VT R may not have an equivalent Regional FCT due to the migration of quadrats in the classification dendrogram
S	11	Quadrats from VT S showed greatest similarity to Regional FCT 11 quadrats, and to a lesser extent Regional FCT 23
T	-	The eastern extent of VT T corresponds to the western edge of the area assessed for the Regional Mapping Assessment. All 10 quadrats from VT T were newly established for the 2023 and 2024 survey. Seven of these classified in a group together, and the remaining three showed some similarity to Regional FCT 9, but further review identified low correlation between the species compositions of VT Tand FCT 9. It is likely that there are no potentially equivalent Regional FCTs
U	19d	VT U was not sampled by quadrats in the Survey Area (representative quadrat GIND-79 located 500 m outside the Survey Area, within the area assessed for the Regional Mapping Assessment). Quadrat GIND-79 is also representative of Regional FCT 19d, and the composition and boundaries of VT U correspond to those of this FCT
V	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
W	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
X	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs

Current Survey VT	Potentially Equivalent Regional FCT(s)*	Comments
Y	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
Z	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
AA	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT A	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT B	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT C	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT D	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT E	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT F	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
HMVT G	-	This VT was not sampled by quadrats, and was therefore not included in the classification analysis with the Regional Mapping dataset. The VT was mapped well outside the area assessed for the Regional Mapping Assessment. Therefore, there are no potentially equivalent Regional FCTs
CP	33	This vegetation community was not sampled by quadrats (by the current assessment or the Regional Mapping Assessment). However, the composition and boundaries of VT CP match the areas mapped as Regional FCT 33

** Regional FCTs have been underlined where those FCTs were considered by the Regional Mapping Assessment to potentially be of significance.*

5.2.7.3 State Soil Landscape and Pre-European Vegetation System Associations

A review was undertaken of DPIRD soil landscape mapping and Pre-European VSAs against Survey Area VTs. This was done with consideration to the soil unit and VSA descriptions, and mapped extents. The soil landscape units and VSAs that potentially correspond to Survey Area VTs are presented in **Table 5.16**. Note that due to the differing mapping scales, the majority of VTs correspond to more than one soil landscape unit/VSA, and most soil landscape units/VSAs correspond to more than one VT. Although four VTs corresponded to few soil landscape units and VSAs (VTs J, M, Z and AA), only VT AA corresponded to a landscape unit and a VSA which were both poorly represented in the Survey Area (Mt Nunn Subsystem1 soil landscape unit; Billeranga_692 VSA) (**Table 5.16**).

Table 5.16 Soil Landscape Units and Pre-European Vegetation System Associations Potentially Corresponding to Survey Area VTs

Survey Area VT	Soil Landscape Unit	Pre-European Vegetation System Association
A	Bowgarder System Challenge System Euchre System Joseph System Koolanooka 1 Subsystem Moriarty System Nerramyne System Noolagabbi East Subsystem 2 Pindar A System Pindar South Subsystem 4 Tealtoo System Yowie System	Jibberding_352 Jibberding_374 Jibberding_420 Jibberding_551 Perenjori_352 Perenjori_1155 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420
B	Challenge System Nerramyne System	Yalgoo_358 Yalgoo_364 Yalgoo_419
C	Challenge System Joseph System Pindar A System	Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419
D	Campsite System Challenge System Cunyu System Doney System Euchre System Joseph System Moriarty System Nerramyne System Pindar A System Tealtoo System Yowie System	Jibberding_374 Jibberding_631 Yalgoo_41 Yalgoo_355 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420

Survey Area VT	Soil Landscape Unit	Pre-European Vegetation System Association
E	Campsite System Challenge System Graves System Joseph System Moriarty System Nerramyne System Noolagabbi East Subsystem 2 Pindar A System Pindar South Subsystem 4 Tealtoo System Yowie System	Jibberding_352 Jibberding_374 Jibberding_420 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420
F	Challenge System Nerramyne System Pindar A System Tealtoo System	Yalgoo_358 Yalgoo_364 Yalgoo_419 Yalgoo_420
G	Campsite System Challenge System Doney System Joseph System Morawa 1 Subsystem Moriarty System Nerramyne System Noolagabbi 1 Subsystem Noolagabbi 7 Subsystem Noolagabbi East Subsystem 2 Noolagabbi East Subsystem 7 Pindar A System Pindar South Subsystem 4 Tealtoo System Yowie System	Jibberding_352 Jibberding_374 Jibberding_420 Jibberding_437 Perenjori_352 Perenjori_693 Perenjori_1155 Yalgoo_355 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420 Yarra Yarra_142
H	Moriarty System Pindar A System Tealtoo System	Yalgoo_358 Yalgoo_363 Yalgoo_420
I	Noolagabbi 1 Subsystem Noolagabbi 7 Subsystem Noolagabbi East Subsystem 2 Pindar South Subsystem 4	Jibberding_352 Jibberding_420 Perenjori_352 Perenjori_631
J	Carnegie System	Yalgoo_41 Yalgoo_125
K	Campsite System Moriarty System Pindar A System Tealtoo System	Yalgoo_355 Yalgoo_358 Yalgoo_363

Survey Area VT	Soil Landscape Unit	Pre-European Vegetation System Association
L	Carnegie System Noolagabbi 7 Subsystem Saline Drainage 2 Subsystem Saline Drainage System	Perenjori_631 Yalgoo_364 Yarra Yarra_142
M	Carnegie System	Jibberding_631
N	Carnegie System Saline Drainage 2 Subsystem Saline Drainage System	Jibberding_631 Perenjori_631
O	Euchre System Moriarty System Nerramyne System Tallering System Tealtoo System	Jibberding_374 Jibberding_437 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420
P	Joseph System Moriarty System Nerramyne System Tallering System Tealtoo System	Jibberding_420 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420
Q	Challenge System Euchre System Joseph System Morawa 1 Subsystem Nerramyne System Pindar A System Tallering System Tealtoo System Yowie System	Jibberding_374 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420 Yarra Yarra_142
R	Challenge System Euchre System Joseph System Nerramyne System Noolagabbi East Subsystem 2 Pindar A System Pindar South Subsystem 4 Tallering System Tealtoo System Yowie System	Jibberding_420 Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419 Yalgoo_420

Survey Area VT	Soil Landscape Unit	Pre-European Vegetation System Association
S	Challenge System Euchre System Graves System Joseph System Moriarty System Nerramyne System Tealtoo System	Yalgoo_358 Yalgoo_363 Yalgoo_364 Yalgoo_419
T	Challenge System Joseph System	Yalgoo_364 Yalgoo_419 Yalgoo_420
U	Carnegie System Doney System	Yalgoo_41 Yalgoo_125
V	Koolanooka 1 Subsystem Koolanooka 2 Subsystem	Perenjori_693 Perenjori_1155
W	Koolanooka 2 Subsystem Noolagabbi East Subsystem 2	Perenjori_693 Perenjori_1155
X	Noolagabbi East Subsystem 2	Perenjori_693
Y	Noolagabbi East Subsystem 2 Pindar South Subsystem 1	Perenjori_352
Z	Noolagabbi East Subsystem 2	Perenjori_352
AA	Mount Nunn 1 Subsystem	Billeranga_692
HMVT A	Noolagabbi Saline Drainage, Phase 2	Occurs within Perenjori_352, but the species composition does not reflect that of the VSA; this HMVT was likely defined and mapped at too small a scale to be captured by the Pre-European mapping
HMVT B	Morawa 1 Subsystem	Perenjori_551
HMVT C	Noolagabbi 1 Subsystem	Perenjori_352
HMVT D	Mount Scratch 1 Subsystem Mount Scratch 3 Subsystem Yandanooka 1 Subsystem	Mingenew_354
HMVT E	Mount Scratch 2 Subsystem Mount Scratch 3 Subsystem Yandanooka 2 Subsystem Yandanooka 3 Subsystem	Mingenew_354
HMVT F	Mount Budd 3 Subsystem Mount Scratch 3 Subsystem Yandanooka 2 Subsystem Yandanooka 3 Subsystem	Mingenew_354
HMVT G	Mount Scratch 1 Subsystem Saline Drainage System	Mingenew_354 Perenjori_631
CP	Pindar A System	Yalgoo_363
Water	NA	NA
PL	NA	NA

5.2.8 Listed Significant Vegetation

Four listed significant vegetation communities are considered to be present in the Survey Area, as summarised in **Table 5.17** and presented in **Figure 5.8**. These communities are discussed in further detail in the following sections. No other formally listed TECs or PECs are considered to be present in the Survey Area (discussed further in **Section 5.2.9**).

Table 5.17 Summary of Significant Vegetation Communities of the Survey Area

Community	Status (WA)	Status (EPBC)	DBCA Description*	Area (ha) and Condition		Location	VTs within Community
				Survey Area	Targeted Survey Area		
Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation)	PEC (P1)	-	-	E: 752.0 VG: 18.4 **Total: 770.4**	E: 98.2 VG: - **Total: 98.2**	Karara Area	O, P, Q, R
Eucalypt woodlands of the Western Australian Wheatbelt	PEC (P3)	TEC (CR)	This community occurs in the IBRA Avon Wheatbelt 1 and 2 and Western Mallee subregions. It also includes outlying patches in the eastern parts of JAF01 Northern Jarrah Forests and JAF02 Jarrah Forests adjacent to the Avon Wheatbelt, that are off the Darling Range, and receive less than 600 mm mean annual rainfall. The structure of the ecological community is a woodland in which the minimum crown cover of the tree canopy in a mature woodland is 10 %. The key dominant or co-dominant species of the tree canopy are species of *Eucalyptus* trees that typically have a single trunk. Native understorey is present but is of variable composition, being a combination of grasses, other herbs and shrubs. The description, area and condition thresholds that apply to the EPBC-listed TEC of the same name, also apply to this PEC.	CD: 1.6 **Total: 1.6**	CD: 1.6 **Total: 1.6**	Borefield Corridor	HMVT D, HMVT E, HMVT F

Community	Status (WA)	Status (EPBC)	DBCA Description*	Area (ha) and Condition		Location	VTs within Community
				Survey Area	Targeted Survey Area		
Koolanooka System as originally described in Beard (1976)	TEC (CR)	-	This community is known from the Koolanooka Hills, its footslopes and the Perenjori Hills. It comprises *Eucalyptus ebbanoensis* subsp. *ebbanoensis* mallee and *Acacia* sp. scrub with scattered *Allocasuarina huegeliana* (rock sheoak) over red loam and ironstone on the upper slopes and summits, *Allocasuarina campestris* scrub over red loam on hill slopes, shrubs and emergent mallees on shallow red loam over massive ironstone on steep rocky slopes, *Eucalyptus loxophleba* (York gum) woodland over scrub on the footslopes, and mixed *Acacia* sp. scrub on granite. The community was originally described in Beard's (1976a) *The vegetation of the Perenjori area, Western Australia: Map and explanatory memoir* (1:250,000 vegetation series, Vegmap Publications, Perth, Western Australia).	VG: 2.6 G: 1.2 D: 1.9 **Total: 5.6**	**0**	Yandanooka Pipeline	A, G, V, W, X
Plant assemblages of the Billeranga System as originally described in Beard (1976)	TEC (CR)	-	The community occurs in the Billeranga Hills in the north-eastern Wheatbelt of WA. It generally comprises: *Melaleuca nematophylla* (wiry honeymyrtle) - *Allocasuarina campestris* thicket on clay sands over laterite on slopes and ridges; open mallee over mixed scrub on yellow sand over gravel on western slopes; *Eucalyptus loxophleba* (York gum) woodland over sandy clay loam or rocky clay on lower slopes and creeklines; and mixed scrub or scrub dominated by *Dodonaea inaequifolia* over red brown loamy soils on the slopes and ridges. The community was originally described by Beard (1976a).	G: 0.2 **Total: 0.2**	**0**	Borefield Corridor	AA

** Source: Priority Ecological Communities for Western Australia Version 35 (DBCA, 2023f); Threatened Ecological Communities (TECs) Listed under the Biodiversity Conservation Act 2016 (DBCA, 2023g).*

Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation) (WA: P1)

The 'Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation)' community is listed as a P1 PEC in WA but is not listed under the EPBC Act.

The Blue Hills PEC was mapped in the Survey Area on BIF crests and slopes. This corresponded with VTs O, P, Q and R where these VTs occurred on restricted BIF landforms that are high in the landscape; this primarily encompassed the major ridgelines, crests and upper to lower slopes of Mount Karara, Terapod, Blue Hills, and the lower slopes of Mungada Ridge (the rest of this landform extending outside the Survey Area within Mungada Ridge National Park). While these VTs were also mapped elsewhere in the Survey Area, these areas are not considered to represent the PEC as they occur on other geologies (granite, dolerite, ironstone), lower in the landscape, and not on restricted landforms.

The Blue Hills PEC was originally defined following a flora and vegetation study by Markey and Dillon (2008) in the central Tallering Land System, which included assessment of quadrats in Karara station. Of these quadrats, 21 occur within the Survey Area and were included in the floristic analysis as per **Section 3.6.1**. One of these quadrats was considered to represent Survey Area VT P, and 16 to represent VT O, all of which occur high in the landscape on BIF landforms. The remaining four quadrats represent VTs D and G and occur lower in the landscape, not on BIF landforms. This is considered to be adequate justification for the presence of the Blue Hills PEC in the Survey Area.

A total of 770.4 ha of the Blue Hills PEC was mapped in the Survey Area, and of this, 98.2 ha occurs within the Targeted Survey Area (all within the Mine Area). Of the mapped area of the PEC, 98 % was in Excellent condition, with the remaining area in Very Good condition due to the presence of tracks, and drill lines and pads (**Table 5.17**; Sheet 9 of **Figure 5.8**).

Eucalypt woodlands of the Western Australian Wheatbelt (WA: P3 / EPBC: CR)

The 'Eucalypt woodlands of the Western Australian Wheatbelt' community is listed as a P3 PEC in WA, and as a Critically Endangered TEC under Commonwealth legislation. DBCA state that the description, area and condition thresholds that apply to the EPBC-listed TEC also apply to the PEC (DBCA, 2023f); therefore, these are discussed together in the context of the EPBC-listed TEC.

The Eucalypt Woodlands TEC is endemic to southwestern WA. It occupies a transitional zone between the wetter forests associated with the Darling Range and the southwest coast, and the low woodlands, mallee and shrublands of the semi-arid to arid interior. The Wheatbelt region where the Eucalypt Woodlands TEC occurs mostly encompasses three IBRA subregions: Avon Wheatbelt subregion AVW01 Merredin; Avon Wheatbelt subregion AVW02 Katanning; and Mallee subregion MAL02 Western Mallee. Some outlying patches of the TEC may extend into adjacent areas south and east of the primary Wheatbelt bioregions, in the easternmost parts of the Jarrah Forest region. The Wheatbelt as defined in the context of this TEC occurs entirely within the Yilgarn Craton, a very ancient and extensive geological formation that dominates southwestern Australia east of Perth and Geraldton and roughly north from the Stirling Ranges. The landscape is generally of flat to undulating relief that is occasionally broken by granite or other rock outcrops and higher elevation sites, and chains of saline wetlands and salt lakes. The TEC is generally associated with the flatter, undulating relief, including drainage lines and saline areas. It does not typically occur on granite outcrops or hills of lateritic gravel but may extend to the base of outcrops, where they are replaced by non-eucalypt woodlands or shrublands. The Wheatbelt region is now dominated by agricultural land uses, principally cereal cropping or grazing, and is extensively cleared of native vegetation (DoE, 2015).

The Eucalypt Woodlands TEC is a woodland in which the trees typically are spaced, and the canopy is relatively open. The woodlands are dominated by a complex mosaic of eucalypt species with a tree or mallet form (i.e. eucalypt species with a single trunk) over an understorey that is highly variable in structure and composition. Woodlands dominated by mallee forms or vegetation with a very sparse eucalypt tree canopy are not part of the TEC, and not all Wheatbelt tree or mallet eucalypt species are characteristic of the TEC (DoE, 2015).

The Approved Conservation Advice for this community (DoE, 2015) outlines key diagnostic characteristics that must be met to identify occurrences of the TEC community, as presented in **Appendix N**. These characteristics were assessed in the context of identifying whether vegetation of the Survey Area represents this TEC, as summarised in **Table 5.18**.

Table 5.18 Summary of Assessment of Survey Area Vegetation Against Eucalypt Woodlands TEC Key Diagnostic Characteristics

Criteria	Fulfilled
Vegetation is within IBRA subregions: • **Avon Wheatbelt AVW01 Merredin** • **Avon Wheatbelt AVW02 Katanning** • **Mallee MAL02 Western Mallee**	Y For vegetation west of Weelhamby Lake, which represents the boundary between Avon Wheatbelt IBRA region to the west, and the Yalgoo region to the east; and excluding the far western part of the Survey Area that extends into the Geraldton Sandplains IBRA region
The dominant trees of the vegetation are *Eucalyptus* species as listed in Table 2a of DoE (2015). Trees listed in Table 2b can be present, but must not be dominant within the vegetation	Y For vegetation dominated by: • *Eucalyptus loxophleba* subsp. *loxophleba* Other taxa present in some locations included the below, but not dominant in the canopy: • *Eucalyptus camaldulensis* • *Eucalyptus loxophleba* subsp. *supralaevis* • Mallee *Eucalyptus* species
Vegetation patches of Degraded condition must be over 5 ha in size, and 2 ha for Good condition	Y Vegetation meeting the above diagnostic characteristics is in Completely Degraded condition and does not meet the condition threshold. However, the vegetation forms part of larger patches that extend outside the Survey Area; are in Degraded or better condition; and are greater than 5 ha in size. Therefore, the condition and size thresholds are met

There were some areas in the Survey Area that structurally represent a Eucalypt woodland and meet the location and patch condition/size diagnostic criteria, but have not been identified by the current assessment as representing the Eucalypt Woodlands TEC, despite occurring within DBCA buffer polygons of the TEC. This is because none of the key *Eucalyptus* species were recorded in the areas (as per **Appendix N**). This result is not unexpected, as according to the metadata for the DBCA Threatened and Priority Ecological Communities database interrogation (DBCA, 2023c), the DBCA mapping for the Eucalypt Woodlands TEC is based on the Commonwealth's 'likely to occur' areas and represents the broad-scale vegetation map units most likely to contain the community. Therefore, the mapping represents an indicative present distribution of the TEC, determined by overlaying broad-scale vegetation over remnant vegetation polygons. In addition, a buffer of 200 m has been added by DBCA to these indicative boundaries. Ground-truthing by DBCA has not been undertaken to confirm occurrences in this dataset in most cases, and the occurrences are therefore considered to be indicative only, with on-ground survey and subsequent assessment against

the diagnostic characteristics and minimum condition/size thresholds being required in order to determine the actual extent of the TEC (if it is present at all). Therefore, the TEC as presented in **Figure 5.8** is considered to represent a more accurate extent within the Survey Area than the occurrences contained in DBCA's TEC and PEC database. Consequently, no attempt has been made to correlate the extent of the TEC as defined above and presented in **Figure 5.8** (Sheets 1, 3, 4, 5, 7, 8) with the DBCA occurrences.

The only key *Eucalyptus* species recorded within vegetation that meets all other key diagnostic characteristics of the TEC, was *Eucalyptus loxophleba* subsp. *loxophleba*. *Eucalyptus salubris* was also recorded in the Survey Area, but within the Yalgoo IBRA region, and therefore is not considered part of the TEC. Ultimately, the Eucalypt Woodlands TEC was mapped in the Survey Area in a small number of occurrences west of Morawa, which corresponds to the eastern edge of the known range of *Eucalyptus loxophleba* subsp. *loxophleba*. East of Morawa, this subspecies is replaced by *Eucalyptus loxophleba* subsp. *supralaevis*, and to a lesser extent *Eucalyptus loxophleba* subsp. *lissophloia*, which are not key *Eucalyptus* species for the TEC and can only be present as associated canopy species (i.e. not dominant or co-dominant in the canopy layer). This taxon is specifically discussed in the Approved Conservation Advice for the TEC, which states that only stands dominated by subspecies *loxophleba* are included in the Eucalypt Woodlands TEC. Unlike most Wheatbelt woodland trees, subspecies *loxophleba* can be multi-stemmed but is still considered a tree, rather than a mallee. However, subspecies *lissophloia* and *gratiae* are recognised to have a mallee growth form, while subspecies *supralaevis* is limited to the far northern Wheatbelt, extending into adjacent bioregions to the north and east. Stands dominated by the latter three subspecies are therefore not part of the Eucalypt Woodlands TEC (DoE, 2015).

The *Eucalyptus* species that comprised the woodland stratum in the areas that were determined as not representing the Eucalypt Woodlands TEC included:

- *Eucalyptus camaldulensis* (as the dominant taxon in the canopy layer)
- *Eucalyptus loxophleba* subsp. *lissophloia*
- *Eucalyptus loxophleba* subsp. *supralaevis*
- Mallee species including *Eucalyptus arctata*, *Eucalyptus ebbanoensis* subsp. *ebbanoensis*, *Eucalyptus ewartiana*, and *Eucalyptus kochii*.

A total of 1.6 ha of the Eucalypt woodlands TEC was mapped in the Borefield Corridor part of the Survey Area. The mapped area is also within the Targeted Survey Area (the Wheatbelt Area). The condition of the TEC intersected by the Survey Area was Completely Degraded due to impact from weeds, historical clearing, and fragmentation (**Table 5.17**). However, these occurrences form part of larger patches that extend outside the Survey Area and meet the condition and size thresholds.

Koolanooka System as originally described in Beard (1976) (WA: CR)

The 'Koolanooka System as originally described in Beard (1976)' community is listed as a Critically Endangered TEC in WA, but is not listed under the EPBC Act.

J. S. Beard mapped the original (i.e. Pre-European) vegetation of WA at a scale of 1:25,000-1:1,000,000. The Survey Area falls within the Perenjori area of the Murchison region of Beard's mapping (Beard, 1976b). The systems mapped by Beard were used to develop Pre-European VSAs, which are discussed in the context of Survey Area VTs in **Section 5.2.7.3**. Two of the systems that occur in the Survey Area are listed as TECs in WA, being the Koolanooka System and the Billeranga System (the latter of which is discussed in the following section).

Beard (1976b) mapped the Koolanooka System over the Koolanooka Hills and their surrounding footslopes, together with another "apparently nameless" range slightly further southeast. These ranges are formed of Archaean metamorphic rocks including highly ferruginous banded ironstones. They form steep-sided linear ridges striking NNW-SSE or N-S. The plant cover consists of open woodland of *Allocasuarina huegeliana*, the mallee *Eucalyptus ebbanoensis*, *Acacia acuminata* and *Dodonaea inaequifolia*, interspersed with thickets of *Allocasuarina campestris*, *Acacia acuminata*, *Grevillea obliquistigma* subsp. *obliquistigma*, *Melaleuca cordata*, *Melaleuca nematophylla* and *Melaleuca radula*. On the footslopes, the pattern becomes *Eucalyptus loxophleba* woodland interspersed with patches of the same thicket. An outcrop of granitic rock on the northeast flank of the Koolanooka Hills carries scrub of *Acacia ramulosa*, *Acacia quadrimarginea*, *Acacia tetragonophylla* and *Hakea preissii* (Beard, 1976b).

The Koolanooka System TEC was mapped in the Yandanooka Pipeline part of the Survey Area across VTs A, G, V, W and X, where these VTs occurred on the Koolanooka Hills and the associated footslopes, and where the species composition of these areas matched the descriptions provided by Beard (1976b), CALM (2000b) and DBCA (2024a) (**Figure 5.8**; Sheet 7). The mapped areas in the Survey Area correspond with the DBCA buffers of the TEC (DBCA, 2023c). This is considered to be adequate justification for the presence of the Koolanooka System TEC in the Survey Area.

The DBCA-applied buffer of the Koolanooka System TEC occurrence on the nameless range southeast of the Koolanooka Hills also intersects a very narrow strip of vegetation in the Borefield Corridor part of the Survey Area. The TEC was not mapped in this part of the Survey Area, as the only vegetation that has similarity to the TEC description and is within 500 m of the edge of the buffer (which is the buffer size applied to this TEC by DBCA, according to their metadata (2023c)) is in Completed Degraded condition and is on the plain below the range, rather than on the footslopes of the range.

A total of 5.6 ha of the Koolanooka System TEC was mapped in the Survey Area. This TEC does not occur within the Targeted Survey Area, as the Targeted Survey Area does not intersect the Koolanooka System. The condition of the TEC ranged from Very Good to Degraded, primarily due to weed presence, but the Degraded areas were contiguous with vegetation that was in better condition (**Table 5.17**).

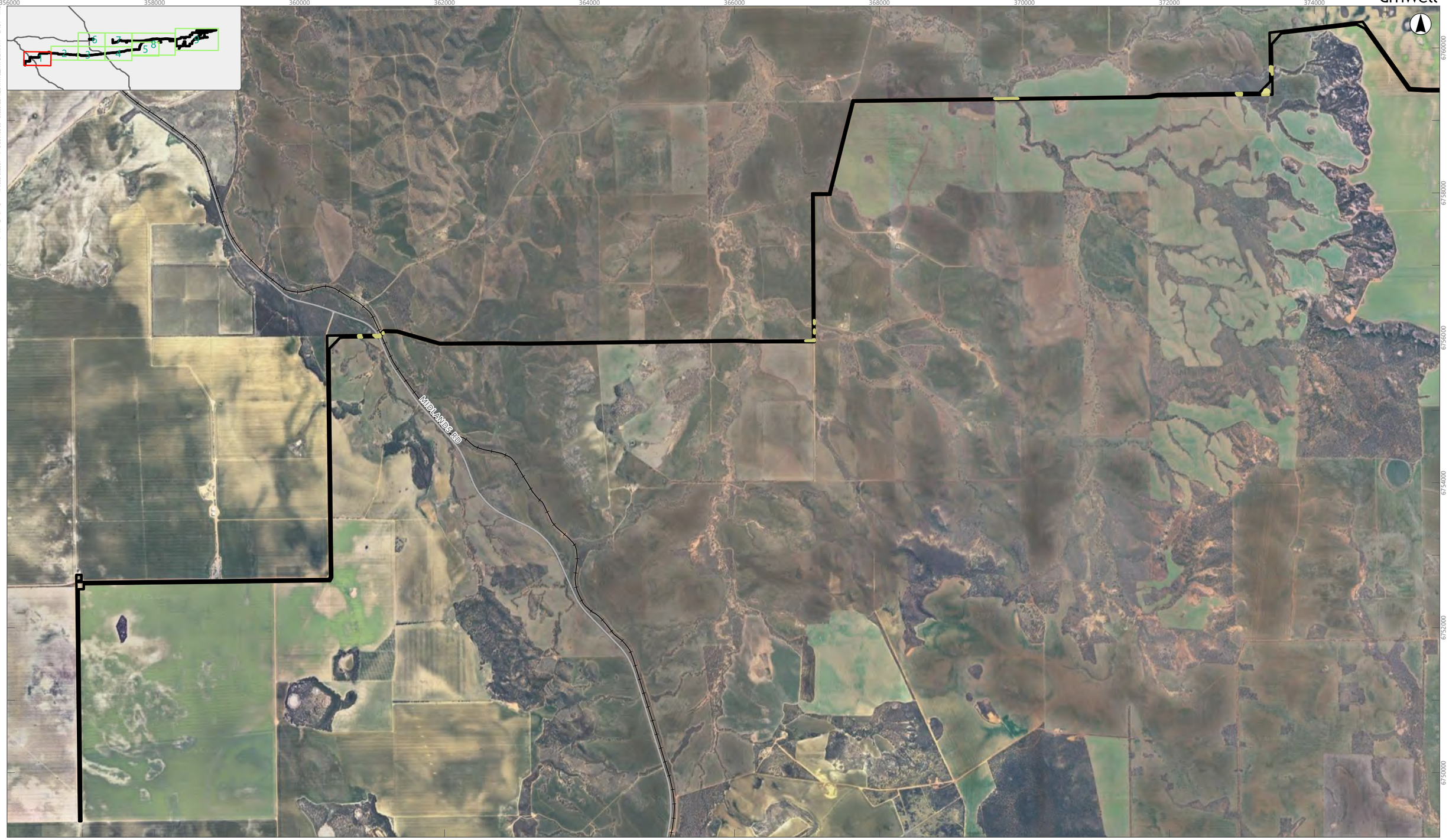
Plant assemblages of the Billeranga System as originally described in Beard (1976) (WA: CR)

The 'Plant assemblages of the Billeranga System as originally described in Beard (1976)' community is listed as a Critically Endangered TEC in WA but is not listed under the EPBC Act.

Beard (1976b) mapped the Billeranga System over the outcrop of the Billeranga Hills, corresponding to the Billeranga group of Proterozoic rocks which comprise sandstone, acid lavas, chert, siltstone, shale and conglomerate. Mount Campbell and Oxley Hill on the southeast side of the main range, which appear to be based on shale and lavas and have a red soil, are covered with scrub of *Dodonaea inaequifolia* and *Eremophila clarkei* with *Grevillea* ?*dielsiana*, *Grevillea teretifolia*, and *Acacia* sp.. On Mount Campbell itself, there is a richer assemblage with some *Eucalyptus loxophleba*, *Acacia acuminata*, *Acacia tetragonophylla*, *Allocasuarina campestris* and *Prostanthera magnifica* in addition to the above. The main part of the Billeranga Hills appear to be more quartzitic, with a yellowish soil. The vegetation is a dense thicket of *Allocasuarina campestris*, *Baeckea* sp. Perenjori (J.W. Green 1516) (P2), *Leptosema aphyllum*, *Grevillea obliquistigma* subsp. *obliquistigma*, *Hakea scoparia*, *Hibbertia* sp., *Melaleuca nematophylla*, *Melaleuca* radula and *Melaleuca fulgens* subsp*. steedmanii* (Beard, 1976b).

The Billeranga System TEC was mapped in the Borefield Corridor part of the Survey Area and is represented by VT AA (**Figure 5.8**; Sheet 2). The vegetation in this area corresponds to the latter description provided by Beard (1976b); i.e. *Allocasuarina campestris* thicket on heavy quartz, and also has similarity to the descriptions from CALM (2000a) and DBCA (2024a). The mapped areas in the Survey Area correspond with the DBCA buffers of the TEC (DBCA, 2023c). This is considered to be adequate justification for the presence of the Billeranga System TEC in the Survey Area.

A total of 0.2 ha of the Billeranga System TEC was mapped in the Survey Area. This TEC does not occur within the Targeted Survey Area, as the Targeted Survey Area does not intersect the Billeranga System. The condition of the TEC ranged was Good due to weed presence and proximity to agriculture (**Table 5.17**).



Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area
Road
Railway

Significant Vegetation

Eucalypt woodlands of the Western Australian Wheatbelt (WA – P3, EPBC – CR)

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 1

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Major Watercourse

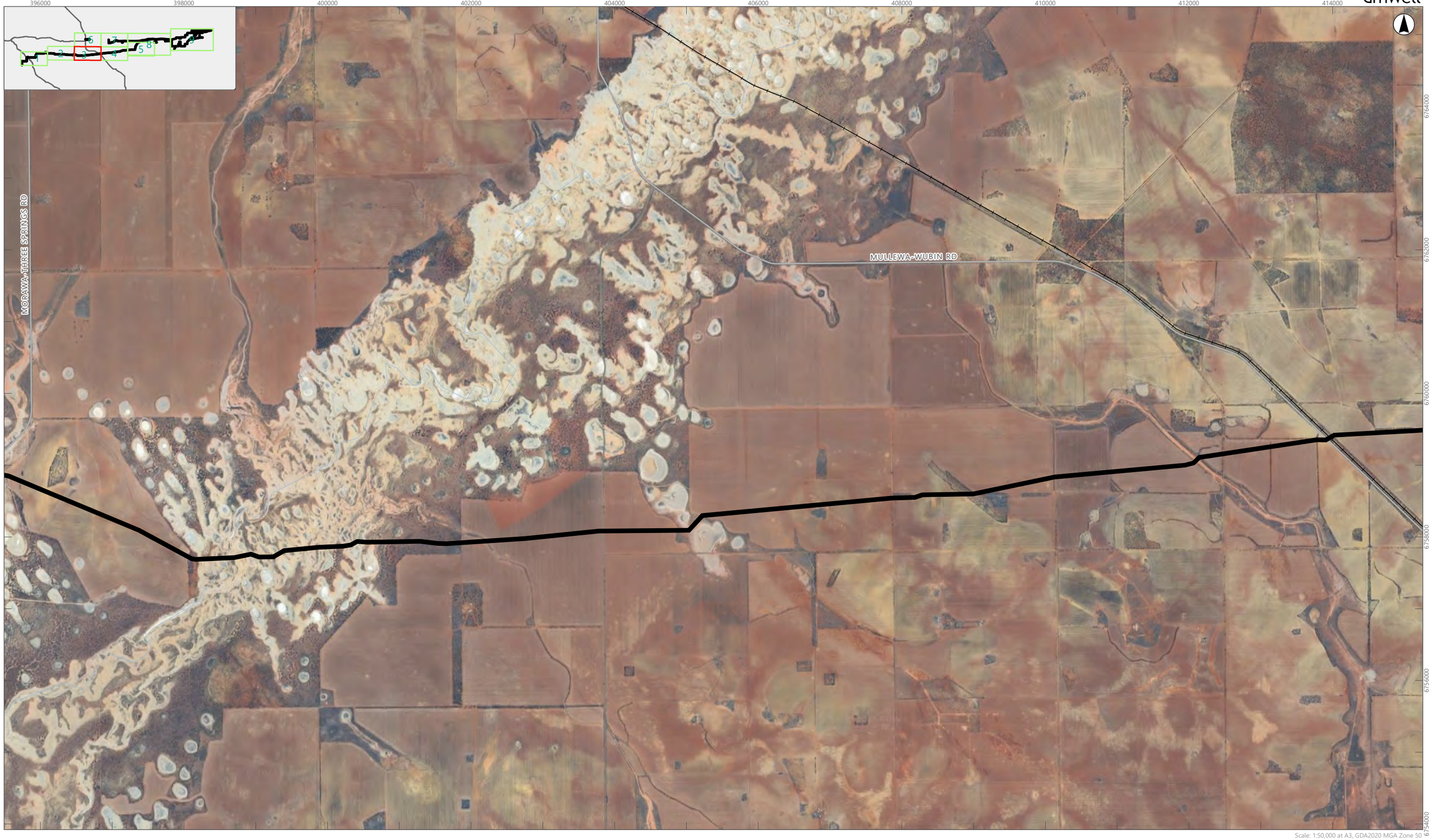
Significant Vegetation

- Plant assemblages of the Billeranga System as originally described in Beard (1976) (WA – CR)

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 2

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



C:\Users\JeffreysJ\UMWELT (AUSTRALIA) PTY. LTD\23712 - GS SWXD Project\GS23712_R004_Karara_BaseliineFloraVegAssessment_v1.aprx

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 3

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

C:\Users\JeffreysJ\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWX\9.Projects\23712_R004_Banan_Baseline\Flora\Vegetassessment_v1.aprx

Legend

- Survey Area
- Road
- Railway

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 4

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Major Watercourse

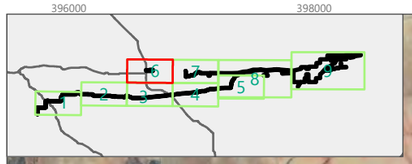
FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 5

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6776000 6774000 6772000 6770000 6768000 6766000



MULLEWA-WUBIN RD

MINGENEW-MORAWA RD

MORAWA

MORAWA-THREE SPRINGS RD

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

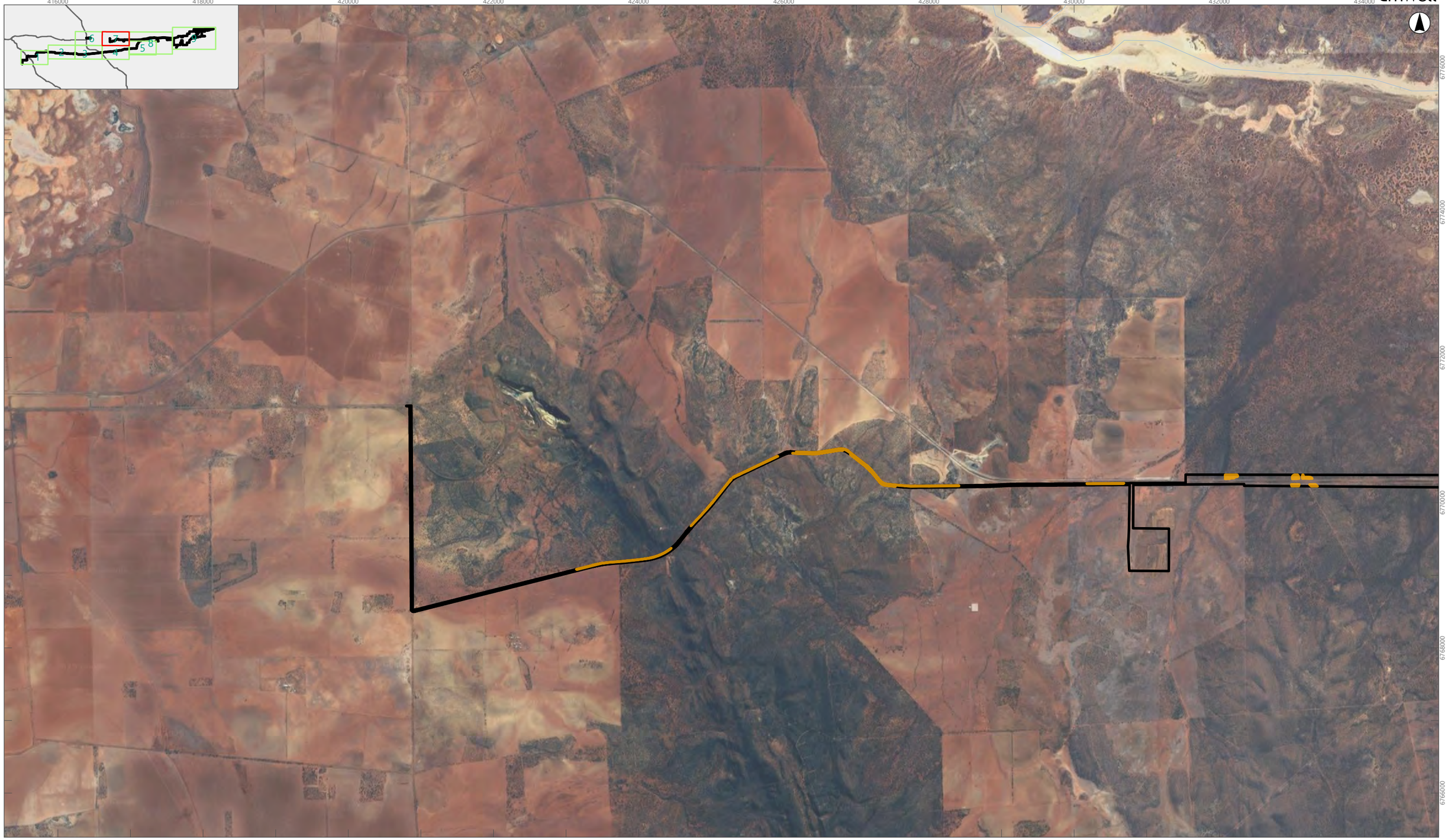
- Survey Area
- Road
- Railway
- Major Watercourse

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 6

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

umwelt



Legend

Survey Area

Major Watercourse

Significant Vegetation

Koolanooka System as originally described in Beard (1976) (WA – CR)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

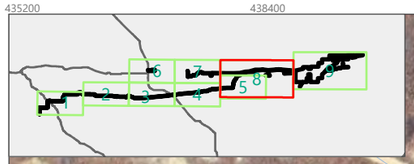
FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 7

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

435200 438400 441600 444800 448000 451200 454400 457600 460800 464000

6774400
6771200
6768000
6764800
6761600



WEELHAMBY LAKE

Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

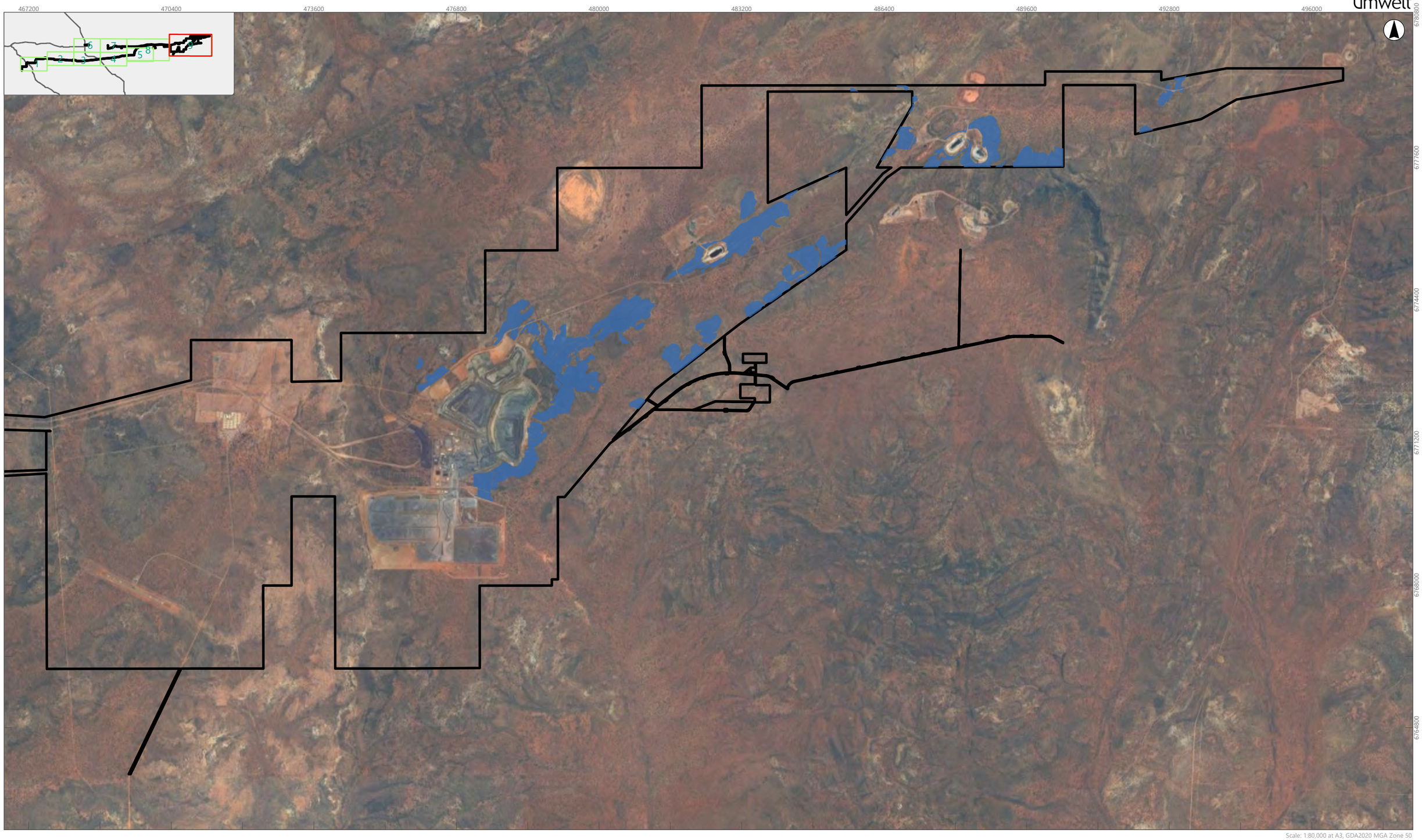
Major Watercourse

FIGURE 5.8

Listed Significant Vegetation of the Survey Area
Sheet 8

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:80,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Significant Vegetation

Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation) (WA – P1)

FIGURE 5.8
Listed Significant Vegetation of the Survey Area
Sheet 9

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

5.2.9 Likelihood of Occurrence of Further Significant Vegetation

As discussed in **Section 5.1.6**, 14 listed significant vegetation communities were returned by the desktop assessment of the Desktop Study Area. Of these, four are considered to be present in the Survey Area, as discussed in **Section 5.2.8**. **Table 5.19** presents a likelihood of occurrence assessment for the other 10 significant vegetation communities being present within the Survey Area.

Of these 10 listed significant communities:

- Two TECs are associated with regional vegetation systems originally described by Beard (Inering System; Moonagin System). One other vegetation system listed as a TEC and defined in this manner (Billeranga System) is known to occur in the Survey Area (**Section 5.2.8**). The extents of TECs defined in this manner are generally restricted to these vegetation system boundaries.

- Five PECs are associated with vegetation assemblages that are restricted to particular BIF ranges. Sampling of these ranges was undertaken as part of wider studies conducted by DBCA primarily in the mid to late 2000s. It was noted in each of these reports that the floristics of each range were significantly different from one another, in as much as 50 % species turn-over between ranges; hence several PECs were listed due to a combination of restricted area, the unique vegetation assemblages present in each of the particular ranges, and threats including exploration and mining interests. Note that floristic analysis methods can be used to identify the presence of these PECs when sampling within the known range within which these PECs occur, and when including the quadrat data from these original assessments.

- Three TECs are those related to particular restricted floristic types, associated with either geology and/or in combination with hydrogeological characteristics. These TECs are not restricted to any particular land system or vegetation system type. These TECs are: 'Assemblages of the organic mound springs of the Three Springs area'; 'Coastal sands dominated by *Acacia rostellifera*, *Eucalyptus oraria* and *Eucalyptus obtusiflora*'; and 'Ferricrete floristic community (Rocky Springs type)'. As per DBCA (2024a), in order to identify each of these TECs, a review of environmental site characteristics (geology, hydrology) and floristics is required to be undertaken; note that these TECs are not identified through the use of floristic composition analysis methods.

In summary, no other formally listed TECs or PECs are considered to be present in the Survey Area (**Table 5.19**).

Table 5.19 Likelihood of Occurrence of Further Significant Vegetation Communities in the Survey Area

Community	Status (WA)	Status (EPBC)	Nearest DBCA Buffer to Survey Area^	Likelihood of Occurrence
Assemblages of the organic mound springs of the Three Springs area	TEC (CR)	-	3.9 km south of western end of Borefield Corridor (buffer size of 5 km)	**Not considered to be present** DBCA (2024a) refers to determination if the habitat contains permanently moist peat mounds, and if associated flora and aquatic fauna assemblages are present. While evaluation of fauna assemblages are outside the scope of this assessment, no areas of peat or permanently moist areas were recorded in the Survey Area. The DBCA buffer polygon of this TEC south of the Survey Area appears to correspond to soil landscape units of the Otorowiri system, which is described as having wet soils and gravels (DPIRD, 2025). This soil landscape system does not occur in the Survey Area (**Section 5.1.1**)
Coastal sands dominated by *Acacia rostellifera*, *Eucalyptus oraria* and *Eucalyptus obtusiflora*	PEC (P1)	-	48.3 km west of western end of Borefield Corridor	**Not considered to be present** This community is restricted to coastal areas, while the western-most end of the Survey Area is 55 km from the coast. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area
Ferricrete floristic community (Rocky Springs type)	TEC (CR)	-	11.7 km south of western end of Borefield Corridor	**Not considered to be present** DBCA (2024a) refers to comparison of key substrate characteristics, and associated assemblages to descriptions in key references. No areas of ferricrete or ferricrete-derived soils were recorded in the Survey Area. Of the flora taxa that have been recorded in occurrences of this TEC (Appendix 1 of the interim recovery plan; CALM (2004)), 19 have been recorded in the Survey Area. However, these taxa are all common in a range of habitats and vegetation types in the area, and are not solely characteristic of ferricrete areas: • *Acacia blakelyi* • *Allocasuarina campestris* • *Borya sphaerocephala* • *Calandrinia calyptrata* • *Calothamnus quadrifidus* • *Cassytha pomiformis* • *Crassula colorata*

Community	Status (WA)	Status (EPBC)	Nearest DBCA Buffer to Survey Area^	Likelihood of Occurrence
Ferricrete floristic community (Rocky Springs type) cont.				• *Dodonaea pinifolia* • *Drosera glanduligera* • *Drosera macrantha* • *Hakea scoparia* • *Lobelia winfridae* • *Podotheca gnaphalioides* • *Schoenus nanus* • *Stylobasium australe* • *Thysanotus patersonii* • *Trachymene pilosa* • *Triglochin nana* • *Wahlenbergia gracilenta.* The DBCA buffer polygons of this TEC south of the Survey Area appear to correspond to soil landscape units of the Otorowiri and Coalara 4 systems, which are described as wet soils and gravels, and bog iron (DPIRD, 2025). Neither of these soil landscape systems occur in the Survey Area (**Section 5.1.1**)
Gullewa vegetation assemblages (banded ironstone formation)	PEC (P1)	-	39.0 km north of central part of Yandanooka Pipeline	**Not considered to be present** Little information is available about the characteristics and diagnosis of this PEC, but it is likely geographically restricted to Buddadoo Range, Edamura Range, Mugga Mugga Hill and Murdaburia Hill, as described by Markey and Dillon (2010). BIF ranges in the region are often classified by DBCA as PECs due to their high plant endemism and unique restricted plant communities. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area

Community	Status (WA)	Status (EPBC)	Nearest DBCA Buffer to Survey Area^	Likelihood of Occurrence
Minjar and Chulaar Hills vegetation assemblages (banded ironstone formation)	PEC (P1)	-	11.2 km north of eastern end of Karara Area	**Not considered to be present** Little information is available about the characteristics and diagnosis of this PEC, but it is likely geographically restricted to Minjar and Chulaar Hills, as described by Markey and Dillon (2008). BIF ranges in the region are often classified by DBCA as PECs due to their high plant endemism and unique restricted plant communities. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area
Mount Gibson Range vegetation assemblages (banded ironstone formation)	PEC (P1)	-	32.7 km south-southeast of eastern end of Karara Area	**Not considered to be present** Little information is available about the characteristics and diagnosis of this PEC, but it is likely geographically restricted to Buddadoo Range, Edamura Range, Mugga Mugga Hill and Murdaburia Hill, as BIF ranges in the region are often classified by DBCA as PECs due to their high plant endemism and unique restricted plant communities. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area
Plant assemblages of the Inering System as originally described in Beard (1976)	TEC (CR)	-	25.5 km south of central part of Borefield Corridor	**Not considered to be present** DBCA (2024a) refers to comparison of habitat (Inering Hills and footslopes) and associated floral assemblages occur, and meet summary description, and description in key references. While the majority of key flora species in this community have been recorded (including *Allocasuarina campestris*, *Allocasuarina huegeliana*, *Acacia acuminata* and *Eucalyptus loxophleba*), these taxa have wide ranges in WA are not restricted to this TEC. However, the Survey Area occurs outside the geographical range of this TEC. This community occurs in the Inering Hills, represented by the Inering System as mapped by Beard (1976b). This system does not occur in the Survey Area (**Section 5.1.2**), and therefore the TEC is not considered to occur in the Survey Area

Community	Status (WA)	Status (EPBC)	Nearest DBCA Buffer to Survey Area^	Likelihood of Occurrence
Plant assemblages of the Moonagin System as originally described in Beard (1976)	TEC (CR)	-	5.3 km north of eastern end of Yandanooka Pipeline	**Not considered to be present** DBCA (2024a) refers to comparison of habitat (Moonagin Hills and footslopes) and associated floral assemblages occur, and meet summary description, and description in key references. There is limited information available on the key flora species known from this TEC, but *Acacia* spp. scrub with *Eucalyptus loxophleba*, and *Eucalyptus loxophleba* woodland occurs within the Survey Area, but could also feasibly occur almost anywhere within the South West and Interzone botanical provinces. *Eucalyptus oleosa* has not been recorded in the Survey Area, and the Survey Area does not occur within the main distribution of this taxon (typically known from southeast of Mount Magnet, but one disjunct record occurs northeast of Morawa (WA Herbarium, 1998-)). The Survey Area occurs outside the geographical range of this TEC. This community occurs on the Moonagin and Milhun Ranges, represented by the Moonagin System as mapped by Beard (1976b). This system does not occur in the Survey Area (**Section 5.1.2**), and therefore the TEC is not considered to occur in the Survey Area
Warriedar/Pinyalling/Walagnumming Hills vegetation assemblages (banded ironstone formation)	PEC (P1)	-	9.1 km east of eastern end of Karara Area	**Not considered to be present** Little information is available about the characteristics and diagnosis of this PEC, but it is likely geographically restricted to Warriedar, Pinyalling and Walagnumming Hills, as BIF ranges in the region are often classified by DBCA as PECs due to their high plant endemism and unique restricted plant communities. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area
Yalgoo (Gnows Nest/Wolla Wolla and Woolgah-Wadgingarra) vegetation assemblages (banded ironstone formation)	PEC (P1)	-	54 km north of central part of Karara Area	**Not considered to be present** Little information is available about the characteristics and diagnosis of this PEC, but it is likely geographically restricted to Gnows Nest Range, and Wolla Wolla and Woolgah-Wadgingarra Hills, as BIF ranges in the region are often classified by DBCA as PECs due to their high plant endemism and unique restricted plant communities. As the Survey Area is outside the geographical range of this PEC, the PEC is not considered to occur in the Survey Area

** Source: Priority Ecological Communities for Western Australia Version 35 (DBCA, 2023f); Threatened Ecological Communities (TECs) Listed under the Biodiversity Conservation Act 2016 (DBCA, 2023g).*

^ Source: DBCA Threatened and Priority Ecological Communities Database interrogation spatial data (DBCA, 2023c).

5.2.10 Vegetation Significant for Other Reasons

An assessment of the Survey Area VTs against the definitions of significant vegetation as per EPA (2016a, 2016b) is presented in **Table 5.20**. Note that "having a degree of historical impact from threatening processes" has not been specifically presented in **Table 5.20**, as this reasoning could theoretically be applied to all VTs in the Survey Area and wider region, due to anthropogenic impacts such as grazing, clearing and introduced flora and fauna being ubiquitous in the area. As per EPA (2016b):

> *Threatening processes are defined as follows: "Any process or activity that threatens to destroy or significantly modify the ecological community and/or affect the continuing evolutionary processes within any ecological community." Examples of some of the continuing threatening processes in Western Australia include: general pollution; competition, predation and change induced in ecological communities as a result of introduced animals; competition and displacement of native plants by introduced species; hydrological changes; inappropriate fire regimes; diseases resulting from introduced microorganisms; direct human exploitation and disturbance of ecological communities.*

Therefore, "having a degree of historical impact from threatening processes" perhaps meaningfully applies to only VT N, and a lesser extent VT M, which form part of the Yarra Yarra salt lake system. The condition of these VTs in the Survey Area was predominately Excellent to Good (**Section 5.2.12**). The catchments of the Yarra Yarra system are severely degraded, primarily as a result of past and current agricultural and pastoral land use practices. The immediate threat to the salt lakes is anthropogenic modification of hydrology through increased volumes of saline surface flow entering the lakes, and rising groundwater, caused by widespread vegetation clearance throughout the catchment (Boggs et al., 2007). This has been addressed in **Table 5.20** in the 'Other Considerations' column.

"Having a degree of historical impact from threatening processes" could also be applied to HMVTs A to G, which represent small and isolated patches of vegetation in a highly cleared landscape, but the condition of these HMVTs is poor, and the landscape so fragmented, that it is unlikely that they contribute meaningfully to the remaining ecosystem. It is considered that these areas do not fit the intent of the EPA guidance, which is understood by Umwelt to identify, and subsequently conserve, vegetation that is in reasonable condition. This understanding is also reflected by DBCA's stance on identification of State-listed TECs in WA, whereby in general a vegetation condition threshold of Good is applied, in that areas of TECs are generally no longer considered to be extant where vegetation condition is poorer than Good. However, they also state that there can be exceptions to this, for example where much of the remaining area of a TEC is in relatively poor condition (V. English, pers. comm., 2022).

In summary, 16 Survey Area VTs were considered potentially significant for reasons other than formal listing (**Table 5.20**):

- Occurring across a restricted distribution or habitat: applied to 15 VTs.
- Playing a role as a refuge or refugium: applied to 10 VTs.
- Providing an important ecological function: applied to 11 VTs.
- Other reasons: applied to 4 VTs (providing preferred habitat for significant flora taxa with restricted distributions in the case of VTs B and Q, and having a degree of historical impact from threatening processes in the case of VTs M and N).

Table 5.20 Assessment of Significance of Survey Area VTs for Against EPA Definitions of Significant Vegetation

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
A	291.7	2.15	Some occurrences form part of the Koolanooka System TEC, but only where mapped on the footslopes of the Koolanooka Hills. The VT as a whole is not equivalent to any TECs or PECs	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	VT as a whole is not considered significant
B	112.3	0.83	No	**Yes** Occurs on granite outcrops, which are a restricted landform in the Survey Area, and relatively restricted in the wider landscape	**Yes** Granite outcrops may be important refugia for aquatic flora and fauna as a freshwater habitat if salinity in the region continues to rise (Pinder et al., 2000)	**Yes** Granite outcrops provide specialised habitats for flora and fauna (e.g. rock pools, meadows, exfoliating rock sheets, rock crevices), and merge with surrounding habitats to form specialised edge habitats. Niche habitats are provided by a combination of high solar radiation, rapid runoff of rainfall, and shallow soils on a rocky substrate, resulting in microhabitats of accentuated seasonal and diurnal stresses (Hopper et al., 1997). The flora and fauna associated with granite outcrops include both the species adapted to granite rock habitats, but include many species from the surrounding habitats that seek temporary or permanent refuge amongst the granite rocks, or in the fringing vegetation (Withers, 2000)	**Yes** Preferred habitat for *Swainsona picta* (P1), which is known from a range of only 10 km and two locations (as per DBC's WA Herbarium specimen database (WA Herbarium, 1998-)), none of which are within conservation tenure	**Significant for reasons other than formal listing**
C	327.2	2.41	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
D	2,448.1	18.06	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
E	640.8	4.73	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
F	391.9	2.89	No	No Occurs on plains and flats, which are widespread in the landscape	No	No While some areas contained granite outcropping, this outcropping was usually small and did not contain the suite of granitic endemic flora that would be expected on larger sheets of granite outcropping (as per VT B). Furthermore, the specialist fringing vegetation as discussed above, is captured in VT B, not VT F	No	Not considered significant

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
G	1,597.0	11.78	Some occurrences form part of the Koolanooka System TEC, but only where mapped on the footslopes of the Koolanooka Hills. The VT as a whole is not equivalent to any TECs or PECs	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	VT as a whole is not considered significant
H	139.8	1.03	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
I	10.4	0.08	No	No Occurs on plains and flats, which are widespread in the landscape. While mapped over a very small proportion of the Survey Area, this is likely an artefact of the Survey Area being very narrow in these areas (Yandanooka Pipeline and Borefield Corridor), and thus the Survey Area intersects only a small extent of the VT. Review of aerial photography indicates that the VT extends outside the Survey Area, and further occurrences are present within the vicinity	No	No	No	Not considered significant
J	99.3	0.73	No	**Yes** Occurs on a saline claypan, which are a restricted landform in the Survey Area, and relatively uncommon in the wider landscape	**Yes** The saline claypan represented by VT J is disjunct from the chain of claypans, playas and salt lakes further west, south and east (the Yarra Yarra salt lake system), and may therefore act as a refugium	**Yes** Represents an internal drainage point for the wider landscape	No Vegetation resembling the Thundelarra Lignum Swamp, which is listed in the Directory of Important Wetlands (DCCEEW, 2019), was recorded by the 2020 Assessment south of the Karara Area. The Thundelarra Lignum Swamp comprises open scrub dominated by *Melaleuca acutifolia* and shrubland dominated by lignum *Duma florulenta*. While VT J has some taxa in common, it is likely slightly saline (co-dominated by *Tecticornia disarticulata*), while the Thundelarra Lignum Swamp is fresh and probably stasohaline (DCCEEW, 2019)	**Significant for reasons other than formal listing**
K	313.6	2.31	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
L	50.9	0.38	No	No Occurs on flats, which are widespread in the landscape. While mapped over a relatively small proportion of the Survey Area, this is likely an artefact of the Survey Area being very narrow in these areas (Yandanooka Pipeline and Borefield Corridor), and thus the Survey Area intersects only a small extent of the VT. Review of aerial photography indicates that the VT extends outside the Survey Area, and further occurrences are present within the vicinity	No	No	No	Not considered significant
M	18.2	0.13	No	**Yes** Occurs in saline lakes and playas, which are a restricted landform in the Survey Area, and are regionally significant	Possibly	**Yes** Provides internal drainage for the wider landscape, and provides habitat to unique aquatic biota and rare water birds (Boggs, 2007)	**Yes** Has a degree of historical impact from threatening processes: anthropogenic modification of hydrology, secondary salinisation, and rising groundwater, as a result of past and current agricultural and pastoral land use practices (Boggs et al., 2007)	**Significant for reasons other than formal listing**
N	10.7	0.08	No	**Yes** Occurs in saline lakes and playas, which are a restricted landform in the Survey Area, and are regionally significant	Possibly	**Yes** Provides internal drainage for the wider landscape, and provides habitat to unique aquatic biota and rare water birds (Boggs, 2007)	**Yes** Has a degree of historical impact from threatening processes: anthropogenic modification of hydrology, secondary salinisation, and rising groundwater, as a result of past and current agricultural and pastoral land use practices (Boggs et al., 2007)	**Significant for reasons other than formal listing**
O	545.6	4.02	Some occurrences form part of the Blue Hills PEC, but only where mapped on BIF crests and slopes of Mount Karara, Mungada Ridge and Blue Hills Ranges. The VT as a whole is not equivalent to any TECs or PECs	**Yes** Occurs on slopes and crests of BIF hills and ridges, as well as on rocky granite, which are restricted landforms in the Survey Area and the wider landscape	**Yes** BIF ranges in the northern Yilgarn are biodiversity hotspots and refugia for endemic or uncommon taxa and floristic communities (Gibson et al., 2007; Markey & Dillon, 2008)	**Yes** Provides habitat for a diverse and unique plant community, with high plant endemism (Gibson et al., 2007; Markey & Dillon, 2008)	No	**Significant for reasons other than formal listing**
P	620.5	4.58	Some occurrences form part of the Blue Hills PEC, but only where mapped on BIF crests and slopes of Mount Karara, Mungada Ridge and Blue Hills Ranges. The VT as a whole is not equivalent to any TECs or PECs	**Yes** Occurs on slopes of BIF hills and ridges, which is a restricted landform in the Survey Area and the wider landscape (as well as some occurrences on rocky ironstone)	No	**Yes** Provides habitat for a diverse and unique plant community, with high plant endemism (Gibson et al., 2007; Markey & Dillon, 2008)	No	**Significant for reasons other than formal listing**

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
Q	1,688.2	12.45	Some occurrences form part of the Blue Hills PEC, but only where mapped on the footslopes of BIF landforms (Mount Karara, Mungada Ridge and Blue Hills Ranges). The VT as a whole is not equivalent to any TECs or PECs	No Occurs on plains and lower slopes, which are widespread in the landscape	No	No	**Yes** Preferred habitat for *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1), which is known from a range of only 15 km and six locations (as per DBC's WA Herbarium specimen database (WA Herbarium, 1998-)), none of which are within conservation tenure	**Significant for reasons other than formal listing**
R	785.4	5.79	Some occurrences form part of the Blue Hills PEC, but only where mapped on the footslopes of BIF landforms (Mount Karara, Mungada Ridge and Blue Hills Ranges). The VT as a whole is not equivalent to any TECs or PECs	No Occurs on plains and lower slopes, which are widespread in the landscape	No	No	No	VT as a whole is not considered significant
S	452.9	3.34	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
T	187.3	1.38	No	No Occurs on plains and flats, which are widespread in the landscape	No	No	No	Not considered significant
U	64.3	0.47	No	**Yes** Represents fringing vegetation for a saline claypan, which are a restricted landform in the Survey Area, and relatively uncommon in the wider landscape	**Yes** The saline claypan represented by VT J (for which VT U forms a part as fringing vegetation) is disjunct from the chain of claypans, playas and salt lakes further west, south and east (the Yarra Yarra salt lake system), and may therefore act as a refugium	**Yes** Represents part of an internal drainage point for the wider landscape	No	**Significant for reasons other than formal listing**
V	0.4	0.003	Forms part of the Koolanooka System TEC	**Yes** Occurs on slopes of BIF/massive ironstone/granite hills and ridges, which is a restricted landform in the Survey Area and the wider landscape	**Yes** BIF ranges in the northern Yilgarn are biodiversity hotspots and refugia for endemic or uncommon taxa and floristic communities (Gibson et al., 2007; Meissner & Caruso, 2008a)	**Yes** Provides habitat for a diverse and unique plant community, with high plant endemism (Gibson et al., 2007; Meissner & Caruso, 2008a)	No	**Significant for reasons other than formal listing**
W	0.6	0.004	Some occurrences form part of the Koolanooka System TEC, but only where mapped on the footslopes of the Koolanooka Hills. The VT as a whole is not equivalent to any TECs or PECs	**Yes** Occurs on footslopes of BIF/massive ironstone/granite hills and ridges, which is a restricted landform in the Survey Area and the wider landscape	No	**Yes** Provides habitat for a diverse and unique plant community, with high plant endemism (Gibson et al., 2007; Meissner & Caruso, 2008a)	No	**Significant for reasons other than formal listing**
X	0.2	0.002	Forms part of the Koolanooka System TEC	**Yes** Occurs on slopes of BIF/massive ironstone/granite hills and ridges, which is a restricted landform in the Survey Area and the wider landscape	**Yes** BIF ranges in the northern Yilgarn are biodiversity hotspots and refugia for endemic or uncommon taxa and floristic communities (Gibson et al., 2007; Meissner & Caruso, 2008a)	**Yes** Provides habitat for a diverse and unique plant community, with high plant endemism (Gibson et al., 2007; Meissner & Caruso, 2008a)	No	**Significant for reasons other than formal listing**

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
Y	1.8	0.01	No	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape. VT Y potentially corresponds to VSA Perenjori_352, which had 7.9 % of its Pre-European extent remaining as at 2018, with only 0.35 % of this remaining extent protected for conservation (**Section 5.1.2**)	**Yes** Potentially acts as a refugium given its location on the boundary of predominately uncleared vegetation to the east, and large expanses of land cleared for agriculture to the west	No	No	**Significant for reasons other than formal listing**
Z	0.7	0.005	No	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape. VT Z potentially corresponds to VSA Perenjori_352, which had 7.9 % of its Pre-European extent remaining as at 2018, with only 0.35 % of this remaining extent protected for conservation (**Section 5.1.2**)	**Yes** Potentially acts as a refugium given its location on the boundary of predominately uncleared vegetation to the east, and large expanses of land cleared for agriculture to the west	No	No	**Significant for reasons other than formal listing**
AA	0.2	0.002	Billeranga System TEC	**Yes** Occurs on slopes of heavy quartz, which are restricted landforms in the Survey Area and the wider landscape	**Yes** Acts as a refugium for flora and fauna in a highly cleared landscape. As at 2000, there was an estimated loss of 58 % (mostly from the lower lying areas) of the original area of the Billeranga system, which was already originally restricted in distribution. Another 52 % of the remaining vegetation was estimated to have been modified by grazing and/or weed invasion (CALM, 2000a)	No	No	**Significant for reasons other than formal listing**
HMVT A	0.1	0.001	No	**Yes** Mapped over very small, isolated patches, and within a highly cleared and fragmented landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Completely Degraded in the Survey Area (**Section 5.2.12**), and review of aerial imagery suggests the condition is similar for contiguous vegetation outside the Survey Area	Unlikely	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
HMVT B	0.2	0.001	No	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Good to Completely Degraded in the Survey Area (**Section 5.2.12**), and review of aerial imagery suggests the condition is similar for contiguous vegetation outside the Survey Area. Vegetation that appears similar to HMVT B is present in Koolanooka Nature Reserve approximately 2 km northwest; this vegetation would be more likely to act as a refugium than the vegetation of the Survey Area	No	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant
HMVT C	0.1	0.0004	No	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Degraded in the Survey Area (**Section 5.2.12**). The area mapped within the Survey Area (0.1 ha) encompasses almost the entirety of this very small and isolated patch of vegetation	No	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant
HMVT D	4.7	0.03	Some occurrences form part of the Eucalypt Woodlands TEC where the key diagnostic criteria are met	**Yes** Mapped over a very small proportion of the Survey Area, and within a highly cleared landscape	**Yes** While the Survey Area intersects parts of this vegetation that are in Completely Degraded condition (**Section 5.2.12**), almost all occurrences in the Survey Area have contiguous vegetation extending outside the Survey Area that appears to be in better condition, and across reasonable areas (greater than approx. 50 ha). This includes some occurrences that do not form part of the Eucalypt Woodlands TEC due to being dominated by *Eucalyptus* that are not key species (as per the Approved Conservation Advice; e.g. *Eucalyptus camaldulensis*). Therefore, the areas in the Survey Area may contribute to maintenance of refugia within a highly cleared landscape	No	No	**Significant for reasons other than formal listing**
HMVT E	1.7	0.01	One occurrence forms part of the Eucalypt Woodlands TEC where the key diagnostic criteria are met	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Completely Degraded in the Survey Area (**Section 5.2.12**). Review of aerial imagery suggests the condition is similar for contiguous vegetation outside the Survey Area, with the exception of the western-most occurrence, which is already captured as representing significant vegetation by forming part of the Eucalypt Woodlands TEC	No	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant

VT	Area in Survey Area (ha)	Proportion of Survey Area (%)	Corresponds to Listed Community	Restricted Distribution or Habitat	Plays a Role as a Refuge or Refugium	Provides Important Ecological Function	Other Considerations	Overall Outcome
HMVT F	2.0	0.01	Some occurrences form part of the Eucalypt Woodlands TEC where the key diagnostic criteria are met	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Completely Degraded in the Survey Area (**Section 5.2.12**). Review of aerial imagery suggests the condition is similar for contiguous vegetation outside the Survey Area, with the exception of the western-most and eastern-most occurrences, which are already captured as representing significant vegetation by forming part of the Eucalypt Woodlands TEC	No	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant
HMVT G	3.3	0.02	No	**Yes** Mapped over a very small proportion of the Survey Area, and within a heavily cleared landscape	No While this HMVT occurs within a highly cleared and fragmented landscape, the condition of the vegetation is likely too poor for it to meaningfully act as a refuge or refugium; it was rated as Completely Degraded in the Survey Area (**Section 5.2.12**). Review of aerial imagery suggests the condition is similar for contiguous vegetation outside the Survey Area. HMVT D, which is adjacent and in better condition (at least outside the Survey Area), is more likely to act as a refugium in the area	No	No	Mapped across a limited extent, but the condition of the vegetation is too poor for it to be considered significant
CP	6.7	0.05	No	**Yes** Occurs in a (presumably fresh) playa, which is a restricted landform in the Survey Area, and is regionally significant	Unlikely	**Yes** Represents an internal drainage point for the wider landscape, and likely provides habitat for aquatic biota and water birds when inundated	No	**Significant for reasons other than formal listing**

5.2.11 Groundwater and Surface Water Dependent Vegetation

Riparian vegetation is defined as plant communities occurring in association with watercourses, both ephemeral and permanent. Therefore, riparian vegetation has some dependence on surface water flows and/or groundwater.

A total of 10 Survey Area VTs are considered to represent riparian vegetation:

- VT C occurrence near Terapod in an ephemeral drainage depression/swamp
- VTs J and CP: mapped on ephemeral claypans that are periodically inundated
- VT L, and HMVTs A and C: mapped on ephemerally damp or wet semi-saline flats and depressions
- VTs M and N: mapped in saline depressions that are periodically inundated
- VT U: mapped in ephemeral drainage depressions/wetlands
- HMVT D: mapped in drainage lines and associated flats.

Occurrences of the above-mentioned VTs/HMVTs are considered to be at least partially or totally dependent on ephemeral surface water flows for survival. The vegetation in these areas are predominately associated with seasonally wet flats, drainage depressions, swamps and claypans, and possess dominant species including *Melaleuca acutifolia*, *Melaleuca eleuterostachya*, *Duma florulenta*, *Teucrium racemosum*, *Frankenia* spp. and *Tecticornia* spp., all of which are known to inhabit drainage flats, claypans, salt pans and other wet areas (WA Herbarium, 1998-) and are tolerant of at least periodic waterlogging (Brophy et al., 2013; Craig et al., 1991; Toelken, 1985). However, the claypan substrates associated with these VTs/HMVTs may not allow for root penetration to groundwater, and at present the depth to groundwater in these areas is unknown. Further, at current there is no literature available on the groundwater dependency of these taxa. While it is doubtful these taxa are phreatophytes, they are certainly at least surface water dependent.

VTs C, D, G, H, K, Y and Z are likely to be at least partially dependent on surface water in the form of sheet flow originating from higher ground (e.g. Mungada Ridge, Koolanooka Hills) during periodic heavy rainfall events. These VTs are located on flats and plains between areas of higher relief and therefore form the main depository for rainfall in the local area. It is unlikely that these areas are groundwater dependent based on species composition; however, further information on depth to groundwater and the groundwater-dependency of the taxa present in these VTs would be required to confirm this.

Mulga communities have been documented to be dependent on the interception of sheet flow water runoff during heavy rainfall events (Dunkerley, 2002a, 2002b). These communities consequently form resource 'hotspots' due to their ability to capture, retain and cycle sediments, nutrients and water during periods of heavy rainfall (Maslin & Reid, 2009). Mulga have been recorded within the Survey Area in VTs C, D, G, H, O, P, Q and R. Of these, VTs C, D, G and H occur on flats or plains that are potentially subject to sheet flow; these VTs are therefore also likely to be surface water dependent.

Nested piezometer monitoring in the Yarra Yarra salt lake system, of which VTs M and N form a part, indicate that these playas and salt lakes were net discharge points for groundwater. However, groundwater does not discharge at the same rate across the playa surfaces. The playas may also have short-lived phases of groundwater recharge (Boggs, 2007). Therefore, VTs M and N are considered to be potentially groundwater dependent.

No data is currently available regarding depth to groundwater across the Survey Area. However, based on the taxa recorded in the aforementioned VTs/HMVTs, it is unlikely that any of these VTs/HMVTs, or any others mapped in the Survey Area, are groundwater dependent, with the exception of HMVT D (and VTs M and N discussed above). The only known or presumed obligate phreatophyte that was recorded in the Survey Area is *Eucalyptus camaldulensis* in HMVT D on the western end of the Borefield Corridor. There appears to be very little information published on groundwater usage by vegetation in the region, but in general, phreatophytic taxa in the Eremaean area of WA are large trees from either the genus *Eucalyptus* or *Melaleuca* (Loomes & Braimbridge, 2010). Although other examples of these genera were recorded in more than half of the Survey Area VTs/HMVTs (including *Eucalyptus clelandiorum*, *Eucalyptus gomphocephala*, *Eucalyptus loxophleba*, *Eucalyptus salubris*, *Melaleuca acutifolia*, *Melaleuca atroviridis*, *Melaleuca eleuterostachya* and *Melaleuca stereophloia*), they are considered unlikely to be phreatophytes; the *Eucalyptus* taxa generally do not occur in wetland situations, and while the *Melaleuca* taxa are common in seasonally wet areas, this likely indicates that they are dependent on water stored in the vadose zone of the clay soil profile in these areas, rather than the groundwater table. However, further information on groundwater depths in the areas where these taxa were recorded would be required to conclusively confirm this.

Based on species composition and the lack of potential phreatophytic taxa, it is unlikely that VTs occurring on BIF areas with substantial rock-based substrate and those occurring on areas where depth to groundwater is > 10–20 m would be groundwater dependent. Therefore, the vegetation of these VTs would be reliant upon sufficient surface water for survival.

A summary of the potential dependence of the VTs of the Survey Area on surface water and groundwater is presented in **Table 5.21**.

Table 5.21 Summary of Potential Surface Water and Groundwater Dependence of Survey Area VTs

VT	Potentially Surface Water Dependent		Potentially Groundwater Dependent
	Riparian Vegetation	Sheet Flow Dependent	
A	-	-	-
B	-	-	-
C	Yes: occurrence near Terapod only	Yes	-
D	-	Yes	-
E	-	-	-
F	-	-	-
G	-	Yes	-
H	-	Yes	-
I		-	-
J	Yes	-	-
K		Yes	-

VT	Potentially Surface Water Dependent		Potentially Groundwater Dependent
	Riparian Vegetation	Sheet Flow Dependent	
L	Yes	-	-
M	Yes	-	Yes
N	Yes	-	Yes
O	-	-	-
P	-	-	-
Q	-	-	-
R	-	-	-
S	-	-	-
T	-	-	-
U	Yes	-	-
V	-	-	-
W	-	-	-
X	-	-	-
Y	-	Yes	-
Z	-	Yes	-
AA	-	-	-
HMVT A	Yes	-	-
HMVT B	-	-	-
HMVT C	Yes	-	-
HMVT D	Yes	-	Yes
HMVT E	-	-	-
HMVT F	-	-	-
HMVT G	-	-	-
CP	Yes	-	-
PL	-	-	-

5.2.12 Vegetation Condition

Table 5.22 presents the area (ha) of each VT and corresponding condition rating(s) (as per EPA Technical Guidance (EPA, 2016b); **Table 3.4**) mapped in the Survey Area. Vegetation condition mapping is presented in **Figure 5.9**.

Areas mapped as 'Cleared Land' and 'Water' were not allocated vegetation condition categories, as they do not constitute vegetation in the context of the condition scale used by this survey (**Section 3.8**, taken from EPA Technical Guidance (EPA, 2016b)). These areas constitute a total of 2,756 ha, or 25 % of the total area of the Survey Area.

A total of 94.7 % of Survey Area vegetation was considered to be in Excellent condition; these areas had no or little evidence of impact to vegetation composition and structure as a result of human or animal activities, or there were only low levels of introduced (weed) taxa. Historical disturbance was present in many areas from mining and exploration activities (for example, drill lines) and historical grazing (evidence of use of the area as a pastoral station), and there was historical and current evidence of kangaroo, rabbit, goat and cattle activity throughout the Survey Area. Note that although the vegetation condition within some individual quadrats was determined to be 'Pristine', in the wider context of the Survey Area, the overall vegetation condition was ranked Excellent. In addition, as mentioned in **Section 3.8**, there were some exploration drill lines in the Survey Area; these lines were mapped as the same condition as their surrounding VT, as their small size and dynamic state of use prevents them from being assessed in detail in a wider scale vegetation condition context. In addition, many of these tracks and drill lines were clearly old, with vegetation observed to have regrown to some extent.

The vegetation in the Karara Area was overwhelmingly mapped as Excellent condition, as well as the eastern part of the Yandanooka Pipeline. There was a general trend of declining vegetation condition east of Weelhamby Lake (and the boundary between the Avon Wheatbelt and Yalgoo IBRA regions), likely associated with a change in the dominant land use to agriculture, and a corresponding increase in weed presence. The vegetation in this part of the Yandanooka Pipeline was generally Very Good to Good, while that of the Borefield Corridor was Good to Degraded, due to proximity to agriculture, high weed loads, and fragmentation (**Table 5.22**; **Figure 5.9**). This is typical of vegetation within that area, which has experienced historically high levels of clearing and weed invasion, primarily for agriculture.

The vegetation north, east and west of camp was mapped as Degraded to Completely Degraded, due to significant alterations to vegetation structure as a result of historical clearing (**Table 5.22**; **Figure 5.9**). These areas had regrown and were compositionally similar to adjacent uncleared vegetation, but very dissimilar structurally.

Note that while the vegetation in some parts of the Survey Area was observed to have been affected by drought (particularly during the 2023 survey), with widespread senescence of shrubs, these areas were generally not mapped as being in poorer condition. It is anticipated that these areas would recover to baseline levels following sufficient rainfall.

Table 5.22 Vegetation Condition Ratings for VTs of the Survey Area

VT	Area Mapped (ha)					
	Excellent	Very Good	Good	Degraded	Completely Degraded	Total
A	272.1	7.2	1.3	11.1	-	**291.7**
B	112.3	-	-	-	-	**112.3**
C	250.3	-	-	73.7	3.3	**327.2**
D	2,423.1	8.1	-	-	12.5	**2,443.7**
E	577.3	62.7	6.0	9.5	15.2	**670.7**
F	299.3	1.2	-	66.3	-	**366.8**
G	1,452.3	72.0	42.3	7.2	1.4	**1,575.2**
H	139.8	-	-	-	-	**139.8**
I	-	-	9.1	1.3	-	**10.4**
J	99.3	-	-	-	-	**99.3**

VT	Area Mapped (ha)					
	Excellent	Very Good	Good	Degraded	Completely Degraded	Total
K	313.6	-	-	-	-	**313.6**
L	31.2	-	5.8	4.2	9.8	**50.9**
M	10.6	7.6	-	-	-	**18.2**
N	1.8	0.1	7.6	0.8	0.5	**10.7**
O	511.8	34.1	0.1	0.2	-	**546.2**
P	613.1	6.7	-	-	-	**619.8**
Q	1,675.2	4.8	-	1.2	7.1	**1,688.2**
R	742.1	15.4	1.9	21.7	4.3	**785.4**
S	450.7	2.0	-	-	-	**452.7**
T	183.1	4.3	-	-	-	**187.3**
U	64.3	-	-	-	-	**64.3**
V	-	0.3	0.1	-	-	**0.4**
W	-	0.3	0.3	-	-	**0.6**
X	-	0.2	-	-	-	**0.2**
Y	-	-	0.4	1.4	-	**1.8**
Z	-	-	-	0.7	-	**0.7**
AA	-	-	0.2	-	-	**0.2**
HMVT A	-	-	-	-	0.1	**0.1**
HMVT B	-	-	0.1	-	0.1	**0.2**
HMVT C	-	-	-	0.1	-	**0.1**
HMVT D	-	-	-	-	4.7	**4.7**
HMVT E	-	-	-	-	1.7	**1.7**
HMVT F	-	-	-	-	2.0	**2.0**
HMVT G	-	-	-	-	3.3	**3.3**
CP	6.7	-	-	-	-	**6.7**
PL	-	-	-	-	3.9	**3.9**
Total	**10,229.9**	**226.9**	**75.0**	**199.3**	**69.9**	**10,801.1**

umwelt

356000 358000 360000 362000 364000 366000 368000 370000 372000 374000

6760000 6758000 6756000 6754000 6752000 6750000

MIDLANDS RD

Legend

Survey Area
Road
Railway

Vegetation Condition

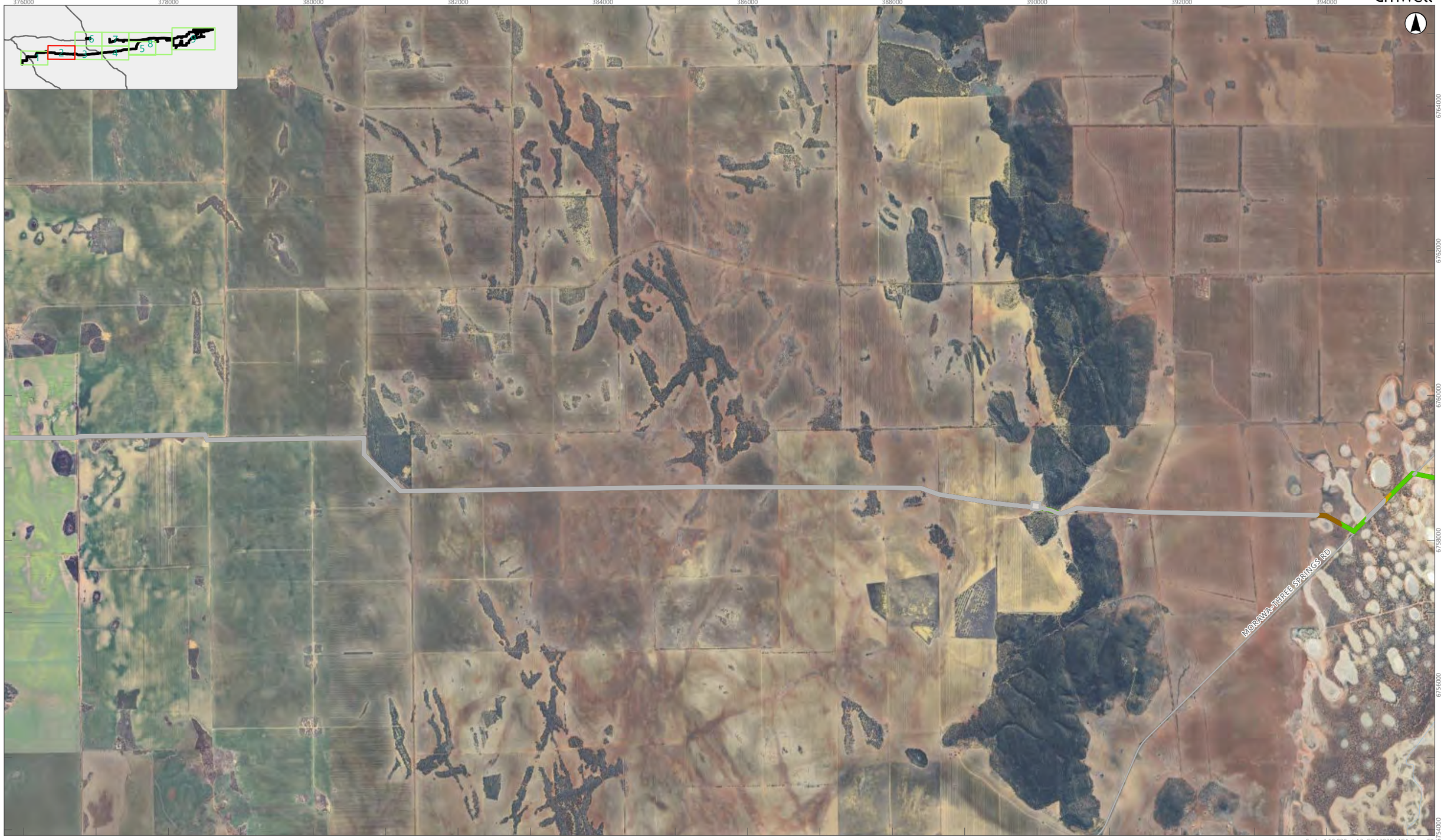
CD
NA

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 1

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Legend

- Survey Area
- Road
- Major Watercourse

Vegetation Condition

- G
- D
- CD
- NA

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

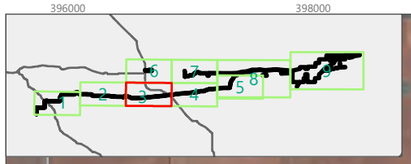
FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 2

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6764000 6762000 6760000 6758000 6756000 6754000



MORAWA-THREE SPRINGS RD

MULLEWA-WUBIN RD

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Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Vegetation Condition

- G
- D
- CD
- NA

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 3

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

C:\Users\JeffreysS\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWX\9.Projects\23712_R004_Banan_Bore\mxd\vegAssessment_v1.aprx

Legend

Survey Area
Road
Railway

Vegetation Condition

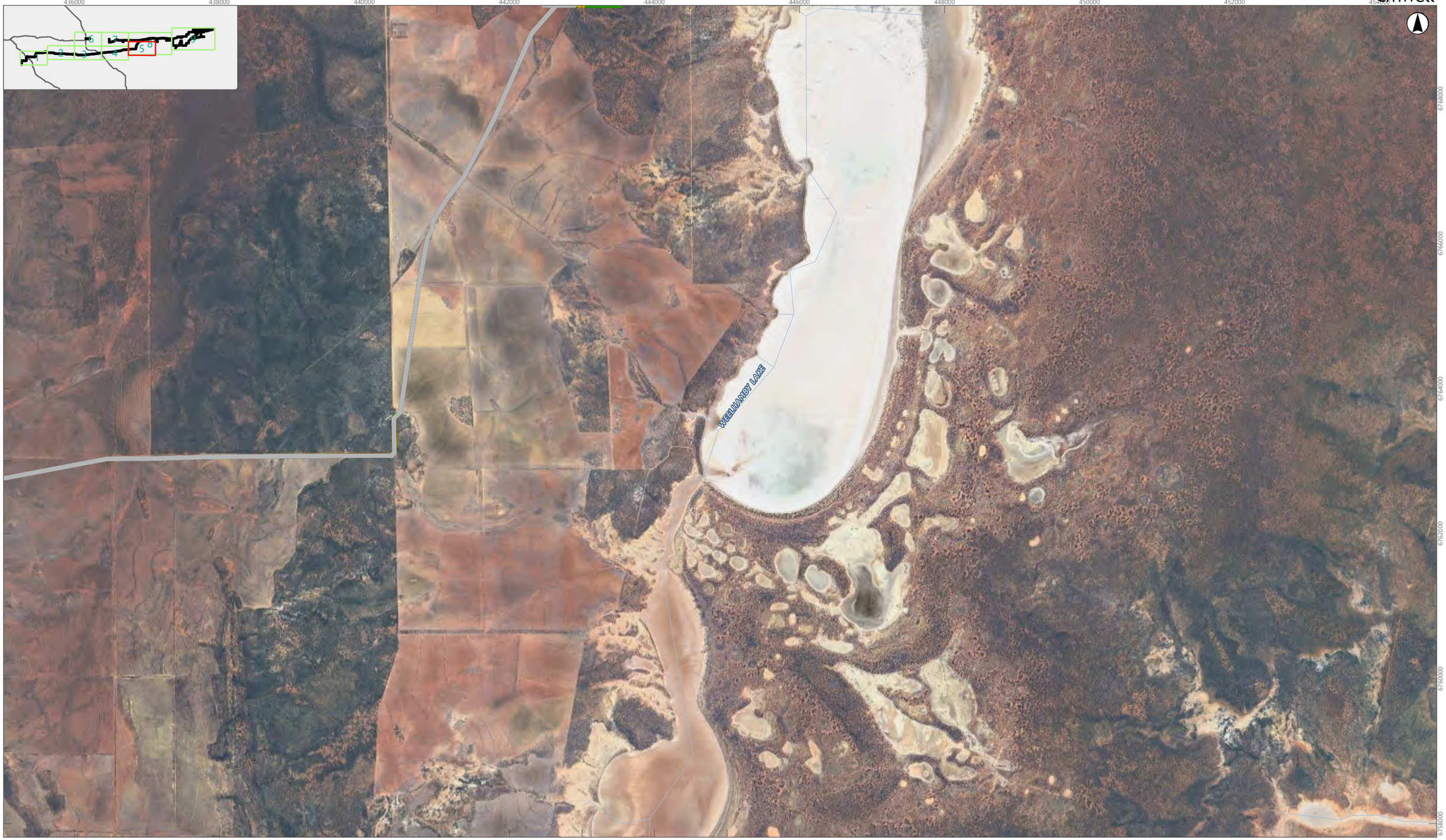
D
CD
NA

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 4

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)



Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Major Watercourse

Vegetation Condition

- VG
- G
- D
- CD
- NA

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 5

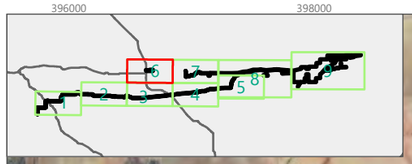
0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

umwelt

396000 398000 400000 402000 404000 406000 408000 410000 412000 414000

6776000 6774000 6772000 6770000 6768000 6766000



MULLEWA-WUBIN RD

MINGENEW-MORAWA RD

MORAWA

MORAWA-THREE SPRINGS RD

Legend

- Survey Area
- Road
- Railway
- Major Watercourse

Vegetation Condition

- G
- D
- CD
- NA

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 6

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Scale: 1:50,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Major Watercourse

Vegetation Condition

- VG
- G
- D
- CD
- NA

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 7

0 1 2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

435200 438400 441600 444800 448000 451200 454400 457600 460800 464000

6774400
6771200
6768000
6764800
6761600

WEELHAMBY LAKE

Scale: 1:80,000 at A3, GDA2020 MGA Zone

Legend

Survey Area
Major Watercourse

Vegetation Condition

E	Excellent
VG	Very Good
G	Good
D	Degraded
CD	Completely Degraded
NA	Not Applicable

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 8

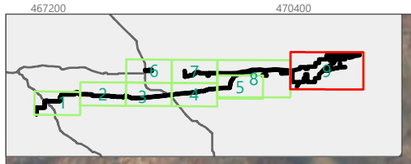
0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

umwelt

467200 470400 473600 476800 480000 483200 486400 489600 492800 496000

6780800 6777600 6774400 6771200 6768000 6764800



Legend

Survey Area

Vegetation Condition

- E Excellent
- VG Very Good
- D Degraded
- CD Completely Degraded
- NA Not Applicable

Scale: 1:80,000 at A3, GDA2020 MGA Zone

FIGURE 5.9
Vegetation Condition of the Survey Area
Sheet 9

0 1.6 3.2 km

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

6.0 Discussion and Conclusions

6.1 Flora

The Survey Area is considered to have high diversity in terms of taxon richness, with 748 discrete vascular flora taxa, two named hybrids (as per WA Herbarium (1998-)), three putative hybrids and one informal taxon variant having been recorded by the current and previous surveys. This was generally expected, as both the greenstone and BIF hills within and in the vicinity of the eastern part of the Survey Area are known to contain relatively diverse floras; however, these floras are relatively dissimilar to each other (Meissner & Coppen, 2014b). This part of the Survey Area also contains valleys and plains with deeper soils, which contributed further taxa to the overall total. Furthermore, with the Survey Area extending over 143 km and three IBRA regions from east to west, it captures a large variety of habitat types, landforms, soils and geologies, and thus also flora assemblages. The total number of taxa recorded in the Survey Area, which extends over 13,557 ha, exceeds that recorded by the Regional Mapping Assessment (656 discrete taxa and hybrids), the study area for which was considerably larger than the Survey Area (81,780 ha, or 500 % larger than the Survey Area). This highlights that a Survey Area that spans across multiple regions can support an extremely diverse flora. Although further taxa may be present in the Survey Area, it is considered that the Survey Area has been well sampled; this is supported by two adequacy of survey measures presented in **Section 4.1**.

The 2023 and 2024 survey was conducted within the most appropriate time to undertake a Primary survey in the region (late winter to early spring). Winter conditions for 2024 were cooler and wetter than average, but were warmer and drier than average in 2023 (**Section 2.0**). The poor conditions in 2023 and later timing of the site visit (October) corresponded with observable drought stress, senescence of perennial taxa, few perennial taxa in flower, and poor abundance and diversity of annual and ephemeral taxa. It is possible that a small number of particularly fragile taxa (e.g. some grass species) may not have been detectable or identifiable during this site visit. However, the conditions prior to the 2024 site visits were good, corresponding with abundant annual and ephemeral taxa, and many perennial taxa in flower. While the first site visit in August 2024 may have been slightly too early in the germination and emergence cycle of some annual taxa (some annual species had germinated but were not yet reproductively mature or in flower), these taxa, and those that may not have been detectable or identifiable during the 2023 site visit, were likely captured by the subsequent site visits in 2024. This is reflected in the relatively high number of annual taxa recorded by the 2023 and 2023 survey (221 annual taxa), which compares favourably to that recorded by the Markey and Dillon (2008) survey (180 annual taxa) and the Meissner and Coppen (2014b) survey (137 annual taxa), although these earlier surveys were undertaken within the Yalgoo IBRA region only.

The number of significant flora taxa recorded in the Survey Area was also considered to be high. A total of forty-one (41) significant flora taxa have been recorded in the Survey Area, comprising:

- Four (4) Threatened taxa listed under the BC and/or EPBC Acts
- Thirty-three (33) DBCA-listed Priority flora taxa
- Four (4) taxa that are considered significant as per EPA definitions (2016a, 2016b) as they represent potentially undescribed taxa.

The high number of significant flora taxa in the Survey Area was expected, given (1) the high levels of endemism of flora taxa on the greenstone and BIF hills in the vicinity of the Survey Area (Markey & Dillon, 2008; Meissner & Coppen, 2014b), which has resulted in many of these taxa being listed as significant; as well as (2) the large size of the Survey Area that extends over three IBRA regions, and thus captures a large and diverse variety of flora habitat types.

Seringia exastia was recorded in the Survey Area for the first time in 2024. The taxon was recorded at a single location on a cleared road verge within the Mine Area. *Seringia exastia* is currently listed as Threatened (Critically Endangered) under the Commonwealth EPBC Act only; it was recently removed from the list of Threatened flora gazetted under the WA BC Act following taxonomic work which determined that *Seringia exastia* is conspecific with (i.e. the same as) *Seringia elliptica*, a taxon widespread across northern and central WA, NT and extending into SA (Binks et al., 2020). It is expected that this taxon will be delisted on a Commonwealth level in the near future given its delisting in WA, but it is unclear when this will occur. However, advice previously received by Umwelt from DBCA was that an Application for Authorisation under Section 40 of the BC Act to Take Threatened Flora was required for *Seringia exastia*, until such time as the taxon is formally delisted, but that Targeted surveys for the taxon were not required.

The four potentially undescribed taxa (*Crassula* sp. nov., *Hemigenia* sp. aff. *botryphylla*, *Tecticornia* sp. 'Karara 1' and *Tecticornia* sp. 'Karara 2'), require further investigation by relevant experts to determine their taxonomic status, which in turn will allow for their conservation significance to be appropriately assessed. These taxa are considered significant in the interim, in line with EPA guidance (2016a, 2016b).

Given the comprehensive survey undertaken in the Targeted Survey Area for the 2023 and 2024 survey (as well as previously undertaken within a similar area for the 2020 Assessment), it is considered that sufficient survey for the flora taxa that are known to occur in the Survey Area has been conducted to inform an assessment of impacts of the Project. The only possible exception is *Crassula* sp. nov. (PU), the taxonomic status of which remains unclear; despite multiple collections being taken in 2024 within the same general area and same habitat as the original 2020 collections, all collections were determined to be of *Crassula extrorsa*. It is not clear why there were no collections made of the potentially undescribed *Crassula* entity in 2023 or 2024, particularly given the exceptional season and above-average winter rainfall received in 2024. It is possible that *Crassula* sp. nov. does in fact represent *Crassula extrorsa*, with the original collection being either aberrant or under-developed. Further sampling is required in order to resolve the taxonomic status of this entity.

A total of 81 significant flora taxa were rated by a likelihood of occurrence assessment as 'likely' or 'possible' to occur in the Survey Area despite not having existing records within the Survey Area. This result is not unexpected, given no Targeted flora survey has been undertaken across the Yandanooka Pipeline or the Borefield Corridor (with the exception of the very western end of the latter). However, of these 81 taxa, only *Calandrinia kalanniensis* (P2) has a likelihood of being present within the Targeted Survey Area. Potentially suitable habitat for this taxon is present within the Mine Area, but the Targeted field survey was undertaken outside the period during which the taxon is typically observable. This taxon is considered unlikely to occur within the Wheatbelt Area, as the Wheatbelt Area is outside the known range of the taxon, and suitable habitat is unlikely to be present.

Collections of eight flora taxa made during the 2023 and 2024 survey represent range extensions or fill gaps within these taxon's known distributions. These taxa include *Seringia exastia* (EPBC: CR) discussed above, but the remainder are taxa that are not of conservation significance, or weeds.

A total of 64 introduced flora taxa have been recorded in the Survey Area, including the Declared Pests *_Echium plantagineum_* (Paterson's Curse) and *_Galium aparine_* (Goosegrass). Introduced flora taxa were generally most abundant around areas associated with disturbance (recent and historical), grazing, and agricultural, or in areas that experience periodic inundation, including winter-wet flats and depressions.

6.2 Vegetation

Similar to the flora, the diversity of VTs within the Survey Area is considered to be moderate to high. This was mainly due to the linear nature of the Survey Area intersecting a variety of landforms, topographic locations and geologies, coupled with the differing floras on the predominant geological and topographical units (ironstone, granite, and to a lesser extent quartz). A total of 38 categories were mapped in the Survey Area, comprising:

- 20 VTs defined via floristic composition analysis of quadrat data (VTs A to T)
- 8 VTs defined structurally using data recorded at quadrats and relevés (VTs U to AA, and VT CP)
- 7 HMVTs defined structurally using data recorded at quadrats and relevés, within areas with a long history of disturbance where the vegetation still possessed tree or large shrub taxa but were highly modified otherwise (HMVTs A to G)
- 1 VT representing planted non-native or non-endemic tree or shrub taxa (VT PL)
- Water in salt lakes and clay pans
- Cleared land.

An additional floristic analysis was undertaken to determine possible relationships between Survey Area VTs with the FCTs defined by the Regional Mapping Assessment. However, with the addition of quadrat data from the current survey to the Regional Mapping Assessment dataset, there was significant migration of quadrats from their original cluster positions. Nevertheless, some similarities between VTs from the current assessment and Regional FCTs could be gleaned; 16 VTs were considered representative of Regional FCTs, while 19 Survey Area VTs have no potentially equivalent Regional FCTs given the VTs occur well outside the study area of the Regional Mapping Assessment.

Four listed significant vegetation communities were considered to be present in the Survey Area, as below. All listed communities were mapped at known locations within DBCA buffers. No other formally listed TECs or PECs are considered to be present in the Survey Area.

- Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation assemblages (banded ironstone formation) (WA: P1). Occurs in the Karara Area only.
- Eucalypt woodlands of the Western Australian Wheatbelt (WA: P3; EPBC: CR). Occurs in the far western end of the Borefield Corridor only.
- Koolanooka System as originally described in Beard (1976) (WA: CR). Occurs in the western end of the Yandanooka Pipeline only.
- Plant assemblages of the Billeranga System as originally described in Beard (1976) (WA: CR). Occurs within the central part of the Borefield Corridor.

In addition to the TECs and PECs of the Survey Area, 16 Survey Area VTs were considered potentially significant for reasons other than formal listing. This was determined following an assessment of the Survey Area VTs against the definitions of significant vegetation as per EPA (2016a, 2016b). The reasoning for VTs potentially representing significant vegetation included:

- Occurring across a restricted distribution or habitat: applied to 15 VTs
- Playing a role as a refuge or refugium: applied to 10 VTs
- Providing an important ecological function: applied to 11 VTs
- Other reasons: applied to 4 VTs (providing preferred habitat for significant flora taxa with restricted distributions in the case of VTs B and Q, and having a degree of historical impact from threatening processes in the case of VTs M and N).

Ten VTs mapped in the Survey Area were considered to represent riparian vegetation and be reliant on ephemeral surface water to some extent. Additionally, seven VTs were likely to be at least partially dependent on surface water in the form of sheet flow originating from higher ground. Three VTs were potentially groundwater dependent: VTs M and N due to forming part of the Yarra Yarra salt lake system which has been determined to be a net discharge point for groundwater; and HMVT D due to the presence of the obligate phreatophyte *Eucalyptus camaldulensis*. Information on the groundwater dependency of taxa recorded in the Survey Area as well as depth to groundwater information is required to confirm this.

The majority of the vegetation in the Survey Area (94.7 %) was rated and mapped as being in Excellent condition, with little to no human or animal disturbance and an absence or low levels of introduced flora taxa. The vegetation in the Karara Area was overwhelmingly mapped as Excellent condition, as well as the eastern part of the Yandanooka Pipeline. There was a general trend of declining vegetation condition east of Weelhamby Lake (and the boundary between the Avon Wheatbelt and Yalgoo IBRA regions), likely associated with a change in the dominant land use to agriculture, and a corresponding increase in weed presence. The vegetation in this part of the Yandanooka Pipeline was generally Very Good to Good, while that of the Borefield Corridor was Good to Degraded, due to proximity to agriculture, high weed loads, and fragmentation. This is typical of vegetation within that area, which has experienced historically high levels of clearing and weed invasion, primarily for agriculture.

There were no survey limitations that are considered to have significantly affected the results of the current survey. Personnel involved in all aspects of the survey have significant previous experience and guided less experienced personnel throughout the survey where necessary. Reasonable contextual information for the Survey Area was available prior to the 2023 and 2024 field survey. No constraints prevented appropriate sampling techniques (sample site establishment, foot traverses) being employed. Most areas were relatively easy to access using available access tracks and drill lines. Data reliability is therefore considered to be relatively high. All vascular groups that were present in the Survey Area were sampled, and at least one reference specimen of all taxa encountered (excluding common, distinctive taxa) was collected for verification and identification purposes. Almost all flora taxa could be positively identified, and adequacy of survey measures indicate that the Survey Area was well sampled.

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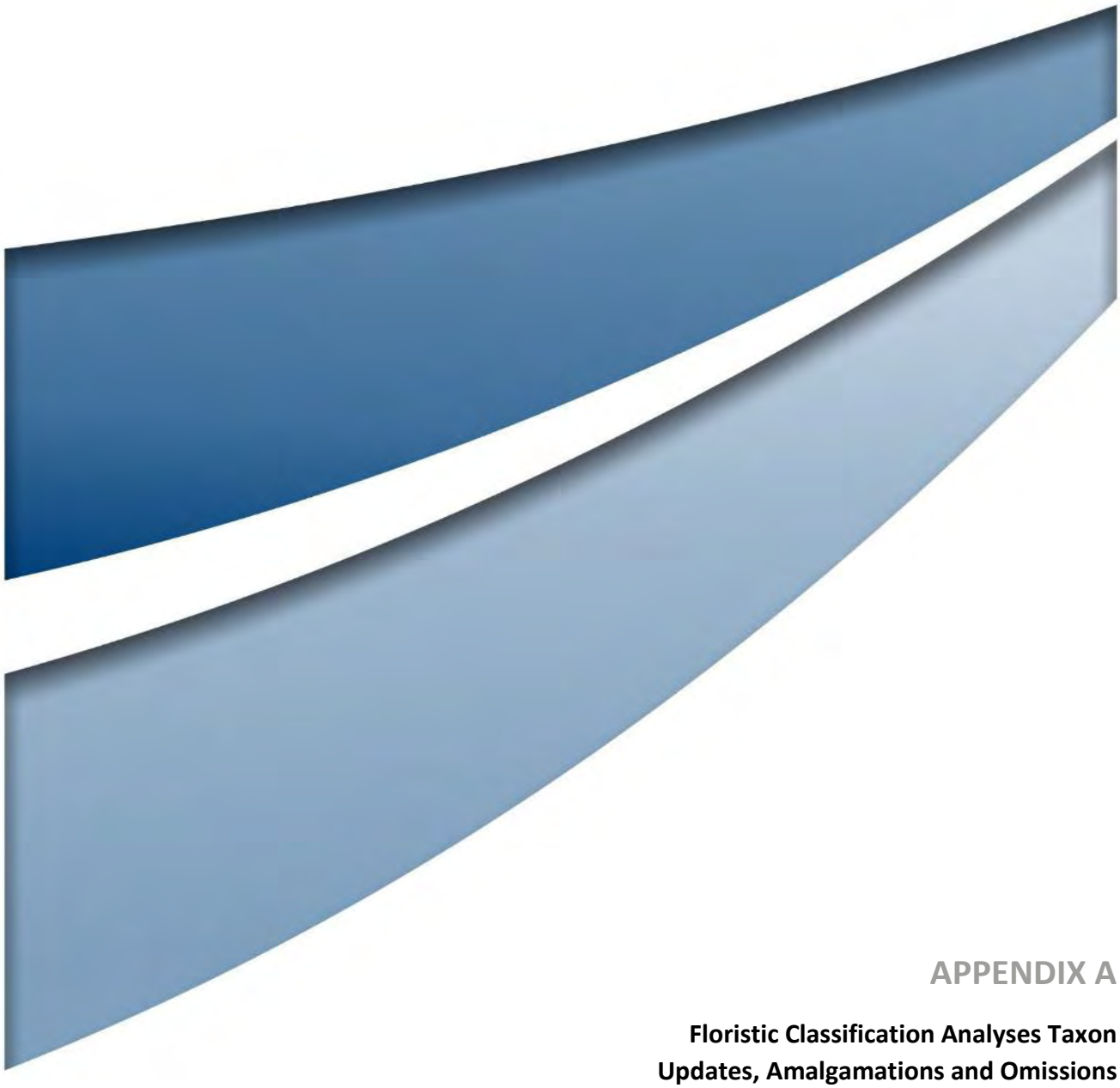

APPENDIX A

Floristic Classification Analyses Taxon Updates, Amalgamations and Omissions

Taxonomic and Nomenclature Updates

Taxon Name in Historic Data	Update
***Abutilon oxycarpum* subsp. *prostratum* ms**	*Abutilon oxycarpum* subsp. *prostratum* ms is more recently known as *Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)
Acacia aneura* var. *aneura	
Acacia aneura* var. *argentea	
Acacia aneura* var. *fuliginea	
Acacia aneura* var. *intermedia	
Acacia aneura* var. *major	
Acacia aneura* var. *microcarpa	
Acacia aneura* var. *tenuis	
Acacia coolgardiensis* subsp. *coolgardiensis	*Acacia coolgardiensis* subsp. *coolgardiensis* is more recently known as *Acacia coolgardiensis*
Acacia karina	*Acacia karina* is incorrectly spelt; refer to *Acacia karinae*
***Acacia saligna* subsp. *lindleyi* ms**	*Acacia saligna* subsp. *lindleyi* ms is more recently known as *Acacia saligna* subsp. Wheatbelt (B.R. Maslin 8602)
***Acacia* sp. Karara (C. Godden 14)**	*Acacia* sp. Karara (C. Godden 14) is more recently known as *Acacia karinae*
***Acacia* sp. Murchison (B.R. Maslin 7331)**	*Acacia* sp. Murchison (B.R. Maslin 7331) is more recently known as *Acacia umbraculiformis*
****Acetosa vesicaria***	*Acetosa vesicaria* is a nomenclatural synonym of *Rumex vesicarius*
Actinostrobus arenarius	*Actinostrobus arenarius* is more recently known as *Callitris arenaria*
Astroloma serratifolium	*Astroloma serratifolium* is more recently known as *Styphelia serratifolia*
****Anagallis arvensis***	*Anagallis arvensis* is more recently known as *Lysimachia arvensis*
Anthericaceae sp.	Anthericaceae is now known as Asparagaceae
Austrodanthonia caespitosa	*Austrodanthonia caespitosa* is more recently known as *Rytidosperma caespitosum*
Austrodanthonia setacea	*Austrodanthonia setacea* is more recently known as *Rytidosperma setaceum*
***Austrodanthonia* sp. Goomalling (A.G. Gunness et al. OAKP 10/63)**	*Austrodanthonia* sp. Goomalling (A.G. Gunness et al. OAKP 10/63) is more recently known as *Rytidosperma* sp. Goomalling (A.G. Gunness et al. OAKP 10/63)
***Baeckea benthamii* ms**	*Baeckea benthamii* ms is more recently known as *Hysterobaeckea setifera* subsp. *setifera*
Baeckea camphorosmae	*Baeckea camphorosmae* is more recently known as *Babingtonia camphorosmae*
***Baeckea megaflora* ms**	*Baeckea megaflora* ms is more recently known as *Baeckea* sp. Dudawa (M.E. Trudgen MET 5369)
***Baeckea* sp. Wanarra (M.E. Trudgen MET 5376)**	*Baeckea* sp. Wanarra (M.E. Trudgen MET 5376) is more recently known as *Hysterobaeckea setifera* subsp. *setifera*
Brachyscome cheilocarpa	*Brachyscome cheilocarpa* is more recently known as *Roebuckiella cheilocarpa*
Brachyscome ciliocarpa	*Brachyscome ciliocarpa* is more recently known as *Roebuckiella ciliocarpa*
Brachyscome oncocarpa	*Brachyscome oncocarpa* is more recently known as *Roebuckiella oncocarpa*

Taxon Name in Historic Data	Update
Brachyscome perpusilla* var. *tenella	*Brachyscome perpusilla* var. *tenella* is more recently known as *Brachyscome perpusilla*
Calandrinia creethiae	*Calandrinia creethiae* is incorrectly spelt; refer to *Calandrinia creethae*
***Calandrinia* sp. Blackberry (D.M. Porter 171)**	*Calandrinia* sp. Blackberry (D.M. Porter 171) is more recently known as *Calandrinia baccata*
***Calandrinia* sp. Murchison - Gascoyne (F. Obbens & F. Hort FO 49/04)**	*Calandrinia* sp. Murchison - Gascoyne (F. Obbens & F. Hort FO 49/04) is an informal synonym of *Calandrinia flava*
***Calandrinia* sp. The Pink Hills (F. Obbens FO 19/06)**	*Calandrinia* sp. The Pink Hills (F. Obbens FO 19/06) is an informal synonym of *Calandrinia monosperma*
Callitris glaucophylla	*Callitris glaucophylla* is more recently known as *Callitris columellaris*
***Chamelaucium* sp. Yalgoo (Y. Chadwick 1816)**	Misidentification of *Chamelaucium* pauciflorum subsp. Perenjori (B.J. Conn 2181)
Cheiranthera filifolia* var. *simplicifolia	*Cheiranthera filifolia* var. *simplicifolia* is more recently known as *Cheiranthera simplicifolia*
Chenopodium melanocarpum* forma *leucocarpum	*Chenopodium melanocarpum* forma *leucocarpum* is more recently known as *Dysphania melanocarpa* forma *leucocarpa*
****Citrullus lanatus***	*Citrullus lanatus* has been misapplied against the current name *Citrullus amarus*
***Darwinia halophila* ms**	*Darwinia halophila* ms is more recently known as *Darwinia* sp. Karonie (K. Newbey 8503)
Daviesia benthamii* subsp. *acanthoclona	*Daviesia benthamii* subsp. *acanthoclona* is more recently known as *Daviesia aphylla*
Daviesia benthamii* subsp. *benthamii	*Daviesia benthamii* subsp. *benthamii* is more recently known as *Daviesia benthamii*
Drosera macrantha* subsp. *eremaea	*Drosera macrantha* subsp. *eremaea* is more recently known as *Drosera eremaea*
Drosera macrantha* subsp. *macrantha	*Drosera macrantha* subsp. *macrantha* is more recently known as *Drosera macrantha*
Elymus scaber	*Elymus scaber* is more recently known as *Anthosachne scabra*
****Emex australis***	*Emex australis* is more recently known as *Rumex hypogaeus*
Eremophila dielsiana	*Eremophila dielsiana* is more recently known as *Eremophila platycalyx*
Eremophila latrobei* var. *latrobei	*Eremophila latrobei* var. *latrobei* is more recently known as *Eremophila latrobei* subsp. *latrobei*
***Eremophila latrobei* (variant)**	Misidentification of *Eremophila eriocalyx*
***Eremophila oldfieldii* subsp. nov.**	ID revised to *Eremophila oldfieldii* subsp. *papula*
***Eremophila oppositifolia* var. *angustifolia* ms**	*Eremophila oppositifolia* var. *angustifolia* ms is more recently known as *Eremophila oppositifolia* subsp. *angustifolia*
***Eremophila* sp.**	ID revised to *Eremophila sericea*
Eucalyptus clelandii	*Eucalyptus clelandii* is an incorrect spelling for *Eucalyptus clelandiorum*
Eucalyptus leptopoda* subsp. *arctata	*Eucalyptus leptopoda* subsp. *arctata* is more recently known as *Eucalyptus arctata*
Eucalyptus pluricaulis	*Eucalyptus pluricaulis* is more recently known as *Eucalyptus redunca* subsp. *pluricaulis*

Taxon Name in Historic Data	Update
Eucalyptus striaticalyx* subsp. *striaticalyx	*Eucalyptus striaticalyx* subsp. *striaticalyx* is more recently known as *Eucalyptus striaticalyx*
Euphorbia drummondii* subsp. *drummondii	*Euphorbia drummondii* subsp. *drummondii* is more recently known as *Euphorbia drummondii*
Gilruthia osbornii	*Gilruthia osbornii* is incorrectly spelt; refer to *Gilruthia osbornei*
Halgania cyanea* var. *cyanea	*Halgania cyanea* var. *cyanea* is more recently known as *Halgania cyanea*
Halosarcia doleiformis	*Halosarcia doleiformis* is more recently known as *Tecticornia doliiformis*
Halosarcia fimbriata	*Halosarcia fimbriata* is more recently known as *Tecticornia fimbriata*
Halosarcia halocnemoides	*Halosarcia halocnemoides* is more recently known as *Tecticornia halocnemoides*
Halosarcia halocnemoides* subsp. *halocnemoides	*Halosarcia halocnemoides* subsp. *halocnemoides* is more recently known as *Tecticornia halocnemoides*
Halosarcia indica* subsp. *bidens	*Halosarcia indica* subsp. *bidens* is more recently known as *Tecticornia indica* subsp. *bidens*
Halosarcia lepidosperma	*Halosarcia lepidosperma* is more recently known as *Tecticornia lepidosperma*
Halosarcia pergranulata* subsp. *pergranulata	*Halosarcia pergranulata* subsp. *pergranulata* is more recently known as *Tecticornia pergranulata* subsp. *pergranulata*
Halosarcia pterygosperma* subsp. *pterygosperma	*Halosarcia pterygosperma* subsp. *pterygosperma* is more recently known as *Tecticornia pterygosperma* subsp. *pterygosperma*
Halosarcia undulata	*Halosarcia undulata* is more recently known as *Tecticornia undulata*
***Halosarcia* sp.**	*Halosarcia* is more recently known as *Tecticornia*
***Hemigenia* sp. Cue (K.F. Kenneally 47A)**	*Hemigenia* sp. Cue (K.F. Kenneally 47A) is more recently known as *Hemigenia benthamii*
***Hemigenia* sp. Jibberding (J. D'Alonzo 418)**	*Hemigenia* sp. Jibberding (J. D'Alonzo 418) is more recently known as *Hemigenia botryphylla*
***Hemigenia* sp. Yuna (A.C. Burns 95)**	*Hemigenia* sp. Yuna (A.C. Burns 95) is more recently known as *Hemigenia yalgensis*
Hibbertia glomerosa* var. *glomerosa	*Hibbertia glomerosa* var. *glomerosa* is more recently known as *Hibbertia glomerosa*
Hybanthus floribundus* subsp. *curvifolius	*Hybanthus floribundus subsp. curvifolius* is more recently known as *Pigea curvifolia*
Hybanthus floribundus* subsp. *floribundus	*Hybanthus floribundus* subsp. *floribundus* is more recently known as *Pigea floribunda*
Hydrocotyle pilifera* var. *glabrata	*Hydrocotyle pilifera* var. *glabrata* is more recently known as *Hydrocotyle intertexta*
Hypoxis glabella	*Hypoxis glabella* is more recently known as *Pauridia glabella*
Isotoma petraea	*Isotoma petraea* is more recently known as *Lithotoma petraea*
Keraudrenia velutina	*Keraudrenia velutina* is more recently known as *Seringia velutina*
Keraudrenia velutina* subsp. *velutina	*Keraudrenia velutina* subsp. *velutina* is more recently known as *Seringia velutina*
Marsdenia australis	*Marsdenia australis* is more recently known as *Leichhardtia australis*
Melaleuca coronicarpa	*Melaleuca coronicarpa* is more recently known as *Melaleuca marginata*
Melaleuca lateriflora* subsp. *acutifolia	*Melaleuca lateriflora* subsp. *acutifolia* is more recently known as *Melaleuca acutifolia*

Taxon Name in Historic Data	Update
***Micromyrtus* sp. Warriedar (S. Patrick 1879A)**	*Micromyrtus* sp. Warriedar (S. Patrick 1879A) is more recently known as *Micromyrtus trudgenii*
***Mirbelia bursarioides* ms**	*Mirbelia bursarioides* ms is more recently known as *Mirbelia* sp. Bursarioides (T.R. Lally 760)
Muehlenbeckia florulenta	*Muehlenbeckia florulenta* is more recently known as *Duma florulenta*
Myriocephalus guerinae	*Myriocephalus guerinae* is incorrectly spelt; refer to *Myriocephalus gueriniae*
Nicotiana occidentalis* subsp. *hesperis	*Nicotiana occidentalis* subsp. *hesperis* is more recently known as *Nicotiana hesperis*
Nicotiana rosulata* subsp. *rosulata	*Nicotiana rosulata subsp. rosulata* is more recently known as *Nicotiana rosulata*
***Olearia dampieri* ms**	*Olearia dampieri* ms is more recently known as *Olearia* sp. Kennedy Range (G. Byrne 66)
Olearia dampieri* subsp. *dampieri	*Olearia dampieri* subsp. *dampieri* is more recently known as *Olearia* sp. Kennedy Range (G. Byrne 66)
***Olearia dampieri* subsp. *eremicola* ms**	*Olearia dampieri* subsp. *eremicola* ms is more recently known as *Olearia dampieri* subsp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)
Paspalidium basicladium	*Paspalidium basicladium* is incorrectly spelt; refer to *Paspalidium basicladum*
****Pentaschistis airoides***	*Pentaschistis airoides* is more recently known as *Pentameris airoides*
Phyllanthus erwinii	*Phyllanthus erwinii* is more recently known as *Dendrophyllanthus erwinii*
Pleurosorus rutifolius	*Pleurosorus rutifolius* is more recently known as *Asplenium subglandulosum*
Podolepis canescens	*Podolepis canescens* is an excluded name; these records likely attributable to *Podolepis aristata*
Podolepis capillaris	*Podolepis capillaris* is more recently known as *Siemssenia capillaris*
Podolepis kendallii	*Podolepis kendallii* is more recently known as *Walshia kendallii*
Podolepis lessonii	*Podolepis lessonii* is more recently known as *Panaetia lessonii*
***Pterostylis* sp. inland (A.C. Beauglehole 11880)**	*Pterostylis* sp. inland (A.C. Beauglehole 11880) is more recently known as *Pterostylis setulosa*
***Pterostylis* sp. scooped sepals (G. Brockman GBB386)**	*Pterostylis* sp. scooped sepals (G. Brockman GBB386) is more recently known as *Pterostylis arida*
Ptilotus divaricatus* var. *divaricatus	*Ptilotus divaricatus* var. *divaricatus* is more recently known as *Ptilotus divaricatus*
Ptilotus exaltatus* var. *exaltatus	*Ptilotus exaltatus* var. *exaltatus* is more recently known as *Ptilotus exaltatus*
Ptilotus gaudichaudii* var. *parviflorus	*Ptilotus gaudichaudii* var. *parviflorus* is an excluded name; likely attributable to *Ptilotus gaudichaudii*
Ptilotus grandiflorus* var. *grandiflorus	*Ptilotus grandiflorus* var. *grandiflorus* is more recently known as *Ptilotus grandiflorus*
Rhyncharrhena linearis	*Rhyncharrhena linearis* is more recently known as *Vincetoxicum lineare*
Rulingia luteiflora	*Rulingia luteiflora* is more recently known as *Androcalva luteiflora*
Salsola tragus	*Salsola tragus* has been misapplied against the current name *Salsola australis*
Sclerostegia disarticulata	*Sclerostegia disarticulata* is more recently known as *Tecticornia disarticulata*

Taxon Name in Historic Data	Update
***Sida atrovirens* ms**	*Sida atrovirens* ms is more recently known as *Sida* sp. dark green fruits (S. van Leeuwen 2260)
***Sida* excedentifolia ms**	*Sida excedentifolia* ms is more recently known as *Sida* sp. Excedentifolia (J.L. Egan 1925)
Solanum ellipticum	*Solanum ellipticum* is an excluded name; these records likely attributable to *Solanum cleistogamum*
***Triglochin* sp. B Flora of Australia (P.G. Wilson 4294)**	*Triglochin* sp. B Flora of Australia (P.G. Wilson 4294) is more recently known as *Triglochin isingiana*
Velleia cycnopotamica	*Velleia cycnopotamica* is more recently known as *Goodenia cycnopotamica*
Velleia glabrata	*Velleia glabrata* is more recently known as *Goodenia glabrata*
Velleia hispida	*Velleia hispida* is more recently known as *Goodenia capillosa*
Velleia rosea	*Velleia rosea* is more recently known as *Goodenia rosea*
Wrixonia prostantheroides	*Wrixonia prostantheroides* is more recently known as *Prostanthera prostantheroides*
Xanthosia bungei	*Xanthosia bungei* is more recently known as *Xanthosia kochii*
Zygophyllum apiculatum	*Zygophyllum apiculatum* is more recently known as *Roepera apiculata*
Zygophyllum aurantiacum	*Zygophyllum aurantiacum* is more recently known as *Roepera aurantiaca*
Zygophyllum eremaeum	*Zygophyllum eremaeum* is more recently known as *Roepera eremaea*
Zygophyllum fruticulosum	*Zygophyllum fruticulosum* is more recently known as *Roepera fruticulosa*
Zygophyllum iodocarpum	*Zygophyllum iodocarpum* is more recently known as *Roepera iodocarpa*
Zygophyllum ovatum	*Zygophyllum ovatum* is more recently known as *Roepera ovata*
***Zygophyllum* sp.**	*Zygophyllum* is an excluded name; most taxa previously included in *Zygophyllum* in WA are now included in *Roepera*

Survey Area Floristic Dataset

Grouped Names

Grouped Code	Taxa	Reasoning for Grouping
ABUCRY	*Abutilon cryptopetalum* *Abutilon ?cryptopetalum*	Likely represent the same entity
ABUOXY	*Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266) *Abutilon oxycarpum* subsp. *prostratum* ms	*Abutilon oxycarpum* subsp. *prostratum* ms is more recently known as *Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)
ACAAND	*Acacia andrewsii* *Acacia ?andrewsii*	Likely represent the same entity
ACAANE	*Acacia aneura* *Acacia aneura* var. ?*aneura* *Acacia aneura* var. ?*argentea* *Acacia aneura* var. ?*conifera* *Acacia aneura* var. ?*intermedia* *Acacia* cf. *aneura* var. *aneura* *Acacia* cf. *aneura* var. *major* *Acacia caesaneura* *Acacia mulganeura*	Taxa part of the Mulga group (see **Section 3.6.1**)
ACABUR	*Acacia acuminata* *Acacia ?acuminata* *Acacia burkittii* *Acacia ?burkittii*	Taxa could not be consistently positively identified due to inadequate material
ACACOO4	*Acacia coolgardiensis* *Acacia ?coolgardiensis* *Acacia coolgardiensis* subsp. *coolgardiensis* *Acacia ?coolgardiensis* subsp. *coolgardiensis* *Acacia ?coolgardiensis* subsp. *effusa* *Acacia* aff. *coolgardiensis (A. Markey & S. Dillon 3313)* *Acacia effusifolia* *Acacia incognita* *Acacia ?incognita* *Acacia latior* *Acacia resinosa* *Acacia ?resinosa* *Acacia sp. nov 2 (gind_21-1)* *Acacia sp. nov 3 (gind_71-05, KM_103-2)*	Taxa part of the '*A. coolgardiensis* group', and sometimes sympatric/parapatric with other group members. *A. effusifolia* and *A. latior* previously treated as subspecies of *A. coolgardiensis* (*A. coolgardiensis* subsp. *effusa* and *A. coolgardiensis* subsp. *latior*, respectively). *Acacia resinosa* is likely a historical misidentification of *A. coolgardiensis*. The ID of entity '*Acacia* aff. *coolgardiensis* (A. Markey & S. Dillon 3313)' has been updated to *A. latior* (PERTH 07406142). The ID of entities '*Acacia* sp. nov 2 (gind_21-1)' and '*Acacia* sp. nov 3 (gind_71-05, KM_103-2)' have been updated to *A. incognita* (PERTH 07424442)
ACADAP	*Acacia daphnifolia* *Acacia microbotrya*	*Acacia daphnifolia* is a member of the '*Acacia microbotrya* group'. The members of this group can be difficult to distinguish
ACADUR	*Acacia duriuscula* *Acacia sibirica*	*Acacia duriuscula* and *A. sibirica* are closely related and can be difficult to distinguish in the absence of good material
ACAERE	*Acacia eremaea* *Acacia ?eremaea*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
ACAINCCO	*Acacia inceana* subsp. *conformis* *Acacia* ?*inceana* subsp. *conformis*	Likely represent the same entity
ACAJIB	*Acacia jibberdingensis* *Acacia* ?*speckii*	*Acacia speckii* not known from the Karara area; likely to be a misidentification of *Acacia jibberdingensis*
ACAKAR	*Acacia karina* *Acacia karinae* *Acacia* sp. Karara (C. Godden 14)	*Acacia karina* is incorrectly spelt; referrable to *Acacia karinae.* *Acacia* sp. Karara (C. Godden 14) is more recently known as *Acacia karinae*
ACARAM	*Acacia ramulosa* *Acacia ramulosa* var. *linophylla* *Acacia ramulosa* var. *ramulosa* *Acacia* ?*ramulosa* var. *ramulosa*	Varieties could not be consistently positively identified due to inadequate material
ACAUMB	*Acacia umbraculiformis* *Acacia* sp. Murchison (B.R. Maslin 7331)	*Acacia* sp. Murchison (B.R. Maslin 7331) is more recently known as *Acacia umbraculiformis*
ACTULI	*Actinobole uliginosum* *Actinobole* ?*uliginosum*	Likely represent the same entity
ALLACU	*Allocasuarina acutivalvis* *Allocasuarina acutivalvis* subsp. *prinsepiana* *Allocasuarina acutivalvis* subsp. ?*prinsepiana*	Likely represent the same entity
ALUASPHE	*Aluta aspera* *Aluta aspera* subsp. *hesperia*	*Aluta aspera* subsp. *hesperia* is the only subspecies known from the Karara area
AMPCAR	*Amphipogon caricinus* *Amphipogon caricinus* var. *caricinus* *Amphipogon* ?*caricinus*	*Amphipogon caricinus* var. *caricinus* is the only variety known from WA
AMYGIB	*Amyema gibberula* *Amyema gibberula* var. *tatei*	*Amyema gibberula* var. *tatei* is the only variety known from the Karara area
ANDLUT	*Androcalva luteiflora* *Rulingia luteiflora*	*Rulingia luteiflora* is more recently known as *Androcalva luteiflora*
ARICON	*Aristida contorta* *Aristida* ?*contorta* *Aristida* ?*holathera* *Aristida holathera* var. *holathera*	Unable to be consistently identified across seasons – identification possible only when flowering material present
ARTCUR	*Arthropodium curvipes* *Arthropodium dyeri*	Unable to be consistently identified across seasons – identification possible only when flowering material present
ATRAMN	*Atriplex amnicola* *Atriplex ?amnicola*	Likely represent the same entity
ATRBUN	*Atriplex bunburyana* *Atriplex* ?*bunburyana*	Likely represent the same entity
ATRCOD	*Atriplex codonocarpa* *Atriplex* ?*codonocarpa*	Likely represent the same entity
ATRLININ	*Atriplex lindleyi* subsp. *inflata* *Atriplex* ?*lindleyi* subsp. *inflata*	Likely represent the same entity
ATRVES	*Atriplex vesicaria* *Atriplex* ?*vesicaria*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
AUSELE	*Austrostipa elegantissima* *Austrostipa* ?*elegantissima*	Likely represent the same entity
CALCOL	*Callitris columellaris* *Callitris glaucophylla*	*Callitris glaucophylla* is more recently known as *Callitris columellaris*
CHESIM	*Cheiranthera filifolia* var. *simplicifolia* *Cheiranthera simplicifolia*	*Cheiranthera filifolia* var. *simplicifolia* is more recently known as *Cheiranthera simplicifolia*
COMINT	*Comesperma integerrimum* *Comesperma* ?*integerrimum* *Comesperma volubile*	*Comesperma volubile* and *C. integerrimum* can be difficult to differentiate in the absence of flowering material
CRYAPEAP	*Cryptandra apetala* var. *apetala* *Cryptandra* ?*apetala* var. *apetala*	Likely represent the same entity
DAMLAV	*Dampiera lavandulacea* *Dampiera* ?*lavandulacea*	Likely represent the same entity
DAVBEN	*Daviesia benthamii* *Daviesia benthamii* subsp. ?*acanthoclona* *Daviesia benthamii* subsp. *benthamii*	*Daviesia benthamii* subsp. *benthamii* is more recently known as *D. benthamii.* *Daviesia benthamii* subsp. *acanthoclona* is more recently known as *D. aphylla*; however, *D. aphylla* is not known from the Karara area, and may represent a misidentification of *D. benthamii*
DAVHAK	*Daviesia hakeoides* *Daviesia hakeoides* subsp. *hakeoides* *Daviesia hakeoides* subsp. *subnuda*	Subspecies could not be consistently positively identified due to inadequate material
DIAREVDI	*Dianella revoluta* *Dianella revoluta* var. *divaricata*	*Dianella revoluta* var. *divaricata* is the only variety known from the Karara area
DRUFUL	*Drummondita fulva* *Drummondita microphylla* *Drummondita* aff. *microphylla* (R. Cranfield 8586 A)	*Drummondita fulva* and *D. microphylla* are closely related and can be difficult to distinguish if material is inadequate. The ID of entity '*Drummondita* aff. *microphylla* (R. Cranfield 8586 A)' has been updated to *D. fulva* (PERTH 03024342)
ENCTOM1	*Enchylaena tomentosa* *Enchylaena tomentosa* var. *tomentosa* *Enchylaena* ?*tomentosa*	Likely represent the same entity
ERECLA	*Eremophila clarkei* *Eremophila* ?*clarkei*	Likely represent the same entity
EREDEC	*Eremophila decipiens* *Eremophila decipiens* subsp. *decipiens* *Eremophila* ?*decipiens* subsp. *decipiens*	Likely represent the same entity
EREERI	*Eremophila eriocalyx* *Eremophila* ?*eriocalyx*	Likely represent the same entity
EREFOR	*Eremophila forrestii* *Eremophila forrestii* subsp. *forrestii*	*Eremophila forrestii* subsp. *forrestii* is the only subspecies known from the Karara area
ERELATLA	*Eremophila latrobei* subsp. *latrobei* *Eremophila latrobei* var. *latrobei* *Eremophila latrobei (variant)*	*Eremophila latrobei* var. *latrobei* is more recently known as *Eremophila latrobei* subsp. *latrobei*

Grouped Code	Taxa	Reasoning for Grouping
EREMIN	*Eremophila miniata* *Eremophila* ?*miniata*	Likely represent the same entity
EREOPPAN	*Eremophila oppositifolia* var. *angustifolia* ms *Eremophila oppositifolia* subsp. *angustifolia*	*Eremophila oppositifolia* var. *angustifolia* ms is more recently known as *Eremophila oppositifolia* subsp. *angustifolia*
EUCARC	*Eucalyptus arctata* *Eucalyptus leptopoda* *Eucalyptus leptopoda* subsp. *arctata* *Eucalyptus leptopoda* subsp. ?*arctata* *Eucalyptus leptopoda* subsp. *elevata*	*Eucalyptus leptopoda* subsp. *arctata* is more recently known as *Eucalyptus arctata.* *Eucalyptus leptopoda* is no longer known from the Karara area; likely to be referrable to *Eucalyptus arctata*
EUCCAM	*Eucalyptus camaldulensis* *Eucalyptus camaldulensis* subsp. *arida* *Eucalyptus camaldulensis* subsp. *obtusa*	Subspecies could not be consistently positively identified due to inadequate material
EUCCLE	*Eucalyptus clelandiorum* *Eucalyptus striaticalyx* subsp. *striaticalyx*	Karara is just outside the range of *Eucalyptus striaticalyx*; these records likely attributable to *E. clelandiorum*, which also belongs to subgenus *Symphyomyrtus* section *Dumaria*, and can be difficult to distinguish if material is inadequate
EUCGIT	*Eucalyptus gittinsii* subsp. *illucida* *Eucalyptus* ?*gittinsii*	Likely represent the same entity
EUCHOR	*Eucalyptus horistes* *Eucalyptus* ?*horistes* *Eucalyptus rigidula* *Eucalyptus* ?*rigidula*	*Eucalyptus horistes* and *E. rigidula* can be confused if material is inadequate
EUCKOC	*Eucalyptus kochii* *Eucalyptus* ?*kochii* *Eucalyptus kochii* subsp. *amaryssia* *Eucalyptus kochii* subsp. *borealis* *Eucalyptus kochii* subsp. ?*borealis* *Eucalyptus kochii* subsp. *plenissima* *Eucalyptus kochii* subsp. ?*plenissima* *Eucalyptus* ?*kochii* subsp. *plenissima*	Subspecies could not be consistently positively identified due to inadequate material
EUCLOXL1	*Eucalyptus loxophleba* subsp. *lissophloia* *Eucalyptus loxophleba* subsp. *loxophleba* *Eucalyptus loxophleba* subsp. ?*loxophleba* *Eucalyptus loxophleba* subsp. *supralaevis* *Eucalyptus loxophleba* subsp. ?*supralaevis* *Eucalyptus* ?*loxophleba* subsp. *loxophleba*	Subspecies could not be consistently positively identified due to inadequate material
FRAPAU	*Frankenia pauciflora* *Frankenia* ?*pauciflora*	Likely represent the same entity
GLIFLA	*Glischrocaryon flavescens* *Glischrocaryon* ?*flavescens*	Likely represent the same entity
GREEXT	*Grevillea extorris* *Grevillea* ?*extorris*	Likely represent the same entity
GRELEV	*Grevillea levis* *Grevillea* ?*levis* *Grevillea* ?*paniculata*	Taxa could not be consistently positively identified due to inadequate material

Grouped Code	Taxa	Reasoning for Grouping
GREOBL	*Grevillea obliquistigma* *Grevillea obliquistigma* subsp. *obliquistigma* *Grevillea obliquistigma* subsp. ?*obliquistigma*	Subspecies could not be consistently positively identified due to inadequate material
HAKINV	*Hakea invaginata* *Hakea* ?*invaginata*	Likely represent the same entity
HAKREC	*Hakea recurva* *Hakea recurva* subsp. *arida* *Hakea* ?*recurva* subsp. *arida* *Hakea recurva* subsp. *recurva*	Subspecies could not be consistently positively identified due to inadequate material
HEMBEN	*Hemigenia benthamii* *Hemigenia* sp. Cue (K.F. Kenneally 47A)	*Hemigenia* sp. Cue (K.F. Kenneally 47A) is more recently known as *Hemigenia benthamii*
HEMBOT	*Hemigenia botryphylla* *Hemigenia* sp. Jibberding (J. D'Alonzo 418) *Hemigenia* ?sp. Jibberding (J. D'Alonzo 418)	*Hemigenia* sp. Jibberding (J. D'Alonzo 418) is more recently known as *Hemigenia botryphylla*
HEMYAL	*Hemigenia macphersonii* *Hemigenia* ?*sp. Yuna (A.C. Burns 95)* *Hemigenia yalgensis*	*Hemigenia yalgensis* formally described in 2015, is morphologically similar to *H. macphersonii*
HIBGLO	*Hibbertia glomerosa* *Hibbertia glomerosa* var. *glomerosa*	*Hibbertia glomerosa* var. *glomerosa* is more recently known as *Hibbertia glomerosa*
HYSSETSE	*Baeckea benthamii* ms *Baeckea* sp. Wanarra (M.E. Trudgen MET 5376) *Hysterobaeckea setifera* subsp. *setifera*	*Baeckea benthamii* ms and *Baeckea* sp. Wanarra (M.E. Trudgen MET 5376) are more recently known as *Hysterobaeckea setifera* subsp. *setifera*
JACACI	*Jacksonia acicularis* *Jacksonia* ?*acicularis*	Likely represent the same entity
KERVEL	*Keraudrenia velutina* *Keraudrenia velutina* subsp. *velutina*	Likely represent the same entity (note: *Keraudrenia velutina* subsp. *velutina* is more recently known as *Seringia velutina*)
LEPSP.	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) *Lepidosperma* sp. (A. Markey & S. Dillon 3468) *Lepidosperma* ?sp. Blue Hills (A. Markey & S. Dillon 3468) *Lepidosperma* sp. Karara BIF *Lepidosperma* sp. Karara (H. Pringle 3865)	IDs of entities revised to *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (PERTH 07351046, PERTH 08754357)
MAIGEO	*Maireana georgei* *Maireana* ?*georgei*	Likely represent the same entity
MAIPLA	*Maireana planifolia* *Maireana* ?*planifolia*	Likely represent the same entity
MAITOM	*Maireana tomentosa* *Maireana* ?*tomentosa* *Maireana tomentosa* subsp. *tomentosa*	Likely represent the same entity
MELACU	*Melaleuca acutifolia* *Melaleuca lateriflora* subsp. *acutifolia*	*Melaleuca lateriflora* subsp. *acutifolia* is more recently known as *Melaleuca acutifolia*
MELHAM	*Melaleuca hamata* *Melaleuca* ?*hamata*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
MICTRU	*Micromyrtus trudgenii* *Micromyrtus* sp. Warriedar (S. Patrick 1879A)	*Micromyrtus* sp. Warriedar (S. Patrick 1879A) is more recently known as *Micromyrtus trudgenii*
MIRBUR	*Mirbelia bursarioides* ms *Mirbelia* sp. Bursarioides (T.R. Lally 760)	*Mirbelia bursarioides* ms is more recently known as *Mirbelia* sp. Bursarioides (T.R. Lally 760)
MIRMIC	*Mirbelia microphylla* *Mirbelia* ?*microphylla*	Likely represent the same entity
OLEHUM	*Minuria cunninghamii* *Olearia humilis*	*Minuria cunninghamii* not known from the Karara area; likely a misidentification of *Olearia humilis*
OLESP.	*Olearia dampieri* ms *Olearia dampieri* subsp. ?*dampieri* *Olearia dampieri* subsp. *eremicola* ms *Olearia* sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)	*Olearia dampieri* subsp. *dampieri* is more recently known as *Olearia* sp. Kennedy Range (G. Byrne 66), and *Olearia dampieri* subsp. *eremicola* ms is more recently known as *Olearia dampieri* subsp. *Eremicola* (Diels & Pritzel s.n. PERTH 00449628). The distinguishing characters of *Olearia* sp. Kennedy Range (G. Byrne 66) and *Olearia dampieri* subsp. Eremicola (Diels & Pritzel s.n. PERTH 00449628) are not clear
PHIDES	*Philotheca deserti* *Philotheca deserti* subsp. *deserti*	*Philotheca deserti* subsp. *deserti* is the only subspecies known from the Karara area
PIMMIC	*Pimelea microcephala* *Pimelea microcephala* subsp. *microcephala* *Pimelea* ?*microcephala* subsp. *microcephala*	Likely represent the same entity
PROPRO	*Prostanthera prostantheroides* *Wrixonia prostantheroides*	*Wrixonia prostantheroides* is more recently known as *Prostanthera prostantheroides*
PTIDIV	*Ptilotus divaricatus* *Ptilotus divaricatus* var. *divaricatus*	*Ptilotus divaricatus* var. *divaricatus* is more recently known as *Ptilotus divaricatus*
PTIDRU	*Ptilotus drummondii* *Ptilotus* ?*drummondii* *Ptilotus drummondii* var. *drummondii*	Varieties could not be consistently positively identified due to inadequate material
PTIOBO	*Ptilotus obovatus* *Ptilotus obovatus* var. *obovatus*	*Ptilotus obovatus* var. *obovatus* is the only subspecies known from the Karara area
RHADRU	*Rhagodia drummondii* *Rhagodia* ?*drummondii*	Likely represent the same entity
RHAPRE	*Rhagodia preissii* *Rhagodia* ?*preissii* subsp. *preissii*	Likely represent the same entity
ROEAURAU	*Roepera aurantiaca* subsp. *aurantiaca* *Zygophyllum aurantiacum* *Zygophyllum* ?*aurantia*cum	*Zygophyllum aurantiacum* is more recently known as *Roepera aurantiaca*
ROEERE	*Roepera eremaea* *Zygophyllum eremaeum*	*Zygophyllum eremaeum* is more recently known as *Roepera eremaea*
ROEOVA	*Roepera ovata* *Zygophyllum ovatum*	*Zygophyllum ovatum* is more recently known as *Roepera ovata*
SCLGAR	*Sclerolaena gardneri* *Sclerolaena* ?*gardneri*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
SENART1	*Senna artemisioides* subsp. x *petiolaris* *Senna* sp. Austin (A. Strid 20210)	Taxa could not be consistently positively identified due to inadequate material
SENGLUCH	*Senna ?stricta* *Senna glutinosa* subsp. *chatelainiana* *Senna ?glutinosa* subsp. *chatelainiana*	*Senna stricta* not known from the Karara area; likely a misidentification of *Senna glutinosa* subsp. *chatelainiana*
SENSTO	*Senna cardiosperma* *Senna stowardii*	*Senna cardiosperma* not known from Karara area; these records likely attributable to *Senna stowardii*
SIDSP.	*Sida atrovirens* ms *Sida ?calyxhymenia* *Sida* sp. dark green fruits (S. van Leeuwen 2260) *Sida* ?sp. dark green fruits (S. van Leeuwen 2260)	*Sida atrovirens* ms is more recently known as *Sida* sp. dark green fruits (S. van Leeuwen 2260). The phrase name '*Sida* sp. dark green fruits (S. van Leeuwen 2260)' was raised following completion of the survey during which '*Sida* ?*calyxhymenia*' was recorded
SOLCLE	*Solanum cleistogamum* *Solanum ellipticum* *Solanum ?ellipticum*	*Solanum ellipticum* is an excluded name; these records likely attributable to *Solanum cleistogamum*
STYSER	*Astroloma serratifolium* *Styphelia serratifolia* s. lat.	*Astroloma serratifolium* is more recently known as *Styphelia serratifolia*
TECDIS	*Sclerostegia disarticulata* *Tecticornia disarticulata*	*Sclerostegia disarticulata* is more recently known as *Tecticornia disarticulata*
TECFIM	*Halosarcia fimbriata* *Tecticornia fimbriata*	*Halosarcia fimbriata* is more recently known as *Tecticornia fimbriata*
TECHAL	*Halosarcia halocnemoides* *Halosarcia halocnemoides* subsp. ?*halocnemoides* *Tecticornia ?halocnemoides* *Tecticornia* sp. 'Karara 1'	*Halosarcia halocnemoides* is more recently known as *Tecticornia halocnemoides.* *Tecticornia* sp. 'Karara 1' forms part of the *T.* aff. *halocnemoides* 'tuberculate seed' species aggregate
TECINDBI	*Halosarcia indica* subsp. *bidens* Halosarcia *indica* subsp. *bidens* *Tecticornia indica* subsp. ?*bidens*	*Halosarcia indica* subsp. *bidens* is more recently known as *Tecticornia indica* subsp. *bidens*
TECPEL	*Tecticornia peltata* *Tecticornia ?peltata*	Likely represent the same entity
TECPER	*Halosarcia pergranulata* subsp. *pergranulata* *Halosarcia ?pergranulata* subsp. *pergranulata* *Tecticornia pergranulata*	*Halosarcia pergranulata* subsp. *pergranulata* is more recently known as *Tecticornia pergranulata* subsp. *pergranulata*
VINLIN	*Rhyncharrhena linearis* *Vincetoxicum lineare*	*Rhyncharrhena linearis* is more recently known as *Vincetoxicum lineare*
XANKOC	*Xanthosia bungei* *Xanthosia kochii*	*Xanthosia bungei* is more recently known as *Xanthosia kochii*

Omitted Names

Taxon	Reasoning
Acacia* ?*nigripilosa* subsp. *nigripilosa	Indeterminate
***Acacia* sp.**	Indeterminate
***Amphipogon* sp.**	Indeterminate
?*Anthericaceae* sp.	Indeterminate
?*Anthocercis genistoides*	Indeterminate
Anthosachne scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
?*Arthropodium dyeri*	Indeterminate
***Atriplex* sp.**	Indeterminate
Austrodanthonia caespitosa	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrodanthonia* ?*caespitosa	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrodanthonia setacea	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Austrodanthonia* sp.**	Indeterminate
?*Austrodanthonia* sp.	Indeterminate
***Austrodanthonia* sp. Goomalling (A.G. Gunness et al. OAKP 10/63)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa eremophila	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa flavescens	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa hemipogon	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa nitida	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa* ?*nitida	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa nodosa	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa* ?*nodosa	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa* ?*scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa scabra* subsp. *scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Austrostipa* sp.**	Indeterminate
Austrostipa* ?*tenuifolia	Unable to be consistently identified across seasons – identification possible only when flowering material present

Taxon	Reasoning
Austrostipa trichophylla	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa variabilis	Unable to be consistently identified across seasons – identification possible only when flowering material present
Burchardia congesta	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caesia micrantha	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* sp. Wongan (K.F. Keneally 8820)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* ?sp. Wongan (K.F. Keneally 8820)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* sp.**	Unable to be consistently identified across seasons – identification possible only when flowering material present
Caladenia hirta* subsp. *rosea	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia petrensis	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia remota	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia roei	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Calandrinia translucens	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Calytrix* ?*oldfieldii	Indeterminate; *Calytrix oldfieldii* not known from the Karara area, and it is not known what this entity may be referrable to
***Cassytha* sp.**	Indeterminate
?Chamaexeros macranthera	Indeterminate
Cheilanthes adiantoides	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes ?adiantoides	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes brownii	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes sieberi	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes ?sieberi	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes sieberi* subsp. *sieberi	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Dichopogon* sp.**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present

Taxon	Reasoning
Dichopogon* ?*tyleri	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Dioscorea hastifolia	Geophyte, unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera bulbosa	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera bulbosa* subsp. *bulbosa	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera eremaea	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera macrantha	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera macrantha* subsp. *eremaea	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera macrantha* subsp. *macrantha	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Drosera* sp. Branched styles (S.C. Coffey 193)**	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Drosera* sp.**	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Drosera* sp. climbing**	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Elymus scaber	Unable to be consistently identified across seasons – identification possible only when flowering material present
?Enchylaena lanata	Indeterminate
?Enchylaena tomentosa	Indeterminate
?Enchylaena tomentosa* var. *tomentosa	Indeterminate
Eragrostis falcata	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Eremophila* sp.**	Indeterminate
Ericksonella saccharata	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Eucalyptus* ?*sargentii	Indeterminate; *Eucalyptus sargentii* revised, no longer known from the Karara area
***Eucalyptus* sp.**	Indeterminate
***Grevillea* sp.**	Indeterminate
Halgania* ?*cyanea* var. *cyanea	Indeterminate
***Halosarcia* sp.**	Indeterminate
***?Hemigenia* sp.**	Indeterminate
Hibbertia* ?*huegelii	Indeterminate; *Hibbertia huegelii* not known from the Karara area, and it is not known what this entity may be referrable to
?Hybanthus floribundus* subsp. *floribundus	Indeterminate

Taxon	Reasoning
Hypoxis glabella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Isotoma petraea	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
?*Liliaceae* sp.	Indeterminate
***Maireana planifolia* x *villosa* (A. Markey & S. Dillon 3482)**	Hybrid
?*Maireana brevifolia*	Indeterminate
?*Maireana georgei*	Indeterminate
?*Maireana tomentosa* subsp. *tomentosa*	Indeterminate
***Maireana* sp.**	Indeterminate
?*Malleostemon hursthousei*	Indeterminate
?*Marsdenia australis*	Indeterminate
***Melaleuca nematophylla* x**	Hybrid
Ophioglossum lusitanicum	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
'opp 12 prostrate crenulate'	Indeterminate
?*Orobanchaceae* sp.	Indeterminate
Pauridia glabella* var. *glabella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Phebalium lepidotum* x *tuberculosum	Hybrid
Pheladenia deformis	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Pleurosorus rutifolius	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Pterostylis setulosa	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Pterostylis* sp. inland (A.C. Beauglehole 11880)**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present.
Rytidosperma caespitosum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Rytidosperma* ?*caespitosum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Rytidosperma setaceum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Scholtzia* aff. *capitata	Indeterminate
***Scholtzia* sp.**	Indeterminate
***Sclerolaena* sp.**	Indeterminate
?*Sclerolaena* sp.	Indeterminate
Senna artemisioides* subsp. x *artemisioides	Hybrid
***Stylidium* sp.**	Indeterminate

Taxon	Reasoning
Stylidium warriedarense	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Stylidium ?warriedarense	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Tecticornia* sp. 'Karara 2'**	Indeterminate
***Tecticornia* sp. 'Karara 3'**	Indeterminate
***Tecticornia* sp. 'Karara 4'**	Indeterminate
Thelymitra petrophila	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thyridolepis multiculmis	Unable to be consistently identified across seasons – identification possible only when flowering material present
Thysanotus manglesianus	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus ?manglesianus	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus patersonii	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus pyramidalis	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus speckii	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Thysanotus* sp.**	Indeterminate
Tricoryne ?elatior	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Tricoryne soullierae* (P3)**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Tricoryne ?tenella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Tricoryne tuberosa	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
?*Verticordia* sp.	Indeterminate
Wurmbea densiflora	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea ?densiflora	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea dilatata	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea flavanthera	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea tenella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present

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Grouped Names

Grouped Code	Taxa	Reasoning for Grouping
ABUCRY	*Abutilon cryptopetalum* *Abutilon* ?*cryptopetalum*	Likely represent the same entity
ABUOXYPR	*Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266) *Abutilon* ?*oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)	Likely represent the same entity
ACAANE	*Acacia aneura* *Acacia aneura* var. ?*aneura* *Acacia* cf. *aneura* var. *aneura* *Acacia aneura* var. *argentea* *Acacia aneura* var. ?*argentea* *Acacia aneura* var. ?*fuliginea* *Acacia aneura* var. ?*intermedia* *Acacia* cf. *aneura* var. *major* *Acacia aneura* var. *microcarpa* *Acacia aneura* var. ?*microcarpa* *Acacia* cf. *aneura* var. *tenuis* *Acacia craspedocarpa* *Acacia* ?*craspedocarpa* *Acacia minyura* *Acacia* ?*minyura*	Taxa part of the Mulga group (see **Section 3.6.1**)
ACABUR	*Acacia acuminata* *Acacia burkittii*	Taxa could not be consistently positively identified due to inadequate material
ACACOO	*Acacia coolgardiensis* *Acacia effusifolia* *Acacia* ?*effusifolia* *Acacia incognita* *Acacia latior* *Acacia* ?*latior* *Acacia mulganeura* *Acacia* sp. nov 2 (gind_21-1)	Taxa part of the '*A. coolgardiensis* group', and sometimes sympatric/parapatric with other group members. *A. effusifolia* and *A. latior* previously treated as subspecies of *A. coolgardiensis* (*A. coolgardiensis* subsp. *effusa* and *A. coolgardiensis* subsp. *latior*, respectively). The ID of entity '*Acacia* sp. nov 2 (gind_21-1)' has been updated to *A. incognita* (PERTH 07424442)
ACAEXO	*Acacia exocarpoides* *Acacia* ?*exocarpoides*	Likely represent the same entity
ACAKAR	*Acacia karina* *Acacia karinae*	*Acacia karina* is incorrectly spelt; referrable to *Acacia karinae*
ACAMAS	*Acacia masliniana* *Acacia* ?*masliniana*	Likely represent the same entity
ACARAM	*Acacia ramulosa* *Acacia ramulosa* var. *linophylla* *Acacia ramulosa* var. *ramulosa* *Acacia* ?*ramulosa* var. *ramulosa*	Varieties could not be consistently positively identified due to inadequate material
ACASIB	*Acacia sibina* *Acacia* ?*sibina*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
ALLACUPR	*Allocasuarina acutivalvis* subsp. *prinsepiana* *Allocasuarina* ?*acutivalvis* subsp. *prinsepiana*	Likely represent the same entity
AMPCARCA	*Amphipogon caricinus* var. *caricinus* *Amphipogon* ?*caricinus* var. *caricinus*	Likely represent the same entity
ATRBUN	*Atriplex bunburyana* *Atriplex* ?*bunburyana*	Likely represent the same entity
ATRVES	*Atriplex vesicaria* *Atriplex* ?*vesicaria*	Likely represent the same entity
CHASP.1	*Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100) *Chamelaucium* ?sp. Warriedar (A.P. Brown & S. Patrick APB 1100)	Likely represent the same entity
COMINT	*Comesperma integerrimum* *Comesperma* ?*integerrimum* *Comesperma volubile*	*Comesperma volubile* and *C. integerrimum* can be difficult to differentiate in the absence of flowering material
DODINA	*Dodonaea inaequifolia* *Dodonaea* ?*inaequifolia*	Likely represent the same entity
DODPET	*Dodonaea petiolaris* *Dodonaea* ?*petiolaris*	Likely represent the same entity
DRUFUL	*Drummondita fulva* *Drummondita microphylla*	*Drummondita fulva* and *D. microphylla* are closely related and can be difficult to distinguish if material is inadequate
ENCLAN	*Enchylaena lanata* *Enchylaena* ?*lanata*	Likely represent the same entity
ERECAP	*Eremophila caperata* *Eremophila* ?*caperata*	Likely represent the same entity
ERECLA	*Eremophila clarkei* *Eremophila* ?*clarkei*	Likely represent the same entity
EREERI	*Eremophila eriocalyx* *Eremophila* ?*eriocalyx*	Likely represent the same entity
EREFORFO	*Eremophila forrestii* *Eremophila forrestii* subsp. *forrestii* *Eremophila* ?*forrestii* subsp. *forrestii*	*Eremophila forrestii* subsp. *forrestii* is the only subspecies known from the Karara area
EREGEO	*Eremophila georgei* *Eremophila* ?*georgei*	Likely represent the same entity
EREOLDOL	*Eremophila oldfieldii* subsp. *oldfieldii* *Eremophila* ?*oldfieldii* subsp. *oldfieldii*	Likely represent the same entity
EREPLAPL	*Eremophila platycalyx* subsp. *platycalyx* *Eremophila* ?*platycalyx* subsp. *platycalyx*	Likely represent the same entity
ERESPU	*Eremophila spuria* *Eremophila* ?*spuria*	Likely represent the same entity
EUCARC	*Eucalyptus arctata* *Eucalyptus leptopoda* subsp. *arctata* *Eucalyptus* ?*leptopoda* subsp. *arctata*	*Eucalyptus leptopoda* subsp. *arctata* is more recently known as *Eucalyptus arctata*
EUCCLE	*Eucalyptus clelandiorum* *Eucalyptus* ?*clelandiorum*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
EUCKOCAM	*Eucalyptus kochii* *Eucalyptus* ?*kochii* *Eucalyptus kochii* subsp. *amaryssia* *Eucalyptus kochii* subsp. *borealis* *Eucalyptus kochii* subsp. ?*borealis* *Eucalyptus kochii* subsp. *plenissima* *Eucalyptus kochii* subsp. ?*plenissima* *Eucalyptus* ?*kochii* subsp. *plenissima*	Subspecies could not be consistently positively identified due to inadequate material
EUCSAL	*Eucalyptus salubris* *Eucalyptus* ?*salubris*	Likely represent the same entity
GREEXT	*Grevillea extorris* *Grevillea* ?*extorris*	Likely represent the same entity
GREGLO	*Grevillea globosa* *Grevillea* ?*globosa*	Likely represent the same entity
GREHAKST	*Grevillea hakeoides* subsp. *stenophylla* *Grevillea* ?*hakeoides* subsp. *stenophylla*	Likely represent the same entity
GREOBLOB	*Grevillea obliquistigma* subsp. *obliquistigma* *Grevillea* ?*obliquistigma* subsp. *obliquistigma*	Likely represent the same entity
GRESUB	*Grevillea subtiliflora* *Grevillea* ?*subtiliflora*	Likely represent the same entity
HEMBEN	*Hemigenia benthamii* *Hemigenia* ?*benthamii*	Likely represent the same entity
HEMBOT	*Hemigenia botryphylla* *Hemigenia* ?*botryphylla*	Likely represent the same entity
HEMYAL	*Hemigenia yalgensis* *Hemigenia* ?*yalgensis*	Likely represent the same entity
HIBGLO	*Hibbertia glomerosa* *Hibbertia glomerosa* var. *glomerosa*	*Hibbertia glomerosa* var. *glomerosa* is more recently known as *Hibbertia glomerosa*
HOMTHR	*Homalocalyx thryptomenoides* *Homalocalyx* ?*thryptomenoides*	Likely represent the same entity
HYBFLOCU	*Hybanthus floribundus* subsp. *curvifolius* *Hybanthus floribundus* subsp. ?*curvifolius*	*Hybanthus floribundus* subsp. *curvifolius* is more recently known as *Pigea curvifolia*. Likely represent the same entity
MAICAR	*Maireana carnosa* *Maireana* ?*carnosa*	Likely represent the same entity
MAICON	*Maireana convexa* *Maireana* ?*convexa*	Likely represent the same entity
MAIGEO	*Maireana georgei* *Maireana* ?*georgei*	Likely represent the same entity
MAIPLA	*Maireana planifolia* *Maireana* ?*planifolia*	Likely represent the same entity
MAITOMTO	*Maireana tomentosa* subsp. *tomentosa* *Maireana* ?*tomentosa* subsp. *tomentosa*	Likely represent the same entity
MAITRI	*Maireana triptera* *Maireana* ?*triptera*	Likely represent the same entity
MAITRI1	*Maireana trichoptera* *Maireana* ?*trichoptera*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
MELBAR	*Melaleuca barlowii* *Melaleuca* ?*barlowii*	Likely represent the same entity
MELHAM	*Melaleuca hamata* *Melaleuca* ?*hamata* *Melaleuca* ?*uncinata*	Records previously attributed to *Melaleuca uncinata* in the region now considered to be *Melaleuca hamata*
MIRDEP	*Mirbelia depressa* *Mirbelia* ?*depressa*	Likely represent the same entity
MIRMIC	*Mirbelia microphylla* *Mirbelia* ?*microphylla*	Likely represent the same entity
MIRSP.	*Mirbelia* sp. Bursarioides (T.R. Lally 760) *Mirbelia* ?sp. Bursarioides (T.R. Lally 760)	Likely represent the same entity
OLEHUM	*Minuria cunninghamii* *Olearia humilis*	*Minuria cunninghamii* not known from the Karara area; likely a misidentification of *Olearia humilis*
OLESP	*Olearia* sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628) *Olearia* ?sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628) *Olearia* sp. Kennedy Range (G. Byrne 66)	The distinguishing characters of *Olearia* sp. Kennedy Range (G. Byrne 66) and *Olearia* sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628) are not clear
PIMFOR	*Pimelea forrestiana* *Pimelea* ?*forrestiana*	Likely represent the same entity
PIMMICMI	*Pimelea microcephala* subsp. *microcephala* *Pimelea* ?*microcephala* subsp. *microcephala*	Likely represent the same entity
PIMSPITH	*Pimelea spiculigera* var. *thesioides* *Pimelea* ?*spiculigera* var. *thesioides*	Likely represent the same entity
PTIBEN	*Ptilotus benlii* *Ptilotus* ?*benlii*	Likely represent the same entity
PTIDRU	*Ptilotus drummondii* *Ptilotus drummondii* var. *drummondii*	Varieties could not be consistently positively identified due to inadequate material
PTIHOL	*Ptilotus holosericeus* *Ptilotus* ?*holosericeus*	Likely represent the same entity
PTIOBOOB	*Ptilotus obovatus* *Ptilotus obovatus* var. *obovatus*	*Ptilotus obovatus* var. *obovatus* is the only subspecies known from the Karara area
ROEAUR	*Roepera aurantiaca* *Roepera aurantiaca* subsp. *aurantiaca*	*Roepera aurantiaca* subsp. *aurantiaca* is the only subspecies known from WA
ROEERE	*Roepera eremaea* *Roepera* ?*eremaea*	Likely represent the same entity
SCLDEN	*Sclerolaena densiflora* *Sclerolaena* ?*densiflora*	Likely represent the same entity
SCLGAR	*Sclerolaena gardneri* *Sclerolaena* ?*gardneri*	Likely represent the same entity
SENARTPE	*Senna artemisioides* subsp. *x petiolaris* *Senna* sp. Austin (A. Strid 20210)	Taxa could not be consistently positively identified due to inadequate material
SERVEL	*Seringia velutina* *Seringia* ?*velutina*	Likely represent the same entity

Grouped Code	Taxa	Reasoning for Grouping
SIDSP.	*Sida* ?*calyxhymenia* *Sida* sp. dark green fruits (S. van Leeuwen 2260) *Sida* ?sp. dark green fruits (S. van Leeuwen 2260)	The phrase name '*Sida* sp. dark green fruits (S. van Leeuwen 2260)' was raised following completion of the survey during which '*Sida* ?*calyxhymenia*' was recorded
SIDSP.2	*Sida* sp. Excedentifolia (J.L. Egan 1925) *Sida* ?sp. Excedentifolia (J.L. Egan 1925) *Sida* ?sp. Golden calyces glabrous (H.N. Foote 32)	*Sida* sp. Excedentifolia (J.L. Egan 1925) is a misidentification of *Sida* sp. Golden calyces glabrous (H.N. Foote 32)
SOLCLE	*Solanum cleistogamum* *Solanum* ?*cleistogamum*	Likely represent the same entity
SOLLAS	*Solanum lasiophyllum* *Solanum* ?*lasiophyllum*	Likely represent the same entity
STYSER	*Styphelia serratifolia* *Styphelia serratifolia* s. lat.	*Styphelia serratifolia* undergoing taxonomic revision
SWAAFF	*Swainsona affinis* *Swainsona* ?*affinis*	Likely represent the same entity
TECHAL	*Tecticornia* ?*halocnemoides* *Tecticornia* sp. 'Karara 1'	*Tecticornia* sp. 'Karara 1' forms part of the *T.* aff. *halocnemoides* 'tuberculate seed' species aggregate

Omitted Names

Taxon	Reasoning
***Acacia* cf. *kalgoorliensis* (A. Markey & S. Dillon 3478)**	Indeterminate; currently lodged at WA Herbarium as *Acacia* sp. (PERTH 07350783)
Acacia latior* x *effusifolia	Hybrid
***Acacia* sp. nov 1 (gind_24-2)**	Indeterminate
***Acacia* sp.**	Indeterminate
Acacia* ?x *effusifolia	Indeterminate
Acacia* ?x *latior	Indeterminate
Amphibromus nervosus	Unable to be consistently identified across seasons – identification possible only when flowering material present
Anthosachne scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
Aristida contorta	Unable to be consistently identified across seasons – identification possible only when flowering material present
Aristida* ?*holathera	Unable to be consistently identified across seasons – identification possible only when flowering material present
Arthropodium* ?*curvipes	Unable to be consistently identified across seasons – identification possible only when flowering material present
Arthropodium dyeri	Unable to be consistently identified across seasons – identification possible only when flowering material present
?*Arthropodium dyeri*	Indeterminate
?Asparagaceae sp.	Indeterminate
Asplenium subglandulosum	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Atriplex* sp.**	Indeterminate
Austrostipa blackii	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa eremophila	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa hemipogon	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa nitida	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa scabra* subsp. *scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa* ?*scabra	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Austrostipa* sp.**	Indeterminate
?*Austrostipa* sp.	Indeterminate
Austrostipa* ?*tenuifolia	Unable to be consistently identified across seasons – identification possible only when flowering material present
Austrostipa trichophylla	Unable to be consistently identified across seasons – identification possible only when flowering material present

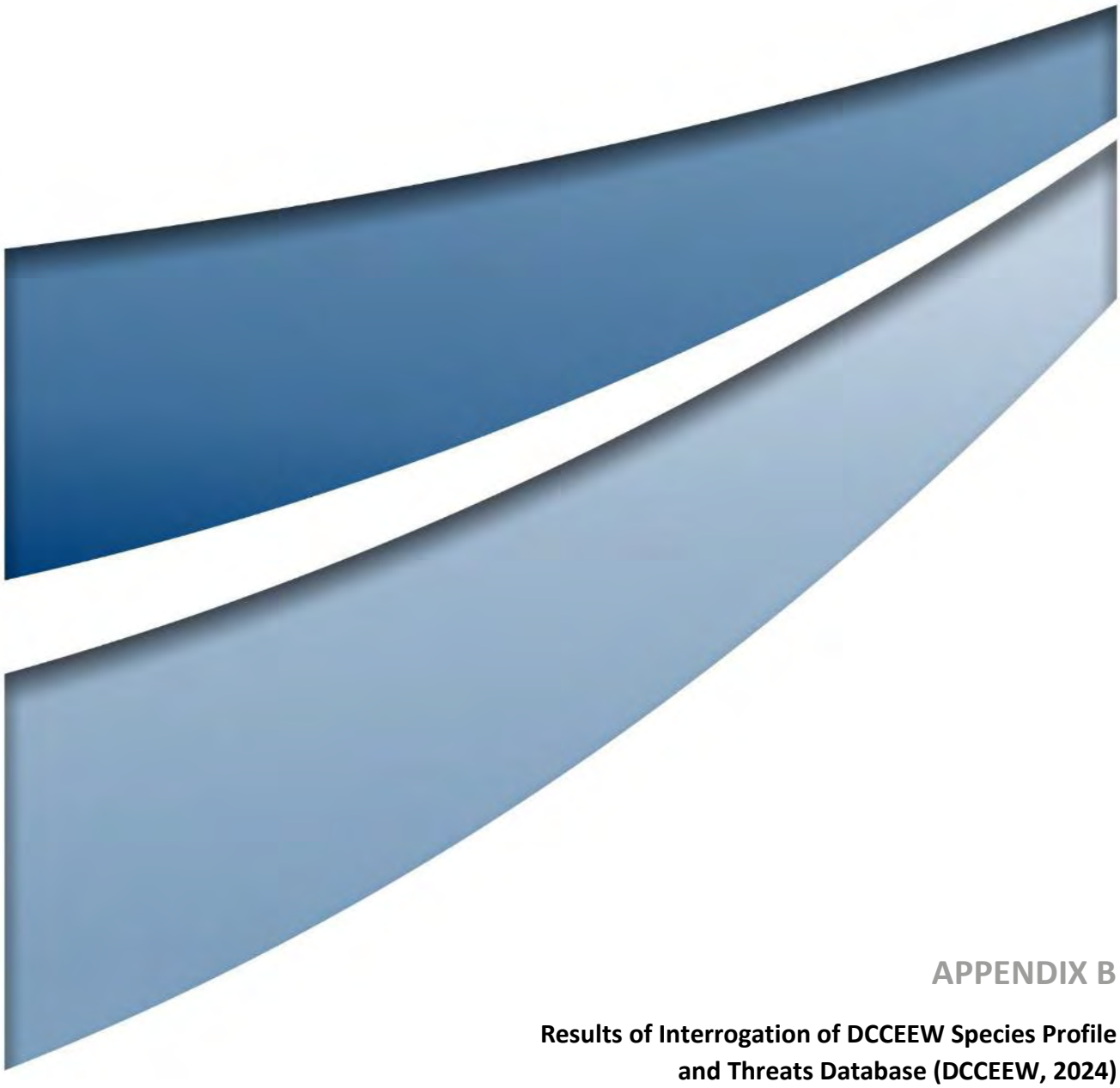
Taxon	Reasoning
Austrostipa* ?*trichophylla	Unable to be consistently identified across seasons – identification possible only when flowering material present
?*Austrostipa trichophylla*	Indeterminate
Austrostipa variabilis	Unable to be consistently identified across seasons – identification possible only when flowering material present
Caesia micrantha	Unable to be consistently identified across seasons – identification possible only when flowering material present
Caesia* ?*micrantha	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* sp.**	Indeterminate
?*Caesia* sp.	Indeterminate
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* sp. Wongan (K.F. Kenneally 8820)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Caesia* ?sp. Wongan (K.F. Keneally 8820)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
Caladenia hirta* subsp. *rosea	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia petrensis	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia remota* subsp. *remota	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Caladenia roei	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Calandrinia translucens	Ephemeral
***Cassytha* sp.**	Indeterminate
***Chamelaucium* sp.**	Indeterminate
Cheilanthes adiantoides	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes* ?*adiantoides	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes brownii	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes lasiophylla	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Cheilanthes* cf. *lasiophylla* X *sieberi* (A. Markey & S. Dillon 3048)**	Indeterminate
Cheilanthes sieberi* subsp. *sieberi	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Cheilanthes* ?*sieberi	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Cheilanthes* sp.**	Indeterminate
***Corchorus* sp.**	Indeterminate

Taxon	Reasoning
***?Cryptandra* sp.**	Indeterminate
***Cyanicula fragrans* (P3)**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Dichopogon ?tyleri	*Dichopogon tyleri* not known from the Karara area. Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Dichopogon tyleri	*Dichopogon tyleri* not known from the Karara area. Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Dichopogon* sp.**	Indeterminate
***?Dichopogon* sp.**	Indeterminate
Dioscorea hastifolia	Geophyte, unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera bulbosa* subsp. *bulbosa	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera eremaea	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Drosera macrantha	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Drosera* sp. Branched styles (S.C. Coffey 193)**	Unable to be consistently identified across seasons – identification possible only when above-ground material present
***Drosera* sp.**	Indeterminate
Enchylaena ?lanata* x *Maireana georgei	Hybrid
Enchylaena tomentosa* var. *tomentosa* x *Maireana georgei	Hybrid
Enchylaena tomentosa* x *Maireana georgei	Hybrid
?Enchylaena lanata	Indeterminate
?Enchylaena tomentosa* var. *tomentosa	Indeterminate
?Enekbatus stowardii	Indeterminate
Eragrostis ?dielsii	Unable to be consistently identified across seasons – identification possible only when flowering material present
Eragrostis falcata	Unable to be consistently identified across seasons – identification possible only when flowering material present
Eragrostis ?falcata	Unable to be consistently identified across seasons – identification possible only when flowering material present
Eremophila latrobei* x *forrestii	Hybrid
***Eremophila* sp.**	Indeterminate
?Ericaceae sp.	Indeterminate
Ericksonella saccharata	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Eucalyptus* sp.**	Indeterminate
***Grevillea* sp.**	Indeterminate

Taxon	Reasoning
Hemigenia ?buccinata	Identification unlikely but cannot be updated or amalgamated without examining original specimen material
Isotoma petraea	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Lawrencia* sp.**	Indeterminate
Maireana planifolia* x *villosa	Hybrid
Maireana villosa* x *planifolia	Hybrid
***Maireana* sp.**	Indeterminate
?Maireana carnosa	Indeterminate
?Maireana georgei	Indeterminate
?Maireana thesioides	Indeterminate
?Malleostemon roseus	Indeterminate
?Marsdenia australis	Indeterminate
***Melaleuca nematophylla* x**	Hybrid
***Melaleuca* sp.**	Indeterminate
Ophioglossum lusitanicum	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Pauridia glabella* var. *glabella	Unable to be consistently identified across seasons – identification possible only when above-ground material present
Phebalium lepidotum* x *tuberculosum	Hybrid
***Phebalium* sp.**	Indeterminate
Pheladenia deformis	Unable to be consistently identified across seasons – identification possible only when above-ground material present
?Pimelea microcephala* subsp. *microcephala	Indeterminate
Prostanthera ?althoferi* subsp. *althoferi* x *campbellii	Hybrid
?Prostanthera prostantheroides	Indeterminate
Pterostylis setulosa	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Pterostylis* sp. scooped sepals (G. Brockman GBB386)**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Pterostylis spathulata	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Ptilotus nobilis	Taxon revised and no longer occurs in the Karara area. These records attributable to Ptilotus exaltatus
?Rhagodia drummondii	Indeterminate
Rytidosperma caespitosum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Rytidosperma ?caespitosum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Rytidosperma setaceum	Unable to be consistently identified across seasons – identification possible only when flowering material present

Taxon	Reasoning
Rytidosperma* ?*setaceum	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Rytidosperma* sp. Goomalling (A.G. Gunness et al. OAKP 10/63)**	Unable to be consistently identified across seasons – identification possible only when flowering material present
***Rytidosperma* sp.**	Indeterminate
***Sclerolaena* sp.**	Indeterminate
?*Sclerolaena* sp.	Indeterminate
Senna artemisioides* subsp. x *artemisioides	Hybrid
Senna artemisioides* subsp. x *sturtii	Hybrid
***Sida* sp.**	Indeterminate
Stylidium longibracteatum	Unable to be consistently identified across seasons – identification possible only when flowering material present
Stylidium warriedarense	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Stylidium* ?*warriedarense	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Tecticornia* sp.**	Indeterminate
***Tecticornia* sp. 'Karara 3'**	Indeterminate
***Tecticornia* sp. 'Karara 4'**	Indeterminate
Thelymitra petrophila	Unable to be consistently identified across seasons – identification possible only when flowering material present
Thysanotus manglesianus	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus* ?*manglesianus	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus patersonii	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus pyramidalis	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus rectantherus	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Thysanotus speckii	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
***Thysanotus* sp.**	Indeterminate
?*Thysanotus* sp.	Indeterminate
***Tricoryne soullierae* (P3)**	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Tricoryne* ?*tenella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Tricoryne tuberosa	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present

Taxon	Reasoning
Wurmbea densiflora	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea ?densiflora	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea dilatata	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea flavanthera	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present
Wurmbea tenella	Unable to be consistently identified across seasons – identification possible only when above-ground and flowering material present



APPENDIX B

Results of Interrogation of DCCEEW 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: 12-Jul-2024

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:	1
Listed Threatened Species:	84
Listed Migratory Species:	11

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:	17
Commonwealth Heritage Places:	None
Listed Marine Species:	16
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:	53
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	36
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Eucalypt Woodlands of the Western Australian Wheatbelt	Critically Endangered	Community likely to occur within area	In feature area

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	Buffer Status
BIRD			
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In buffer area only
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding known to occur within area	In feature area
MAMMAL			
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat may occur within area	In feature area
Lagostrophus fasciatus fasciatus Banded Hare-wallaby, Merrnine, Marnine, Munning [66664]	Vulnerable	Translocated population known to occur within area	In buffer area only
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Translocated population known to occur within area	In buffer area only
Parantechinus apicalis Dibbler [313]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Perameles bougainville](#) Shark Bay Bandicoot [278]	Endangered	Translocated population known to occur within area	In buffer area only
PLANT			
[Acacia aprica](#) Blunt Wattle [64821]	Endangered	Species or species habitat known to occur within area	In buffer area only
[Acacia cochlocarpa subsp. cochlocarpa](#) Spiral-fruited Wattle [23877]	Endangered	Species or species habitat may occur within area	In buffer area only
[Acacia imitans](#) Gibson Wattle [65211]	Endangered	Species or species habitat known to occur within area	In buffer area only
[Acacia recurvata](#) Recurved Wattle [64825]	Endangered	Species or species habitat known to occur within area	In buffer area only
[Acacia unguicula](#) a shrub [55592]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
[Acacia wilsonii](#) Wilson's Wattle [65228]	Endangered	Species or species habitat known to occur within area	In buffer area only
[Acacia woodmaniorum](#) Woodman's Wattle [85026]	Endangered	Species or species habitat known to occur within area	In feature area
[Andersonia gracilis](#) Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area	In buffer area only
[Androcalva adenothalia](#) [86389]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
[Caladenia hoffmanii](#) Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caladenia wanosa Kalbarri Spider-orchid [5878]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Caleana dixonii listed as Paracaleana dixonii Sandplain Duck Orchid [87944]	Endangered	Species or species habitat known to occur within area	In feature area
Chorizema humile Prostrate Flame Pea [32573]	Endangered	Species or species habitat known to occur within area	In feature area
Conostylis dielsii subsp. teres Irwin's Conostylis [3614]	Endangered	Species or species habitat known to occur within area	In buffer area only
Conostylis micrantha Small-flowered Conostylis [17635]	Endangered	Species or species habitat known to occur within area	In buffer area only
Darwinia chapmaniana Chapman's Bell [64877]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Darwinia masonii Mason's Darwinia [18538]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Darwinia polychroma Harlequin Bell [83192]	Endangered	Species or species habitat known to occur within area	In buffer area only
Dasymalla axillaris Native Foxglove [38829]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Daviesia bursarioides Three Springs Daviesia [56696]	Endangered	Species or species habitat known to occur within area	In buffer area only
Daviesia speciosa Beautiful Daviesia [56698]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eleocharis papillosa Dwarf Desert Spike-rush [2519]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Eremophila nivea Silky Eremophila [14431]	Endangered	Species or species habitat known to occur within area	In feature area
Eremophila resinosa Resinous Eremophila [11735]	Endangered	Species or species habitat may occur within area	In feature area
Eremophila rostrata Beaked Eremophila [65124]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Eremophila viscida Varnish Bush [2394]	Endangered	Species or species habitat likely to occur within area	In feature area
Eucalyptus beardiana Beard's Mallee [18933]	Vulnerable	Species or species habitat known to occur within area	In feature area
Eucalyptus crispata Yandanooka Mallee [24268]	Vulnerable	Species or species habitat known to occur within area	In feature area
Eucalyptus impensa Eneabba Mallee [56711]	Endangered	Species or species habitat may occur within area	In buffer area only
Eucalyptus johnsoniana Johnson's Mallee [14516]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Eucalyptus leprophloia Scaly Butt Mallee, Scaly-butt Mallee [56712]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eucalyptus pruiniramis Midlands Gum, Jingymia Gum [56403]	Endangered	Species or species habitat known to occur within area	In buffer area only
Eucalyptus rhodantha Rose Mallee [9362]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eucalyptus synandra Jingymia Mallee [3753]	Vulnerable	Species or species habitat known to occur within area	In feature area
Frankenia conferta Silky Frankenia [6074]	Endangered	Species or species habitat known to occur within area	In buffer area only
Gastrolobium hamulosum Hook-point Poison [9212]	Endangered	Species or species habitat likely to occur within area	In feature area
Glyceria drummondii Nangetty Grass [14008]	Endangered	Species or species habitat known to occur within area	In feature area
Grevillea christineae Christine's Grevillea [64520]	Endangered	Species or species habitat known to occur within area	In buffer area only
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Grevillea murex [22053]	Endangered	Species or species habitat known to occur within area	In feature area
Grevillea pythara Pythara Grevillea [64525]	Endangered	Species or species habitat likely to occur within area	In feature area
Gyrostemon reticulatus Net-veined Gyrostemon [8491]	Critically Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hakea megalosperma Lesueur Hakea [10505]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Hemiandra gardneri Red Snakebush [7945]	Endangered	Species or species habitat likely to occur within area	In feature area
Hemiandra rutilans Sargents Snakebush, Colourful Snakebush [17932]	Endangered	Species or species habitat may occur within area	In buffer area only
Hensmania chapmanii Chapman's Hensmania [10481]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Hybanthus cymulosus Ninghan Violet [2803]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Hypocalymma angustifolium subsp. Hutt River (S.Patrick 2982) [85023]	Endangered	Species or species habitat known to occur within area	In buffer area only
Jacksonia pungens Pungent Jacksonia [64920]	Endangered	Species or species habitat may occur within area	In buffer area only
Leucopogon marginatus Thick-margined Leucopogon [12527]	Endangered	Species or species habitat known to occur within area	In feature area
Leucopogon obtectus Hidden Beard-heath [19614]	Endangered	Species or species habitat known to occur within area	In buffer area only
Ricinocarpos brevis [82879]	Endangered	Species or species habitat may occur within area	In buffer area only
Roycea pycnophylloides Saltmat [21161]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Schoenia filifolia subsp. subulifolia Mingenew Everlasting [63904]	Endangered	Species or species habitat known to occur within area	In feature area
Stylidium amabile [85007]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Styphelia longissima [89333]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Tecticornia bulbosa Large-articled Samphire [82741]	Vulnerable	Species or species habitat known to occur within area	In feature area
Tetratheca nephelioides [83217]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat known to occur within area	In buffer area only
Verticordia albida White Featherflower [55635]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Verticordia spicata subsp. squamosa Scaly-leaved Featherflower [55822]	Endangered	Species or species habitat known to occur within area	In feature area
Wurmbea tubulosa Long-flowered Nancy [12739]	Endangered	Species or species habitat known to occur within area	In feature area
REPTILE			
Egernia stokesii badia Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat known to occur within area	In feature area
SHARK			
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only
SPIDER			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Idiosoma nigrum			
Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat known to occur within area	In feature area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Marine Species			
Pristis pristis			
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Migratory Terrestrial Species			
Motacilla cinerea			
Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Pandion haliaetus](#) Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

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

Commonwealth Land Name	State	Buffer Status
Unknown		
Commonwealth Land - [50651]	WA	In buffer area only
Commonwealth Land - [50393]	WA	In buffer area only
Commonwealth Land - [51493]	WA	In buffer area only
Commonwealth Land - [50879]	WA	In buffer area only
Commonwealth Land - [52116]	WA	In buffer area only
Commonwealth Land - [51930]	WA	In buffer area only
Commonwealth Land - [50391]	WA	In buffer area only
Commonwealth Land - [52006]	WA	In buffer area only
Commonwealth Land - [52021]	WA	In buffer area only
Commonwealth Land - [52014]	WA	In buffer area only
Commonwealth Land - [51996]	WA	In buffer area only
Commonwealth Land - [51511]	WA	In buffer area only
Commonwealth Land - [52012]	WA	In buffer area only
Commonwealth Land - [50392]	WA	In buffer area only
Commonwealth Land - [50810]	WA	In buffer area only
Commonwealth Land - [51999]	WA	In buffer area only
Commonwealth Land - [51998]	WA	In buffer area only

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area	In buffer area only
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat known to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In buffer area only

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Barnabinmah	Conservation Park	WA	In buffer area only
Barnong Pastoral Lease	NRS Addition - Gazettal in Progress	WA	In buffer area only
Beekeepers	Nature Reserve	WA	In buffer area only
Bowgada	Nature Reserve	WA	In buffer area only
Bowgarder	Nature Reserve	WA	In feature area

Protected Area Name	Reserve Type	State	Buffer Status
Canna	Nature Reserve	WA	In buffer area only
Caron	Nature Reserve	WA	In buffer area only
Charles Darwin	Conservation Reserve	WA	In buffer area only
Coalseam	Conservation Park	WA	In buffer area only
Depot Hill	Nature Reserve	WA	In buffer area only
Dookanooka	Nature Reserve	WA	In buffer area only
Doutha Soak	Nature Reserve	WA	In buffer area only
Kadathinni	Nature Reserve	WA	In buffer area only
Kadathinni - Part lot 3 on Plan 15105	NRS Addition - Gazettal in Progress	WA	In buffer area only
Kadji Kadji	NRS Addition - Gazettal in Progress	WA	In feature area
Karara	NRS Addition - Gazettal in Progress	WA	In feature area
Koolanooka	Nature Reserve	WA	In buffer area only
Koolanooka Dam	Nature Reserve	WA	In buffer area only
Lochada	NRS Addition - Gazettal in Progress	WA	In feature area
Mingenew	Nature Reserve	WA	In buffer area only
Mount Nunn	Nature Reserve	WA	In buffer area only
Mt Gibson	Private Nature Reserve	WA	In buffer area only
Mungada Ridge	National Park	WA	In feature area
Ninghan	Indigenous Protected Area	WA	In buffer area only
NTWA Bushland covenant (0084)	Conservation Covenant	WA	In buffer area only
NTWA Bushland covenant (0101)	Conservation Covenant	WA	In buffer area only
Pintharuka	Nature Reserve	WA	In buffer area only
Pintharuka Well	Nature Reserve	WA	In buffer area only
Sweetman	Nature Reserve	WA	In buffer area only
Tathra	National Park	WA	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Thundelarra	NRS Addition - Gazettal in Progress	WA	In buffer area only
Unnamed WA00428	Nature Reserve	WA	In buffer area only
Unnamed WA00783	Nature Reserve	WA	In buffer area only
Unnamed WA02360	Nature Reserve	WA	In buffer area only
Unnamed WA12705	Nature Reserve	WA	In buffer area only
Unnamed WA14776	Nature Reserve	WA	In buffer area only
Unnamed WA25495	Nature Reserve	WA	In buffer area only
Unnamed WA28755	Nature Reserve	WA	In buffer area only
Unnamed WA39744	Nature Reserve	WA	In buffer area only
Unnamed WA47436	Nature Reserve	WA	In buffer area only
Unnamed WA48098	Nature Reserve	WA	In buffer area only
Unnamed WA51564	Nature Reserve	WA	In buffer area only
Unnamed WA53971	Conservation Park	WA	In buffer area only
Warriedar Station Nature Reserve	NRS Addition - Gazettal in Progress	WA	In feature area
Weelhamby Lake	Nature Reserve	WA	In buffer area only
West Perenjori	Nature Reserve	WA	In buffer area only
White Gums	Nature Reserve	WA	In buffer area only
Wilson	Nature Reserve	WA	In buffer area only
Wongoondy	Nature Reserve	WA	In buffer area only
Wotto	Nature Reserve	WA	In buffer area only
Yardanogo	Nature Reserve	WA	In buffer area only
Yarra Yarra Lake	Conservation Park	WA	In buffer area only
Yarra Yarra Lakes	Nature Reserve	WA	In buffer area only

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Thundelarra Lignum Swamp	WA	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Arrowsmith Central Silica Sand Project	2021/9067		Completed	In buffer area only
BEHARRA SILICA SAND PROJECT	2022/09308		Assessment	In buffer area only
Karara Iron Ore Project - Mine Life Extension	2023/09566		Assessment	In feature area
Ocean Hill 3D seismic survey, Eneabba, WA	2017/7970		Completed	In buffer area only
West Erregulla Processing Plant and Pipeline	2021/8907		Post-Approval	In buffer area only
Zemira 3D Seismic Survey	2020/8658		Completed	In buffer area only
Controlled action				
Arrowsmith North Silica Sand Project	2020/8788	Controlled Action	Proposed Decision	In buffer area only
Construct and operate 79km rail spur	2009/5040	Controlled Action	Post-Approval	In feature area
construction and operation of a unmanned platform at the Cliff Head oil field, a	2003/1300	Controlled Action	Post-Approval	In buffer area only
Expansion of mineral sand mine	2008/4192	Controlled Action	Completed	In buffer area only
Hematite (iron ore) Mine and Beneficiation Plant	2001/542	Controlled Action	Completed	In feature area
Iron Hill Deposit mining project, mt Gibson Ranges, Shire of Yalgoo, WA	2015/7514	Controlled Action	Post-Approval	In buffer area only
Karara Magnetite Project	2006/3017	Controlled Action	Post-Approval	In feature area
Koolanooka/Blue Hills Iron Ore Mining Project	2007/3809	Controlled Action	Post-Approval	In feature area
Mount Gibson Iron Ore Pellet Project	2000/95	Controlled Action	Completed	In feature area
Mt Gibson Iron Ore Project	2004/1874	Controlled Action	Completed	In buffer area only
Natta 3D Seismic Acquisition Survey, 36 km east of Dongara	2021/8992	Controlled Action	Referral Decision	In buffer area only
open cut mine & assoc infrastructure	2005/2381	Controlled Action	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Tiwest Dongara Project, mineral sands mining and concentrating operation, 25km	2009/5032	Controlled Action	Post-Approval	In buffer area only
Trieste 3D seismic survey, WA	2017/8133	Controlled Action	Post-Approval	In buffer area only
Undertake seismic survey to assess shale resources	2013/7088	Controlled Action	Post-Approval	In buffer area only
West Erregulla 3D onshore seismic survey & appraisal drilling exploration program WA	2013/7054	Controlled Action	Post-Approval	In buffer area only
West Erregulla Field Development Program, 40 km southeast of Dongara, WA	2021/8991	Controlled Action	Assessment Approach	In buffer area only
Not controlled action				
Blue Hills Iron Ore Project, near Rothsay, WA	2019/8591	Not Controlled Action	Completed	In feature area
Feral Prospect, magnatite iron ore exploration drilling, Perejori Hills, WA	2014/7333	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Koolanooka Direct Shipping Iron Ore Project	2004/1886	Not Controlled Action	Completed	In feature area
Mt Mulgine Mining Project, 330km northeast Perth, WA	2017/7913	Not Controlled Action	Completed	In buffer area only
Munckton Road upgrade	2005/2277	Not Controlled Action	Completed	In feature area
Mungada Ridge Hematite Project	2006/2797	Not Controlled Action	Completed	In feature area
Mungada Ridge Rehabilitation, Mid-West Region, WA	2019/8556	Not Controlled Action	Completed	In feature area
Shine Iron ore project WA	2012/6331	Not Controlled Action	Completed	In buffer area only
Waitsia Gas Project Stage 2, Yardarino WA	2020/8633	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Karara Hinge Iron ore project, Perejori, Mid West, WA	2013/7090	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action (particular manner)				
Minjar Gold Mining Project, WA	2012/6646	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Referral decision				
Transmission Line Rebuild and Extension	2009/4972	Referral Decision	Completed	In buffer area only

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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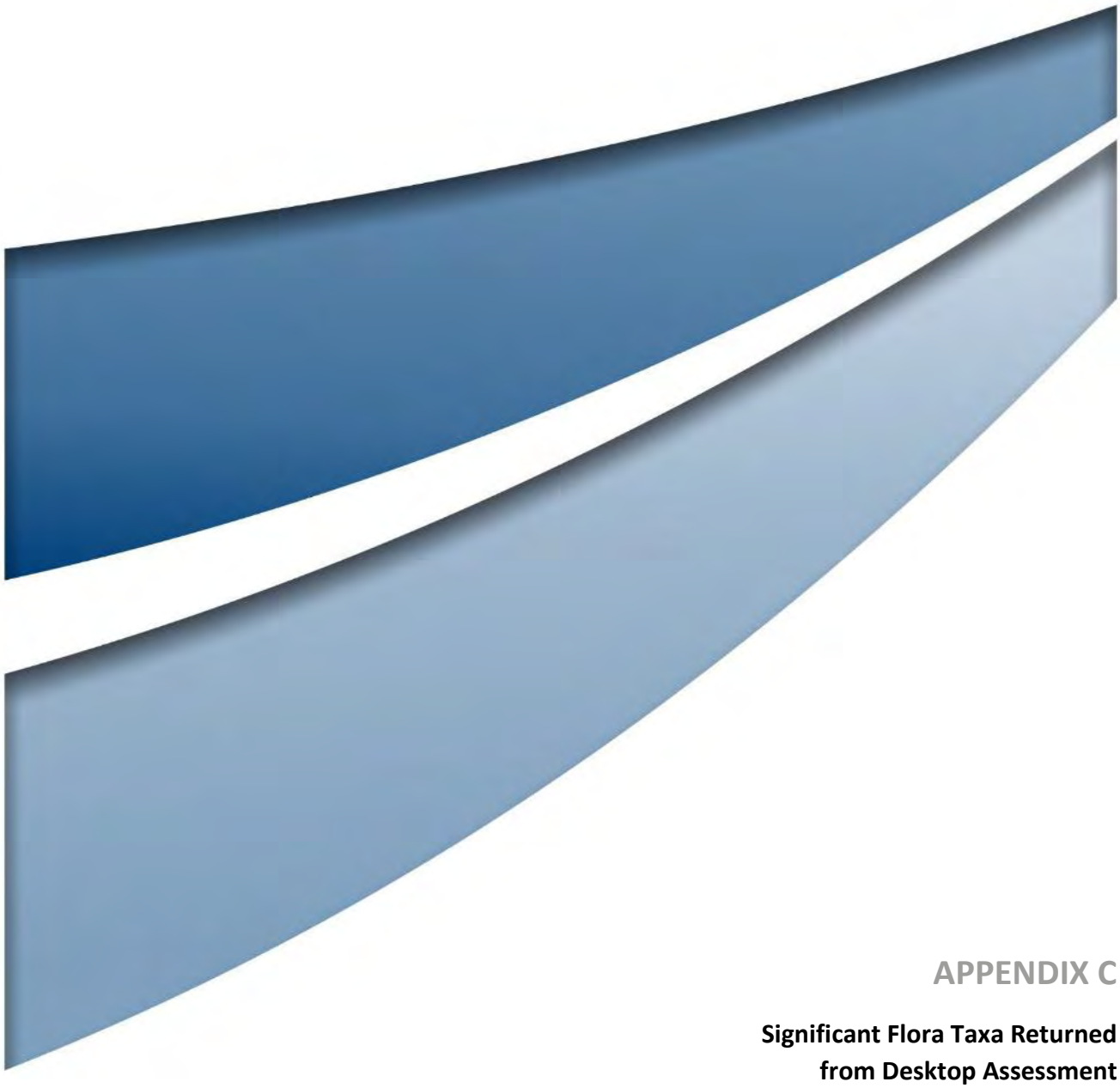


APPENDIX C

Significant Flora Taxa Returned from Desktop Assessment

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Acacia aprica	T	EN	June to July	Red or gravelly sand, sandy loam. Plains, rocky hills.	DCCEEW
Acacia cerastes	P3		January, August to September	Yellow-brown sandy loam over granite or ironstone. Hilltops, outcrops, drainage lines.	WAHerb/TPFL; NatureMap
Acacia chapmanii* subsp. *chapmanii	P2		August to September	Grey, brown loam or yellow sand over laterite. Flats and slopes.	WAHerb/TPFL; NatureMap
Acacia cochlocarpa* subsp. *cochlocarpa	T	EN	June to August	Clayey, sandy, often gravelly soils.	DCCEEW
Acacia congesta* subsp. *cliftoniana	P1		August to September	Rocky or lateritic loam.	WAHerb/TPFL; NatureMap
Acacia congesta* subsp. *wonganensis	P2		August to December	Brown-red clay loam over laterite. Hillsides.	WAHerb/TPFL; NatureMap
Acacia cylindrica	P3		March, September	Sandplains. Yellow or brown sand.	NatureMap
Acacia diallaga	P1		July to September	Red-brown clay loam with basalt. Low hills and slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
Acacia flabellifolia	P3		August to September	Low hills and ridges with rocky loam, lateritic gravelly soils.	WAHerb/TPFL; NatureMap
Acacia formidabilis	P3		July to September	Pale yellow sand. Plains and slopes.	WAHerb/TPFL; NatureMap
Acacia graciliformis	P1		September	Red-brown clay-loam over laterite and ironstone. Hills.	WAHerb/TPFL; NatureMap
Acacia imitans	P4	EN	July to September	Red-brown rocky loam. Hillside and edges of a dry creek.	WAHerb/TPFL; NatureMap; DCCEEW
Acacia isoneura* subsp. *isoneura	P3		August to September	Flats, slopes and low rises on yellow/brown sand.	WAHerb/TPFL; NatureMap
Acacia isoneura* subsp. *nimia	P3		July to September	Granite outcrops. deep yellow loamy sand or stony soil.	WAHerb/TPFL; NatureMap
Acacia karinae	P3		April to August	Red-brown to yellowish red sandy clay loam, basalt and BIF. Plains, slopes and hills.	WAHerb/TPFL; NatureMap; Maia; Meissner & Coppen; Umwelt; Woodman Environmental
Acacia lanceolata	P3		July to August	Lateritic hills and breakaways.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Acacia latipes* subsp. *licina	P3		June to October	White/grey sand, lateritic soils, sandy loam. Sandplains, flats, hills.	WAHerb/TPFL; NatureMap
Acacia lineolata* subsp. *multilineata	P1		June to August	Clay loam, red loam, rocky clay. Slopes, hills, and breakaways.	WAHerb/TPFL; NatureMap
Acacia megacephala	P3		July to September	Yellow or grey pale sands, occasional gravel. Flats or slopes.	WAHerb/TPFL; NatureMap
Acacia muriculata	P1		September to October	Red clay-loam over laterite and ironstone. Hills.	WAHerb/TPFL; NatureMap
Acacia nigripilosa* subsp. *latifolia	P1		August to September	Sandplains and slopes. Yellow sands.	WAHerb/TPFL; NatureMap
Acacia nodiflora	P3		September to November	Red-brown clay, loam over granite. Hills.	WAHerb/TPFL; NatureMap
Acacia pterocaulon	P1		June to September	Brown rocky soil, yellow sand. Slope and ridges.	WAHerb/TPFL; NatureMap
Acacia recurvata	T	EN	July to August	Sandy clay, granitic clay-loam. Creeklines, plains, breakaways, low hills.	WAHerb/TPFL; NatureMap; DCCEEW
Acacia speckii	P4		March, July	Low hills with basalt, granite or dolerite.	WAHerb/TPFL; NatureMap; Woodman Environmental
Acacia subrigida	P2		August to October	Sandplains. Yellow or brown sand or loam.	WAHerb/TPFL; NatureMap
Acacia subsessilis	P3		August to October	Red-brown sandy clay loam or stony gravel over ironstone or granite Foot slopes and mid slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
Acacia sulcaticaulis	T		June to July, December	Red or brown loam. Slopes of dolerite, granite and greenstone hills, rocky creeklines.	WAHerb/TPFL; NatureMap; Meissner & Coppen
Acacia telmica	P3		July to September	Low-lying seasonally moist areas on sand, loam or loamy clay.	WAHerb/TPFL; NatureMap
Acacia tuberculata	P2		May, September	Brown sandy clay over granite slopes.	NatureMap
Acacia unguicula	T	CR	August to September	Red-brown rocky, sandy, loam soils over dolerite. Hills.	WAHerb/TPFL; NatureMap; DCCEEW
Acacia vittata	P2		June to August, November	Margins of seasonal lakes with grey or brown sand or sandy clay.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Acacia wilsonii	T	EN	November to March	Hilltops, slopes and breakaways with gravelly brown, grey or yellow sand or clay loam over laterite or occasionally sandstone.	WAHerb/TPFL; NatureMap; DCCEEW
Acacia woodmaniorum	T	EN	July to September	Red clay loam, silt over ironstone. Hill slopes, scattered among rocks.	WAHerb/TPFL; NatureMap; DCCEEW; Maia; Umwelt; Woodman Environmental
***Acacia* sp. Goodlands (B.R. Maslin 7761)**	P1		July	Orange-brown or yellow coarse sand or loam. Flats.	WAHerb/TPFL; NatureMap
Allocasuarina grevilleoides	P3		September to November	Slopes, outcrops and plains with rocky or gravelly brown sand or clay loam over laterite or granite.	WAHerb/TPFL; NatureMap
Allocasuarina ramosissima	P3		May to September	Breakaways, slopes and plains with gravelly grey, brown or white sand or loam over laterite.	WAHerb/TPFL; NatureMap
Allocasuarina tessellata	P3		April, August to September	Red sandy loam over laterite and ironstone. Slopes and rocky basalt outcrops.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Umwelt; Woodman Environmental
Aluta aspera* subsp. *localis	P2		October to December	Undulating plains. Yellow or brown sandy loam over gravel.	NatureMap
Andersonia gracilis	T	EN	August to November	Winter-wet areas, near swamps. White-grey sand, sandy clay and gravelly loam.	DCCEEW
Androcalva adenothalia	T	CR	August to November	Orange-brown sandy loam or gravel. Plains.	WAHerb/TPFL; NatureMap; DCCEEW
Angianthus micropodioides	P3		September to November	Saline flats, winter-wet depressions and adjacent dunes. Grey or brown clay loam or sand.	WAHerb/TPFL; NatureMap
Anthocercis intricata	P3		June to September	Consolidated sand dunes on sand or loam over limestone.	NatureMap
Apectospermum exsertum	P3		July to November	Sandplains. Brown or yellow sandy clay, ironstone gravel.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Asteridea morawana	P1		September to November	Brown loam over limestone.	WAHerb/TPFL; NatureMap
Atriplex muelleri	P1		Unknown	Claypans, cracking clay.	WAHerb/TPFL; NatureMap
Austrostipa nunaginensis	P3		September to November	Yellow or brown sand, occasionally clay. On slopes or low hills.	WAHerb/TPFL; NatureMap
Babingtonia fascifolia	P1		November to December	Yellow to red sandy clay, laterite. Ridges or plains.	WAHerb/TPFL; NatureMap
Babingtonia minutifolia	P1		September to November	Brown sandy-clay loam, laterite gravel. Rocky ground.	WAHerb/TPFL; NatureMap
Babingtonia peteriana	P2		August to December	E/NE-facing gentle slopes, red/brown, brown or grey clay/clayey loam over lateritic sandstone, sometimes rocky areas and creekline edges.	WAHerb/TPFL
***Baeckea* sp. Billeranga Hills (M.E. Trudgen 2206)**	P1		September to October	Light coloured loams and sandy loams, pebbly and rocky. On slopes and stony hills.	WAHerb/TPFL; NatureMap
***Baeckea* sp. Morawa (M.A. Langley MAL4177)**	P1		Unknown	Orange-brown silty fine sand over laterite.	WAHerb/TPFL; NatureMap
***Baeckea* sp. Perenjori (J.W. Green 1516)**	P2		August to September	Red brown sandy loam or clay, or silty sands. Often with granite or ironstone on ridges and hills.	WAHerb/TPFL; NatureMap; Woodman Environmental
***Baeckea* sp. Walkaway (A.S. George 11249)**	P3		November to January	Undulating plains, hillslopes on yellow/brown or white sand.	WAHerb/TPFL; NatureMap
Balaustion grande	P3		August to October	Flats. Orange or brown or yellow gravelly or clayey sand, laterite rocks.	WAHerb/TPFL
Balaustion hemisphaericum	P1		July to October	Yellow, brown gravelly loamy sand over laterite or granite. Breakaways, hillsides and uplands.	WAHerb/TPFL
Banksia benthamiana	P4		November to January	Sandplains. Brown or yellow sand/gravel or loam.	WAHerb/TPFL; NatureMap
Banksia borealis* subsp. *elatior	P3		January, July to August	Yellow clay loam, brown gravelly loam, grey or brow sandy loam, lateritic gravel. Flat to undulating plains.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Banksia chamaephyton	P4		October to December	Slopes, breakaways and flats with grey or white sand over laterite.	WAHerb/TPFL; NatureMap
Banksia cypholoba	P3		June to September	Plains, slopes and hills with sand, often with laterite.	WAHerb/TPFL; NatureMap
Banksia elegans	P4		October to November	White sand on slopes, low lateritic hills, brown gravelly loam, grey sandy gravel.	WAHerb/TPFL; NatureMap
Banksia fraseri* var. *crebra	P3		July to August	Lateritic hilltops, slopes, plains and valleys with yellow, grey or brown gravelly sand over laterite.	WAHerb/TPFL; NatureMap
Banksia fraseri* var. *oxycedra	P3		August to September	Yellow-brown sandy loam, laterite. Hillslopes.	WAHerb/TPFL; NatureMap
Banksia scabrella	P4		September to January	White, grey or yellow sand, sometimes with lateritic gravel. Sandplains, lateritic ridges.	WAHerb/TPFL; NatureMap
Banksia splendida* subsp. *macrocarpa	P3		July to August	Ridges, slopes and undulating plains with white/grey sand and laterite.	WAHerb/TPFL; NatureMap
Banksia subulata	P3		September	White/grey or yellow sand over laterite, gravelly laterite.	WAHerb/TPFL; NatureMap
Banksia trifontinalis	P3		August to October	Brown sandy loam, red-brown laterite. Hillslopes.	WAHerb/TPFL; NatureMap
Beyeria apiculata	P1		September	Orange-brown, red loam, rocky laterite. Flat to undulating plains.	WAHerb/TPFL
Beyeria gardneri	P3		August to September	Sandplains and hillsides on yellow sand.	WAHerb/TPFL; NatureMap
***Bossiaea* sp. Jackson Range (G. Cockerton & S. McNee LCS 13614)**	P3		March to October	Red-brown clay loam soils, white-grey sandy loam. On outcrops and breakaways.	WAHerb/TPFL; NatureMap; Woodman Environmental
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1		September to October	Yellow, red clayey sand over granite or laterite, rocky banded ironstone. Moderately inclined slopes.	WAHerb/TPFL; NatureMap; Umwelt
Caladenia denticulata* subsp. *albicans	P1		August to September	Wet flats, moist depression. Sandy soils.	WAHerb/TPFL; NatureMap
Caladenia hoffmanii	T	EN	August to October	Clay loam or sandy loams. Rocky outcrops and hillsides, ridges, swamps, and gullies.	DCCEEW

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Caladenia longicauda* subsp. *minima	P2		August	Along creek lines. Red loam with ironstone outcrops, yellow sand.	WAHerb/TPFL
Caladenia wanosa	T	VU	August	Yellow sand. Low rocky hills and flats.	DCCEEW
Calandrinia kalanniensis	P2		October to January	Brown, red gritty sandy clay over granite. Shallow rock hollow on large granite rock.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
***Calandrinia* sp. Warriedar (F. Obbens 04/09)**	P2		August to September	Red-brown, fine clayey loam. Gently sloping granitic flats.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
Calectasia browneana	P2		June to August	Slopes and plains and creekline edges with white-grey sand over laterite.	WAHerb/TPFL; NatureMap
Calectasia palustris	P2		September to November	Winter-wet flats and swamps with white sand.	NatureMap
Calothamnus accedens	P4		September to January	Slopes or rises with brown clay loam.	WAHerb/TPFL; NatureMap
Calothamnus arcuatus	P2		June to September	Shallow loam/clayey loam or sand over sandstone, breakaways.	WAHerb/TPFL; NatureMap
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3		August to September	Ridges and slopes with banded ironstone.	WAHerb/TPFL; NatureMap; Markey & Dillon; Umwelt; Woodman Environmental
Calytrix chrysantha	P4		November to February	Plains and flats, on yellow or grey sand.	WAHerb/TPFL; NatureMap
Calytrix ecalycata* subsp. *ecalycata	P3		August to October	Sandy or stony soils. Hills or slopes.	WAHerb/TPFL; NatureMap
Calytrix eneabbensis	P4		July to October	White, grey or yellow sand over laterite. Sandplains.	WAHerb/TPFL; NatureMap
Calytrix plumulosa	P3		October to November	Yellow loamy or clayey sand over laterite gravel. Plain.	WAHerb/TPFL; NatureMap
Calytrix purpurea	P2		September to December	Sandplains and sand dunes with white, grey or yellow sand, often over laterite.	WAHerb/TPFL; NatureMap
Calytrix superba	P4		December to February	Sand over laterite. Flats.	WAHerb/TPFL; NatureMap
Centrolepis milleri	P3		September to October	Sandplains with grey-white sand or sandy clay.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Chamelaucium repens	P1		August	Brown, grey clay-loam with granite boulders and rocks.	WAHerb/TPFL
***Chamelaucium* sp. Bunjil (M.E. Ballingall 1970)**	P1		August to October	Lower slopes and plains. Brown or yellow-brown sand or sandy clay, sometimes with ironstone or spongolite.	WAHerb/TPFL; NatureMap
***Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100)**	P1		August to September	Brown-red rocky clay loam, sandy clay. Slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
***Chamelaucium* sp. Wongan Hills (B.H. Smith 1140)**	P3		August to December	Sand flats and slopes, near saline watercourses. Yellow, grey-white or cream sand over laterite, brown sandy loam.	WAHerb/TPFL
***Chamelaucium* sp. Yalgoo (Y. Chadwick 1816)**	P1		August to October	Upper slopes, flats with granite and red-brown clay.	WAHerb/TPFL; NatureMap
Cheyniana rhodella	P2		October	Brown-red loam over calcrete, yellow-brown sandy loam, brown gravel.	WAHerb/TPFL; NatureMap
Chorizema humile	T	EN	August to September	Plains with granite; rock outcrops of granite with red-brown soil.	WAHerb/TPFL; NatureMap; DCCEEW
Comesperma griffinii	P2		August to January	Slopes, plains, open depressions and flats with grey or brown sand or light clay, sometimes with laterite.	WAHerb/TPFL; NatureMap
Comesperma rhadinocarpum	P3		October to November	Undulating plains, valley slopes and flats with grey, brown or yellow sandy loam or sand.	WAHerb/TPFL; NatureMap
Conostylis dielsii* subsp. *teres	T	EN	July to August	White, grey or yellow sand, gravel. Low open woodland.	WAHerb/TPFL; NatureMap; DCCEEW
Conostylis micrantha	T	EN	July to August	White or grey sand. Sandplains.	WAHerb/TPFL; NatureMap; DCCEEW
Corynotheca acanthoclada	P1		October to December	White, red/orange, yellow sand, brown-grey sand loam, sandplain.	WAHerb/TPFL

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
***Crassula* sp. nov.**	PU		Unknown; recorded in August and September (Umwelt, 2021)	Granitic areas, granite outcrops (Umwelt, 2021).	Umwelt
Cryptandra nola	P3		June to August	Along drainage lines, breakaways and hillsides. Sandy soils over granite or laterite.	WAHerb/TPFL; NatureMap
Cryptandra stellulata	P3		September	Pale yellow loamy clay, brown-grey loam over granite. Hills.	WAHerb/TPFL; NatureMap
Cyanicula fragrans	P3		September to October	Red-brown sandy clay loam. Slopes and creek lines.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
Dampiera scaevolina	P1		September to November	Brown, grey sand, loam, gravelly soil.	WAHerb/TPFL; NatureMap
Dampiera tephrea	P3		August to October	Flats, riverbanks and slopes with sand or loam, often with limestone.	WAHerb/TPFL; NatureMap
Darwinia chantiae	P3		August to October	Plains and hillsides. Red-brown or yellow sandy or gritty loam over granite.	WAHerb/TPFL; NatureMap
Darwinia chapmaniana	T	EN	September to November	Shallow red or yellow clay-loam over sandstone or calcrete, around the edges of saline lakes in winter damp flats.	DCCEEW
Darwinia masonii	T	VU	September to October	Brown loam over banded ironstone, laterite. Hilltops.	DCCEEW
Darwinia polychroma	T	EN	July to September	Orange-brown sandy loam. Flat to undulating plains.	WAHerb/TPFL; NatureMap; DCCEEW
Darwinia sphaerica	P2		August to October	Tan-brown, orange-brown sandy loam over laterite. Granite outcrops.	WAHerb/TPFL
***Darwinia* sp. Strawberry (M.G. Corrick 8279)**	P2		September	Cream-beige, grey, yellow sand. Undulating sandplains.	WAHerb/TPFL; NatureMap
Dasymalla axillaris	T	CR	September to December	Plains and flats. Yellow sand.	WAHerb/TPFL; NatureMap; DCCEEW
Daviesia bursarioides	T	EN	August	Brown sandy loam, yellow clay loam over lateritic gravel.	WAHerb/TPFL; NatureMap; DCCEEW

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Daviesia speciosa	T	EN	April to December	Breakaways, hilltops, and slopes with gravelly grey, brown or white sand or clay loam over laterite.	WAHerb/TPFL; NatureMap; DCCEEW
Desmocladus biformis	P3		September to October	Hills, slopes and undulating plains with white or brown sand or sandy clay over laterite.	NatureMap
Desmocladus elongatus	P4		August to December	Slopes, plains and uplands with white or grey sand over laterite.	WAHerb/TPFL; NatureMap
Dicrastylis linearifolia	P3		August to January	Red or red brown to yellow sands on flats and sand ridges.	WAHerb/TPFL; NatureMap; Woodman Environmental
Diuris eburnea	T		October to November	Winter wet flats.	WAHerb/TPFL; NatureMap
Diuris recurva	P4		July to August	Winter-wet areas and drainage lines with brown sandy clay or loam.	WAHerb/TPFL; NatureMap
Dodonaea amplisemina	P4		October	Hills and ridges with quartz, chert or banded ironstone.	WAHerb/TPFL; NatureMap; Meissner & Coppen
Dodonaea scurra	P1		August	Yellow gravelly loamy sand over laterite, brown-red ironstone gravel.	WAHerb/TPFL; NatureMap
Drakaea concolor	T	VU	August	Grey sand.	WAHerb/TPFL
Drosera pedicellaris	P1		September to December	Heathland with white/grey sand.	WAHerb/TPFL; NatureMap
Drummondita fulva	P3		May to November	Orange-brown sandy loam. Hillslopes.	WAHerb/TPFL; NatureMap; Maia; Umwelt; Woodman Environmental
Drummondita rubriviridis	P1		October	Banded ironstone and laterised banded ironstone and hematite.	WAHerb/TPFL
Elatine macrocalyx	P3		May to August, November	Grey-brown sandy clay, orange-red sand, red sandy loam. Wetlands.	WAHerb/TPFL; NatureMap
Eleocharis keigheryi	T	VU	August to November	Clay, sandy loam. Emergent in freshwater: creeks, claypans.	DCCEEW
Eleocharis papillosa	P3	VU	March to November	Claypans, saline floodplains.	DCCEEW
Enekbatus dualis	P1		July to October	Plains and slopes. Brown or yellow or orange fine silty to clayey sand, pink loam over granite.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Enekbatus longistylus	P3		August to September	Sandplains and flats or gentle slopes. Yellow sands, dull brown sand, silty fine sands.	WAHerb/TPFL; NatureMap
Enekbatus planifolius	P1		September to October	Very gentle slopes. Orange-brown to brown silty fine sands.	WAHerb/TPFL; NatureMap
Epitriche demissus	P2		July to December	Edges of saline lakes and depressions. Grey sands, occasionally with clay.	WAHerb/TPFL; NatureMap
Eremaea acutifolia	P3		August to November	Grey or yellow sand. Proteaceous sandplains.	WAHerb/TPFL; NatureMap
Eremophila glabra **subsp. Morawa (C.A. Gardner 7521)**	P1		Unknown	Flats and plains. Red, slightly saline sand.	WAHerb/TPFL; NatureMap
Eremophila grandiflora	P1		August to October	Very gentle and simple slopes. Rocky soils of red or brown clays and clay loams. Various geologies.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Woodman Environmental
Eremophila nivea	T	EN	September to October	Grey-white sand. *Banksia attenuata* and *Eucalyptus marginata* woodland.	WAHerb/TPFL; NatureMap; DCCEEW
Eremophila oldfieldii **subsp. *papula***	P1		September	Rocky hills and slopes. Red and red-brown clay loams.	WAHerb/TPFL; NatureMap; Woodman Environmental
Eremophila resinosa	T	EN	January	Brown or red clay loam. Disturbed sites, plains and flats.	DCCEEW
Eremophila rostrata **subsp. *trifida***	T	CR	June, September to October	Hard brown sandy loam on upland slopes and flats.	WAHerb/TPFL; NatureMap; DCCEEW
Eremophila sargentii	P2		August to December	Gravelly or sandy soils. Slopes, ridges, disturbed sites.	WAHerb/TPFL; NatureMap
Eremophila sericea	P1		March, September to October	Rocky red brown clay loam on low slopes.	WAHerb/TPFL; NatureMap
Eremophila viscida	T	EN	August to December	Brown sand or loam. Flats, slopes, around salt lakes.	WAHerb/TPFL; NatureMap; DCCEEW
Eremophila **sp. Thundelarra (B. Buirchell BB 324)**	P1		September	Red to brown sandy loam. Flat saline clay pans.	WAHerb/TPFL; NatureMap
Eucalyptus abdita	P2		February	Laterite, sandy clay with gravel over laterite. Slopes, breakaways.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Eucalyptus arachnaea* subsp. *arrecta	P3		May	Red or brown stony loams. Upper slopes and rises.	WAHerb/TPFL; NatureMap
Eucalyptus beardiana	T	VU	May to August	Yellow sand plains and dunes.	DCCEEW
Eucalyptus blaxellii	P4		January, April to November	Rocky slopes. Red or brown sandy loam over sandstone.	WAHerb/TPFL; NatureMap
Eucalyptus crispata	T	VU	March to June	Lateritic breakaways and slopes with brown-grey sand or loam with lateritic gravel.	WAHerb/TPFL; NatureMap; DCCEEW
Eucalyptus ebbanoensis* subsp. *photina	P4		September to March	Lateritic breakaways, sandplains with sandy clay or red sand.	WAHerb/TPFL; NatureMap
Eucalyptus* x *impensa	T	EN	June to July	Hills, slopes and plains with grey, yellow or white sand over laterite.	DCCEEW
Eucalyptus johnsoniana	T	VU	July to May	Sandplains and lateritic breakaways with white-grey sand with lateritic gravel.	DCCEEW
Eucalyptus jutsonii* subsp. *kobela	P1		March	Yellow sand or orange sandy loam or orange sandy clay. Broad slope or rises.	WAHerb/TPFL; NatureMap
Eucalyptus leprophloia	T	EN	July to November	Breakaways and slopes with grey or white sand or sandy clay over laterite.	WAHerb/TPFL; NatureMap; DCCEEW
Eucalyptus macrocarpa* subsp. *elachantha	P4		August to December	Hillslopes, ridges, sandplains with white or grey sand over laterite.	WAHerb/TPFL; NatureMap
Eucalyptus macrocarpa* x *pyriformis	P3		August to October	Sand, lateritic sandy soils. Hills, rocky ironstone ridges, sandplains.	WAHerb/TPFL; NatureMap
Eucalyptus pruiniramis	T	EN	December to February	Skeletal soils over sandstone or laterite. Rocky hillslopes.	WAHerb/TPFL; NatureMap; DCCEEW
Eucalyptus rhodantha* var. *rhodantha	T	VU	July to January	Hillslopes, breakaways and gentle slopes with grey, yellow or brown sand, sometimes over laterite.	WAHerb/TPFL; NatureMap; DCCEEW
Eucalyptus rhodantha* var. x *petiolaris	P4		Unknown	Yellow-brown sandy loam on massive laterite. Upper slopes and edges of creeks.	WAHerb/TPFL; NatureMap; DCCEEW
Eucalyptus synandra	T	VU	June, November to January	Hills, flats and valleys. Yellow or light brown-orange, red sandy gravel, ironstone and laterite.	WAHerb/TPFL; NatureMap; DCCEEW

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Eucalyptus zopherophloia	P4		October to January	Slopes and dunes with grey/white sand. Often with limestone. Coastal areas.	WAHerb/TPFL; NatureMap
Euryomyrtus recurva	P3		April to October	Yellow to red or orange gravelly sandy soils. Across undulating landscapes.	WAHerb/TPFL; NatureMap
***Eutaxia* sp. Jasper Hill (R.J. Cranfield 8607)**	P1		Unknown	Red-brown clay over ironstone. Only known from one record in 1992.	WAHerb/TPFL; NatureMap
Fitzwillia axilliflora	P2		September to November	White saline sandy clay on low gypsum ridges or flats near or on salt lake edges.	WAHerb/TPFL; NatureMap
Frankenia conferta	T	EN	September to November	Clay and sand. Edges of salt lakes.	WAHerb/TPFL; NatureMap; DCCEEW
Frankenia glomerata	P4		November	Salt lake edges, watercourses and flats with white sand or grey-brown sandy loam.	WAHerb/TPFL; NatureMap
Gastrolobium hamulosum	T	EN	August to October	Flats, slopes, ridges with sandy, often gravelly soils or clay.	DCCEEW
Gastrolobium rotundifolium	P3		September to October	Hilltops, breakaways. Grey sandy loam.	WAHerb/TPFL; NatureMap
Glyceria drummondii	T	EN	July to October	Seasonally flooded clay pans within clay plains, in hollows. Brown or red-brown clay.	WAHerb/TPFL; NatureMap; DCCEEW
Gnephosis cassiniana	P3		August to November	Drainage lines, saline flats.	WAHerb/TPFL; NatureMap
Gnephosis setifera	P1		August to September	White to pale grey/brown sandy soil. Sandy flats or ridges fringing salt lakes.	WAHerb/TPFL; NatureMap
Gompholobium cinereum	P3		September to November	Plains and slopes, usually above saline areas. Gravelly or clayey yellow sand over laterite.	WAHerb/TPFL; NatureMap
Goodenia neogoodenia	P4		August to September	Flood plains, clay pans.	WAHerb/TPFL; NatureMap
Goodenia perryi	P3		November	Yellow sand/clayey sand. Flats or upland hilltops.	WAHerb/TPFL; NatureMap
Grevillea amplexans* subsp. *adpressa	P1		September	Slopes with yellow or white sand, sometimes over laterite.	WAHerb/TPFL; NatureMap
Grevillea asparagoides	P3		June to October	Yellow sand or sandy loam. Plains.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Grevillea biformis* subsp. *cymbiformis	P3		October	Flats, slopes and hills with yellow-white sand.	WAHerb/TPFL; NatureMap
Grevillea bracteosa* subsp. *howatharra	T	CR	June to February	Hillsides and plains. Orange-brown sandy loam over laterite, ironstone or granite gravel.	WAHerb/TPFL; NatureMap
Grevillea christineae	T	EN	July to September	Laterite hills and slopes.	DCCEEW
Grevillea curviloba	T	EN	August to October	Grey sand, sandy loam. Winter-wet heath.	DCCEEW
Grevillea erinacea	P3		July to December	Plains, hills and slopes with white, grey or yellow sand, often with lateritic gravel.	WAHerb/TPFL; NatureMap
Grevillea globosa	P3		June, November to January	Ridges, flats and plains. Red-brown sandy soil.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
Grevillea granulosa	P3		July to November	Slopes and margins of salt lakes. Yellow sand, red-brown saline clay-loam, lateritic or fluviatile gravel.	WAHerb/TPFL; NatureMap
Grevillea hirtella	P3		August to October	Sand or loam over laterite, often with gravel.	WAHerb/TPFL; NatureMap
Grevillea leptopoda	P3		June to October	Hills and slopes with brown, red or yellow sand or clay loam, sometimes over laterite or occasionally granite.	WAHerb/TPFL; NatureMap; Woodman Environmental
Grevillea makinsonii	P3		July, September to October	Gravelly white, grey or yellow sand, loam or clay over laterite. Rocky hills, sandplains.	WAHerb/TPFL; NatureMap
Grevillea murex	T	EN	August to December	Brown sandy loam. Gentle slopes and plains.	WAHerb/TPFL; NatureMap; DCCEEW
Grevillea obliquistigma* subsp. *cullenii	P3		March, August to October	Red sand/sandy loam. Low flats.	WAHerb/TPFL; NatureMap
Grevillea phanerophlebia	T		August to September	Red and yellow sand. On hills and flats.	WAHerb/TPFL; NatureMap
Grevillea pythara	T	EN	August to October	Slopes. Brown or yellow sandy or gravelly loam.	DCCEEW
Grevillea rosieri	P2		June to September	Brown sandy clay/loam and lateritic gravel, typically above saline areas. Potential disturbance opportunist.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Grevillea rudis	P4		April to January	Hills and slopes with white, grey, yellow or red sand, often with gravel and laterite.	WAHerb/TPFL; NatureMap
Grevillea scabrida	P3		July to September	Shallow red/brown sandy clay loam soils over dolerite and/or ironstone. Moderately inclined low to mid slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Umwelt; Woodman Environmental
Grevillea stenogyne	P1		June	Clay plains. Only known from one record in 2011.	NatureMap
Grevillea subtiliflora	P3		August	Shallow red/brown sandy clay loam soils. Moderately inclined low to mid slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Umwelt; Woodman Environmental
Grevillea tenuiloba	P3		July to October	Slopes and granite outcrops. Gritty red, brown loam.	WAHerb/TPFL; NatureMap
Guichenotia alba	P3		July to August	Sandy and gravelly soils. Low-lying flats, depressions.	WAHerb/TPFL; NatureMap
Guichenotia quasicalva	P2		September to October	Sandy clay over laterite. Drainage lines.	WAHerb/TPFL; NatureMap
Gunniopsis divisa	P3		August to November	Slopes with banded ironstone and chert, sandy clay loam soil.	WAHerb/TPFL; NatureMap; Markey & Dillon; Umwelt; Woodman Environmental
Gyrostemon reticulatus	T	CR	September to October	Brown sandy loam. Plains.	WAHerb/TPFL; NatureMap; DCCEEW
Haegiela tatei	P4		September to December	Saline flats.	WAHerb/TPFL; NatureMap
Haemodorum loratum	P3		November	Uplands and sandplains with grey, white or yellow sand and gravel.	WAHerb/TPFL
Hakea megalosperma	T	VU	April to June	High in landscape; hills, breakaways, slopes and flats with white, grey or brown sand or sandy loam over laterite.	WAHerb/TPFL; NatureMap; DCCEEW
Hemiandra gardneri	T	EN	August to November	Plains with yellow or grey sand or clayey sand.	DCCEEW
Hemiandra rutilans	T	EN	October to November	Yellow/grey sand.	NatureMap; DCCEEW

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
***Hemiandra* sp. Eneabba (H. Demarz 3687)**	P3		February	Sandplains with white, grey or yellow sand.	WAHerb/TPFL; NatureMap
***Hemiandra* sp. Watheroo (S. Hancocks 4)**	P4		October to November	Sandplains and hillslopes with grey/white sand, sometimes over laterite.	WAHerb/TPFL; NatureMap
Hemigenia diadela	P2		October	Lower hill slopes.	WAHerb/TPFL
Hemigenia pimeleifolia	P2		August	Sandstone, brown loam. Flats and plains.	WAHerb/TPFL
Hemigenia saligna	P3		July to October	Lateritic and sandy soils.	WAHerb/TPFL; NatureMap
Hemigenia tichbonii	P1		August to November	Red/brown clay loam over ironstone or granite uplands.	WAHerb/TPFL; NatureMap; Woodman Environmental
***Hemigenia* sp. major (C.A. Gardner 2677)**	P1		July to September	Unknown. Only known from three collections in 1931, with no habitat information provided.	WAHerb/TPFL; NatureMap
Hensmania chapmanii	T	VU	December to January	Yellow-grey or lateritic sand.	WAHerb/TPFL; NatureMap; DCCEEW
Hensmania stoniella	P3		September to November	Flats and slopes with white, grey or lateritic sand, sometimes winter-wet.	WAHerb/TPFL; NatureMap
Hibbertia bistrata	P3		April, August to September	Ridge, flats. Brown loam, yellow sand, lateritic gravel.	WAHerb/TPFL; NatureMap
Hibbertia cockertoniana	P3		July to October	Orange and brown rocky soils. Banded ironstone outcrops.	WAHerb/TPFL; NatureMap; Umwelt
Hibbertia subvillosa	P3		June to October	Sandy creek beds, heavy soils, often disturbed sites.	WAHerb/TPFL
Homalocalyx chapmanii	P2		September to October	Undulating plains, slopes and riverbanks with sand or loam.	WAHerb/TPFL; NatureMap
Hopkinsia anoectocolea	P3		September to December	White or grey sand, often saline. Winter-wet depressions, floodplains, salt lakes.	WAHerb/TPFL; NatureMap
Hyalosperma stoveae	P2		August to October	Plains. Red-brown or orange or brown-yellow sandy loam over laterite.	WAHerb/TPFL
Hydrocotyle dimorphocarpa	P1		September to October	Shallow red/brown sandy clay loam. Moderately inclined mid slopes to flats.	WAHerb/TPFL; NatureMap; Meissner & Coppen

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Hydrocotyle spinulifera	P3		September to October	Clay or sandy clay, bentonite clays. Around salt lakes.	WAHerb/TPFL; NatureMap
Hypocalymma tetrapterum	P3		August	Grey sand, loam, lateritic gravel. Riverbanks, breakaways.	WAHerb/TPFL; NatureMap
Isotropis petrensis	P1		July to August	Granite outcrops or sheets, brown loam.	WAHerb/TPFL
Jacksonia pungens	T	EN	November to December	Yellow sand, gravelly lateritic soils. Undulating areas.	DCCEEW
Korthalsella leucothrix	P1		Unknown	Parasitic on *Acacia acuminata*, *A. ramulosa*, *A. tetragonophylla*, *A. quadrimarginea*, *A. incurvaneura*, and *A. craspedocarpa*. Coarse red lateritic sandy loam by run-on areas or creeks.	WAHerb/TPFL; NatureMap
Lasiopetalum decoratum	P2		August to December	Gullies and slopes of breakaways in grey, brown or brown-yellow, loamy sand and lateritic gravel and boulders.	WAHerb/TPFL; NatureMap
Lasiopetalum ogilvieanum	P1		July to October	Undulating plains, lateritic rises.	WAHerb/TPFL; NatureMap
Lechenaultia galactites	P3		June, September to October	Yellow or brown sand over laterite, plains.	WAHerb/TPFL; NatureMap
Lechenaultia juncea	P3		November to December	White, grey or yellow sand, sandy gravel. Banksia woodland.	WAHerb/TPFL; NatureMap
Lechenaultia longiloba	P4		September to October	Yellow/white to grey sand across undulating landscapes. Recently burned areas.	WAHerb/TPFL; NatureMap
Lepidium fasciculatum	P3		September to December	Red or brown cracking clay/loam on dried lake beds.	WAHerb/TPFL; NatureMap
Lepidium sagittulatum	P1		September	Unknown. Only known from two collections in 1949, with no habitat information provided.	WAHerb/TPFL; NatureMap
Lepidobolus densus	P4		August to November	Sandplains, lake edges and slopes with brown or yellow sand.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Lepidosperma gibsonii	T		May to July, October to February	Shallow red to pale brown or pale pink sandy loam with a rocky surface over ironstone or granite. In gullies and on lower slopes of BIF hills.	WAHerb/TPFL; NatureMap
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1		July to October	Seasonally wet brown to red sandy loam at the base of granite outcrops or across moderate to steeply inclined hillslopes of rocky magnetite and laterite banded ironstone.	WAHerb/TPFL; NatureMap; Maia; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
***Lepidosperma* sp. Koolanooka (K.R. Newbey 9336)**	P1		May to June, October	Pale brown to red clay loam soils or in cracks on moderate to steeply inclined BIF. Occasionally on pale brown clay loam over granite outcrops.	WAHerb/TPFL; NatureMap
Leucopogon grammatus	P3		August	Slopes, breakaways and ridges with laterite.	WAHerb/TPFL; NatureMap
Leucopogon stokesii	T		August to September	Rocky loams on sandstone. Breakaways.	WAHerb/TPFL; NatureMap
***Leucopogon* sp. Yanneymooning (F. Mollemans 3797)**	P3		May to July	Brown or grey sandy clay loam across granite hills and decomposed granite breakaways.	WAHerb/TPFL; NatureMap
Liparophyllum congestiflorum	P4		September to November	Flats, swamps and drainage lines with grey sandy clay or sand.	WAHerb/TPFL; NatureMap
Lyginia excelsa	P2		March to November	Undulating plains, flats and depressions with white/grey sand.	WAHerb/TPFL; NatureMap
Malleostemon decipiens	P1		August to October	Brown-orange sand or grey loam. Sandplains. Granite breakaways.	WAHerb/TPFL; NatureMap
***Malleostemon* sp. Yalgoo Road (Morawa Tree Committee 329)**	P1		September	Sand. Only known from two records collected in 1993.	WAHerb/TPFL; NatureMap
Melaleuca barlowii	P3		August to October	Slopes, flats and roadsides. Hard gravelly yellow or red or brown sandy clay loam, banded ironstone or laterite.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
Melaleuca sclerophylla	P3		August to November	Gravelly white or red-brown or orange sand over clay, granite or quartzite slopes and hills.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Menkea draboides	P3		August to September	Granitic flats with brown clay loam or red soils.	WAHerb/TPFL; NatureMap; Woodman Environmental
Mesomelaena stygia* subsp. *deflexa	P3		March to October	Plains, flats and slopes with white, grey or lateritic sand, clay, gravel.	WAHerb/TPFL; NatureMap
Micromyrtus acuta	P3		June, September to October	Red and red-brown loam and rocky soils. Banded ironstone.	WAHerb/TPFL; NatureMap; Maia; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
Micromyrtus mucronulata	P1		April to September	Rocky brown loam and dolerite (sometimes over greenstone or granite) on upper slopes and summits of rocky hills.	WAHerb/TPFL; NatureMap
Micromyrtus ninghanensis	P1		September to October	Rocky brown clay loam soil over greenstone or granite on slopes and summits of rocky hills.	WAHerb/TPFL; NatureMap
Micromyrtus rogeri	P1		July to October	Breakaways on yellow-brown sandy soils, gravel, laterite.	WAHerb/TPFL; NatureMap
Micromyrtus trudgenii	P3		July to November	Shallow, rocky red to brown sandy clay loam over moderately inclined hillcrests of banded ironstone or basalt.	WAHerb/TPFL; NatureMap; Maia; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
Micromyrtus uniovulum	P2		November	Ridges, hilltops and slopes with grey or brown sand or clay loam over laterite.	WAHerb/TPFL; NatureMap
Millotia dimorpha	P1		September to October, February	Rocky red to brown clay loam across moderately inclined slopes of banded (often laterised with haematite) ironstone.	WAHerb/TPFL; NatureMap; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
Millotia jacksonii	P2		September to October	Valleys. Orange or grey sandy clay over laterite or sandstone or siltstone.	WAHerb/TPFL; NatureMap
Mirbelia ferricola	P3		June to November	Red to brown sandy clay loam across slopes of BIFs or laterite.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
***Mirbelia* sp. Ternata (M.D. Crisp & L.G. Cook MDC 9267)**	P1		September	Undulating plains and rocky slopes. Pale yellow, dry grey, brown loamy sand, sandstone/laterite.	WAHerb/TPFL; NatureMap
Nicotiana salina	P1		July to October	Slopes fringing major salt lakes and islands in salt lakes. Red-brown sandy loam to yellow clay.	WAHerb/TPFL
Papistylus grandiflorus	P2		July to October	Brown sandy loams. With granite, often on slopes.	WAHerb/TPFL; NatureMap
Paracaleana dixonii	T	EN	Late October to November	Flats, plains and slopes with grey sand, sometimes with laterite gravel.	WAHerb/TPFL; NatureMap; DCCEEW
Persoonia chapmaniana	P3		September to November	White sandy clay, yellow sand. Vicinity of salt lakes.	WAHerb/TPFL; NatureMap
Persoonia filiformis	P3		November to December	Plains and slopes with yellow or white sand over laterite.	WAHerb/TPFL; NatureMap
Persoonia kararae	P2		October	Gentle rises on sandplains. Red clay loam.	WAHerb/TPFL; NatureMap
Persoonia pentasticha	P3		August to November	Slope of low rises, sides of ridges and drainage lines. Rocky basalt outcrops with red-brown or orange shallow sandy clay soils, fragments of granite, haematite, ironstone, quartz or ochre.	WAHerb/TPFL; NatureMap; Maia; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
Persoonia rudis	P3		September to January	Flats and slopes with white, grey or yellow sand, often over laterite.	WAHerb/TPFL; NatureMap
Petrophile biternata	P3		August to September	Lateritic hills, ridges.	WAHerb/TPFL; NatureMap
Petrophile conifera* subsp. *divaricata	P2		September to October	Brown to red sand loam or clay across rocky undulating slopes of ironstone or granite. Only known from two records in 2008 and 2011.	WAHerb/TPFL; NatureMap
Petrophile globifera	P3		September	Yellow or brown sand. Often on slopes.	WAHerb/TPFL; NatureMap
Petrophile pauciflora	P3		August to September	Breakaways with granite or laterite. Flats or slopes with loam and clay.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
Petrophile septemfida	P3		July to September	Hillsides, uplands and plains with grey-white sand, often over laterite.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Phebalium brachycalyx	P3		June to September	Gravelly brown or red to yellow sandy loam or clay over laterite across slopes.	NatureMap
Philotheca nutans	P1		April to September	Red sandy loam or brown to yellow sandy clay, occasionally over ironstone. Across flats or sometimes over gradual slopes.	WAHerb/TPFL; NatureMap
Phlebocarya pilosissima* subsp. *pilosissima	P3		August to October	Slopes with sand over laterite.	WAHerb/TPFL; NatureMap
Pigea cymulosa	T	CR	January, May to August	Rocky red to brown clay loam over greenstone across hill side slopes or along creekline banks or gullies.	WAHerb/TPFL; NatureMap; DCCEEW
Pityrodia viscida	P4		September to February	Upper slopes and mid slopes with white or grey sand, sometimes over laterite.	WAHerb/TPFL; NatureMap; Woodman Environmental
Podotheca pritzelii	P3		September to October	Salt lakes and saline habitats.	WAHerb/TPFL; NatureMap
Podotheca uniseta	P3		August to December	White/grey sand, sandy loam. Samphire flats.	WAHerb/TPFL; NatureMap
Polianthion collinum	P3		July	Red to brown loamy or clay loam soils across moderate to steeply inclined slopes of banded ironstone.	WAHerb/TPFL; NatureMap; Markey & Dillon; Umwelt; Woodman Environmental
Poranthera asybosca	P1		Late October	Grey/white sandy soil.	WAHerb/TPFL; NatureMap
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1		September	Red silty clay loam. Low to mid slopes of low rises.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
Psammomoya implexa	P3		August to September	Gentle slopes, stony hills or sandplains. Yellow sand or red clay/silt over ironstone gravel.	WAHerb/TPFL; NatureMap; Markey & Dillon; Woodman Environmental
Ptilotus fasciculatus	P4		October to December	Saline brown or grey loam and clay loam. Around watercourses or on flats.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Rhodanthe collina	P3		August to October	Rocky shallow red to brown sandy clay loam. Low to upper slopes of moderately inclined banded ironstone (often mixed with other minerals and rock).	WAHerb/TPFL; NatureMap; Markey & Dillon; Meissner & Coppen; Umwelt; Woodman Environmental
***Rhodanthe* sp. Yuna (G.J. Keighery, B.J. Keighery & B. Moyle 2820)**	P3		September to November	Red to yellow sandy loam over laterite or granite. Open flats or hillside slopes.	WAHerb/TPFL
Ricinocarpos brevis	T	EN	February, June to July	Red brown loam gravel, sandy clay loam or silty clay. Steep upper slopes of banded ironstone ridges.	DCCEEW
Ricinocarpos oliganthus	P1		June, September	Red brown sandy clay or loam or stony brown clayey sand on hillsides.	WAHerb/TPFL; NatureMap
Roebuckiella halophila	P3		August to October	Sand ridges in saline drainage lines or salty lake areas. Slightly to moderately saline brown-red sand or laterite clay.	WAHerb/TPFL; NatureMap
Roycea pycnophylloides	T	EN	September to October	Salt lakes and saline habitats.	DCCEEW
Scaevola chrysopogon	P2		August to October	Gentle sand dunes, flat sandplains, breakaway and ridges. Dry red-brown sand.	WAHerb/TPFL; NatureMap
Scaevola kallophylla	P4		May to December	Brown or yellow sand and sandy clay.	WAHerb/TPFL; NatureMap
Schoenia filifolia* subsp. *subulifolia	T	EN	August to October	Clay and brown clay loam.	WAHerb/TPFL; NatureMap; DCCEEW
Schoenus badius	P2		September to October	Grey sand. Moist areas.	WAHerb/TPFL; NatureMap
Schoenus griffinianus	P4		September to October	Undulating sandplains, lower slopes, flats and depressions with grey sand.	WAHerb/TPFL; NatureMap
Schoenus natans	P4		September to December	Ephemeral wetlands. *Melaleuca lateritia/ Melaleuca viminea* shrubland, sometimes with emergent *Eucalyptus rudis*.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
***Schoenus* sp. Eneabba (F. Obbens & C. Godden I154)**	P2		November to December	Undulating sandplains, mid slopes and tops of rises with grey, yellow or white sand.	WAHerb/TPFL; NatureMap
Scholtzia brevistylis* subsp. *brevistylis	P1		October to December	Sandplains, margins of granite outcrops, or in association with damp depressions.	WAHerb/TPFL; NatureMap
Scholtzia brevistylis* subsp. *prowaka	P2		June to September	Brown soils with granite.	WAHerb/TPFL; NatureMap
Scholtzia calcicola	P2		September to December	Slopes, undulating plains. Grey or yellow sand, often with limestone.	WAHerb/TPFL; NatureMap
Scholtzia multiflora	P1		August to September	Yellow to off-white siliceous sand or dry ironstone gravel laterite. Gently inclined slopes of shallow gullies or swales.	NatureMap
Scholtzia prostrata	P3		November	Flats or gentle slopes. Dry sand or sand over laterite.	WAHerb/TPFL; NatureMap
Scholtzia subsessilis	P1		September to December	Yellow sand and sandy clay.	WAHerb/TPFL; NatureMap
***Sclerolaena* sp. Koolanooka Hills (R. Meissner & Y. Caruso 437)**	P1		Unknown	Red brown soils on footslope outwash areas of banded ironstone. Known from a single record from 2005.	WAHerb/TPFL; NatureMap
Spergularia nesophila	P3		September to December	Sand. Limestone plateaus.	WAHerb/TPFL; NatureMap
Stawellia dimorphantha	P4		June to November	Undulating plains and slopes with yellow sand.	WAHerb/TPFL; NatureMap
Stenanthemum poicilum	P3		April, August to December	Red to brown sand, clay or loam over basalt gravel or laterised banded ironstone often with haematite. Moderately inclined upper slopes.	WAHerb/TPFL; NatureMap; Meissner & Coppen; Umwelt; Woodman Environmental
Stylidium amabile	T	CR	September to November	Yellow/red brown sandy clay or loam. Gentle slopes of sheet laterite.	DCCEEW
***Stylidium carnosum* subsp. Narrow leaves (J.A. Wege 490)**	P1		September to October	Hillslopes and plains with white-grey sand and lateritic gravel.	WAHerb/TPFL; NatureMap
Stylidium cornuatum	P2		September	Brown or orange brown clay-loam in seasonally moist habitats.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Stylidium drummondianum	P3		August to October	Upper hillslopes and breakaways, low heath or mallee shrubland on sand or clayey sand over laterite.	WAHerb/TPFL; NatureMap
Stylidium longitubum	P4		July to November	Seasonal damplands, brown clay loam.	WAHerb/TPFL; NatureMap
Stylidium pendulum	P1		April, September to December	Hillsides, ridges and plains. Red-brown sand, loam or clay over basalt gravel or banded ironstone.	WAHerb/TPFL; NatureMap
Stylidium pseudocaespitosum	P2		September to November	Breakaways and hillslopes on white, grey or yellow sand over laterite.	WAHerb/TPFL; NatureMap
Stylidium ricae	P3		August to October	Clay loams with gravel. Over granite.	WAHerb/TPFL; NatureMap
Stylidium scintillans	T		August to October	Brown clay loam or brown gravelly loam on mid to upper slopes of granite outcropping. Sometimes growing in cracks between rocks.	WAHerb/TPFL; NatureMap; Umwelt; Woodman Environmental
Stylidium tinkeri	P2		April, October to November	Winter-wet depressions, flats, wetlands and valleys with brown or grey clay loam.	WAHerb/TPFL; NatureMap
Stylidium torticarpum	P3		September to November	Adjacent to drainage lines, depressions, and beneath breakaways, heath or mallee shrubland on sandy clay or clay loam over laterite.	WAHerb/TPFL; NatureMap
Stylidium wilroyense	P3		September to October	Yellow sand. Gentle slopes of sand plains.	WAHerb/TPFL; NatureMap
Stylidium xanthopis	P1		September to November	Damp red clayey sand with granite and laterite. Base of rock outcrops, screes or hillsides.	WAHerb/TPFL; NatureMap
***Stylidium* sp. Three Springs (J.A. Wege & C. Wilkins JAW 600)**	P2		August to September	Rocky slopes, flats and outcrops with clay-sand or loam.	WAHerb/TPFL; NatureMap
Styphelia filifolia	P3		February to June	Sand, sometimes winter damp.	WAHerb/TPFL; NatureMap
Styphelia howatharra	P2		June to July, October	Brown sandy loam, often gravelly. Mid to upper slopes.	NatureMap

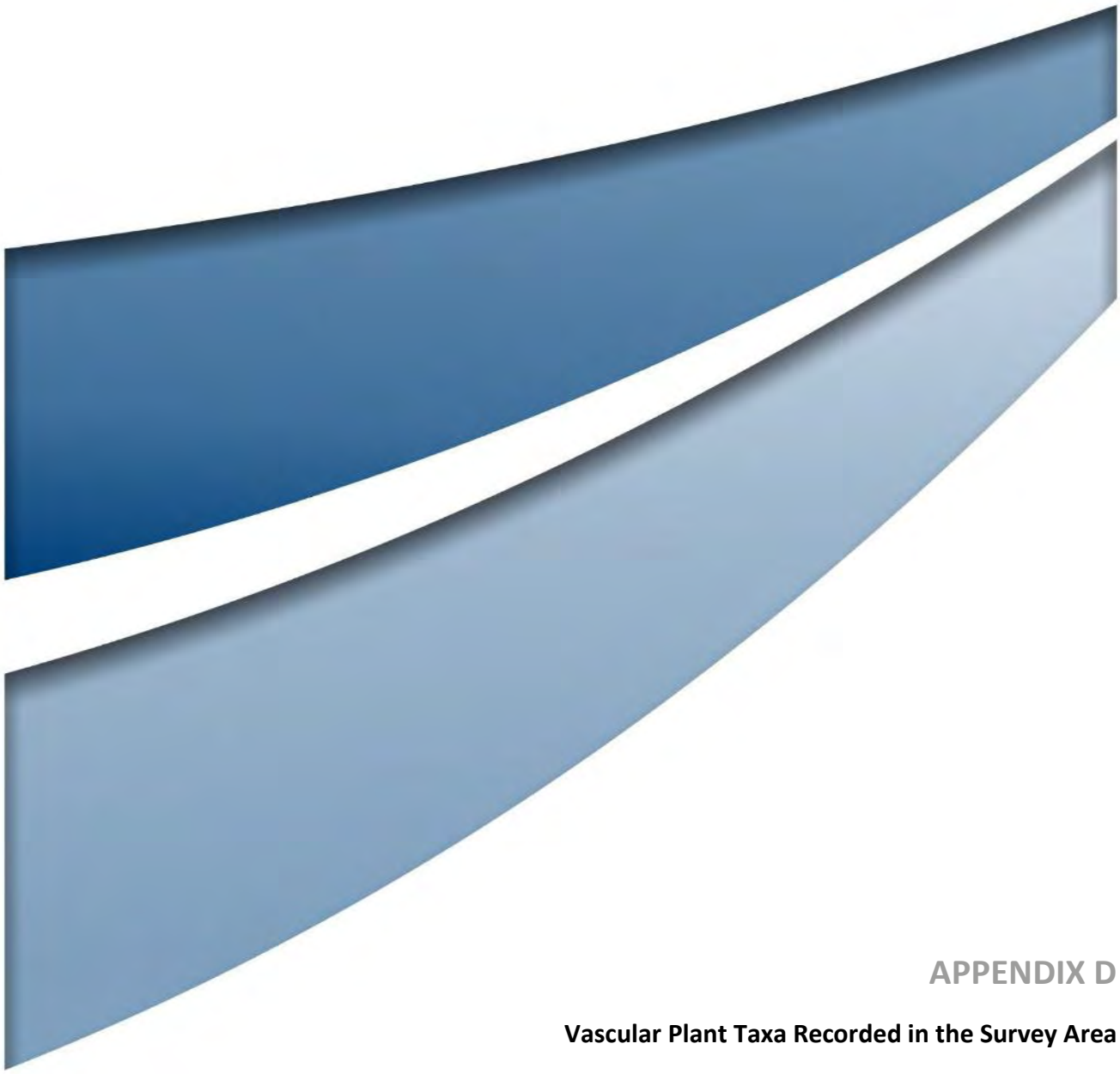
Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Styphelia hyalina	P3		June, October to December	Sand or loam soils, on lateritic uplands and often in association with breakaways.	WAHerb/TPFL
Styphelia longissima	T	CR	June to September	Hillsides with gentle slopes and yellow sand.	WAHerb/TPFL; NatureMap; DCCEEW
Styphelia marginata	T	EN	May to July	Yellow sand with gravel. Hillsides, ironstone breakaways.	WAHerb/TPFL; NatureMap; DCCEEW
Styphelia obtecta	T	EN	October to November	Plains with white, grey or yellow sand.	WAHerb/TPFL; NatureMap; DCCEEW
Styphelia pallens	P2		October to December	Usually high in the landscape in sand or light loam over laterite.	WAHerb/TPFL
Swainsona picta	P1		August	Red brown sandy loam. Granite outcrops and adjacent areas.	WAHerb/TPFL; Umwelt
Synaphea oulopha	P3		July to October	Lateritic breakaways and rises on grey sand, gravelly loam, clay.	WAHerb/TPFL; NatureMap
Synaphea sparsiflora	P2		August to September	Slopes / crests of hills and lateritic ridges with grey / brown sand.	WAHerb/TPFL; NatureMap
Synaphea xela	P2		August	Undulating sites with red-brown gravelly sand, white-pink, grey-brown clayey sand and loam, over laterite.	WAHerb/TPFL; NatureMap
Tecticornia bulbosa	T	VU	June	Brown sandy clay. Gently undulating saline areas, permanently wet saline clays.	WAHerb/TPFL; NatureMap; DCCEEW
Tecticornia fimbriata	P3		Unknown	Saline sand and clayey soil. Shores of salt lakes.	WAHerb/TPFL; NatureMap
Tetratheca nephelioides	T	CR	July to January	Slopes and ridges with white or grey gravelly sand over laterite.	DCCEEW
Thelymitra apiculata	P4		June to August	Hillslopes with grey sand, lateritic gravel and laterite.	WAHerb/TPFL
Thelymitra stellata	T	EN	September to early November	Ridges and tops of lateritic hills with grey or brown sand or loam and lateritic gravel.	WAHerb/TPFL; NatureMap; DCCEEW
Thomasia x formosa	P1		October	Orange clayey sand. Disturbed areas.	WAHerb/TPFL

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Thryptomene nitida	P3		August to November	Lower slopes, flats and drainage lines with clay and clay/sand.	WAHerb/TPFL; NatureMap
Thryptomene pieroniae	P3		July to September	Yellow sandplains. Yellow sand or silty gravel. Disturbed areas.	WAHerb/TPFL; NatureMap
Thryptomene shirleyae	P2		July to October	Yellow sand or sandy loam over gravel. Gentle upper slopes or plains.	WAHerb/TPFL; NatureMap
Thryptomene spicata	P2		September to November	Slopes with grey, yellow or brown lateritic sand, Rocky Springs ferricrete.	WAHerb/TPFL
Thryptomene velutina	P2		June to October	Sandplains, ridgetops and slopes. Red-brown, brown, yellow, orange or white sand, sandy clay.	WAHerb/TPFL
Thysanotus glaucus	P4		October to March	White, grey or yellow sand, sandy gravel.	WAHerb/TPFL; NatureMap
Thysanotus vernalis	P3		September to October	Slopes, flats and winter wet depressions with grey, brown or white sand with lateritic gravel over laterite.	WAHerb/TPFL; NatureMap
Tricoryne soulliereae	P3		October to December	Yellow to grey sand, gravelly clay quartz, laterite, limestone. Midslopes and uplands.	WAHerb/TPFL; NatureMap
Triglochin protuberans	P3		August to November	Margins of ephemeral wetlands and rock pools, clay pans, sometimes granitic. Red-brown clay.	WAHerb/TPFL; NatureMap
Urodon capitatus	P3		September to December	Yellow sand. Sandplains and flats.	WAHerb/TPFL; NatureMap
Verticordia albida	T	EN	November to January	Undulating sandplains with grey, white or yellow sand, sometimes over laterite.	WAHerb/TPFL; NatureMap; DCCEEW
Verticordia argentea	P2		November to April	White, grey or yellow sand. Sand ridges, undulating plains.	WAHerb/TPFL; NatureMap
Verticordia aurea	P4		September to December	Sandplains with deep white-grey sand.	WAHerb/TPFL; NatureMap
Verticordia capillaris	P4		March, September to November	Yellow sand across flat sandplains or slightly undulating plains.	WAHerb/TPFL; NatureMap
Verticordia chrysostachys* var. *pallida	P3		October to January	Yellow sand. Plains or slopes.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Verticordia comosa	P1		September to January	Yellow sand. Plains or slopes.	WAHerb/TPFL; NatureMap; Woodman Environmental
Verticordia dasystylis* subsp. *oestopoia	P1		October to December	Gritty soils over granite. Outcrops.	WAHerb/TPFL; NatureMap
Verticordia densiflora* var. *roseostella	P3		September to December	Sandplains and breakaways with yellow, grey or white sand or sandy loam, often with laterite.	WAHerb/TPFL; NatureMap
Verticordia fragrans	P3		September to November	Sandplains and low-lying areas with white, grey or yellow sand or clay loam.	WAHerb/TPFL; NatureMap
Verticordia insignis* subsp. *eomagis	P3		August to November	Sandplains and rocky rises with sandy soils over laterite.	WAHerb/TPFL; NatureMap
Verticordia luteola* var. *luteola	P3		October to January	Grey or yellow sand. Slopes.	WAHerb/TPFL; NatureMap
Verticordia luteola* var. *rosea	P1		December to January	White sand. Flats.	WAHerb/TPFL; NatureMap
Verticordia muelleriana* subsp. *muelleriana	P3		September to January	Sandplains and slopes with white-grey or yellow sand.	WAHerb/TPFL; NatureMap
Verticordia penicillaris	P4		September to October	Hills, rocky creeks and outcrops with shallow grey or brown sandy loam or clay loam, often with granite or sometimes laterite or sandstone.	WAHerb/TPFL; NatureMap
Verticordia polytricha	P4		September to January	Yellow sand across flat sandplains or slightly undulating plains. Often found with moist soils near gorges or gullies.	WAHerb/TPFL
Verticordia spicata* subsp. *squamosa	T	EN	November to January	Dry yellow sand. Plains and road verges.	WAHerb/TPFL; NatureMap; DCCEEW; Woodman Environmental
Verticordia venusta	P3		October to January	Yellow sand or yellow to brown sandy loam across undulating terrain.	WAHerb/TPFL; NatureMap
Vittadinia cervicularis* var. *occidentalis	P1		August to September	Slopes or plains. Brown sand or sandy gravel. Disturbed areas.	WAHerb/TPFL; NatureMap

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Source^
Wurmbea murchisoniana	P4		July to September	Brown sand, sandy/gritty clay near ephemeral granite rock pools, riverbanks or other wet depressions.	WAHerb/TPFL; NatureMap
Wurmbea tubulosa	T	EN	June to October	Riverbanks, seasonally-wet places with clay or loam.	WAHerb/TPFL; NatureMap; DCCEEW

** Source: WA Herbarium specimen records data, accessed via Florabase (WA Herbarium, 1998-), except where stated otherwise.*



APPENDIX D

Vascular Plant Taxa Recorded in the Survey Area

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Aizoaceae	*Carpobrotus modestus*		X	Discrete	Perennial
	**Cleretum papulosum* subsp. *papulosum*	X	X	Discrete	Annual
	Disphyma crassifolium subsp. *clavellatum*	X	X	Discrete	Perennial
	Gunniopsis divisa (P3)	X	X	Discrete	Annual
	Gunniopsis propinqua	X		Discrete	Annual
	Gunniopsis quadrifida	X	X	Discrete	Perennial
	Gunniopsis rodwayi		X	Discrete	Annual
	Gunniopsis rubra	X	X	Discrete	Annual
	Gunniopsis septifraga	X	X	Discrete	Annual
	**Mesembryanthemum nodiflorum*	X	X	Discrete	Annual
	Sarcozona praecox	X	X	Discrete	Perennial
	Tetragonia diptera	X	X	Discrete	Annual
	Tetragonia eremaea	X		Discrete	Annual
Amaranthaceae	*Gomphrena verecunda*	X		Discrete	Annual
	Ptilotus chamaecladus		X	Discrete	Annual
	Ptilotus divaricatus	X	X	Discrete	Perennial
	Ptilotus drummondii	X	X	Discrete	Perennial
	Ptilotus eremita		X	Discrete	Annual
	Ptilotus exaltatus	X	X	Discrete	Annual
	Ptilotus gaudichaudii	X	X	Discrete	Annual
	Ptilotus grandiflorus		X	Discrete	Annual
	Ptilotus halophilus	X		Discrete	Perennial
	Ptilotus helipteroides		X	Discrete	Annual
	Ptilotus humilis	X		Discrete	Annual
	Ptilotus obovatus	X	X	Discrete	Perennial
	Ptilotus polystachyus	X	X	Discrete	Perennial
	Ptilotus schwartzii		X	Discrete	Perennial
Apiaceae	*Daucus glochidiatus*	X	X	Discrete	Annual
	Platysace trachymenioides	X	X	Discrete	Perennial
	Xanthosia kochii	X	X	Discrete	Perennial
Apocynaceae	*Alyxia buxifolia*	X	X	Discrete	Perennial
	Vincetoxicum lineare	X	X	Discrete	Perennial
Araliaceae	*Hydrocotyle callicarpa*		X	Discrete	Annual
	Hydrocotyle glochidiata	X		Discrete	Annual
	Hydrocotyle intertexta	X	X	Discrete	Annual
	Hydrocotyle rugulosa	X	X	Discrete	Annual
	Trachymene ceratocarpa	X	X	Discrete	Annual
	Trachymene cyanopetala	X	X	Discrete	Annual
	Trachymene ornata	X	X	Discrete	Annual
	Trachymene pilosa		X	Discrete	Annual

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Asparagaceae	*Acanthocarpus canaliculatus*	X	X	Discrete	Perennial
	Acanthocarpus sp. Ajana (C.A. Gardner 8596)		X	Discrete	Perennial
	Arthropodium curvipes	X	X	Discrete	Annual
	Arthropodium dyeri	X	X	Discrete	Perennial
	Chamaexeros fimbriata	X		Discrete	Perennial
	Chamaexeros macranthera	X	X	Discrete	Perennial
	Dichopogon sp.		X	Discrete	Perennial
	Lomandra effusa	X	X	Discrete	Perennial
	Lomandra marginata	X	X	Discrete	Perennial
	Thysanotus manglesianus	X	X	Discrete	Perennial
	Thysanotus patersonii		X	Discrete	Perennial
	Thysanotus pyramidalis	X	X	Discrete	Perennial
	Thysanotus speckii	X	X	Discrete	Perennial
	Xerolirion divaricata		X	Discrete	Perennial
Asphodelaceae	*Bulbine semibarbata*	X		Discrete	Annual
Aspleniaceae	*Asplenium subglandulosum*		X	Discrete	Perennial
Asteraceae	*Actinobole uliginosum*	X	X	Discrete	Annual
	Angianthus ?milnei		X	Discrete	Annual
	Angianthus cornutus		X	Discrete	Annual
	Angianthus preissianus		X	Discrete	Annual
	Angianthus tomentosus	X	X	Discrete	Annual
	**Arctotheca calendula*	X	X	Discrete	Annual
	Bellida graminea	X	X	Discrete	Annual
	Blennospora drummondii	X	X	Discrete	Annual
	Blennospora phlegmatocarpa	X		Discrete	Annual
	Brachyscome ?pusilla		X	Discrete	Annual
	Brachyscome ciliaris		X	Discrete	Annual
	Brachyscome iberidifolia	X		Discrete	Annual
	Brachyscome perpusilla	X	X	Discrete	Annual
	Calocephalus multiflorus		X	Discrete	Annual
	Calotis hispidula	X	X	Discrete	Annual
	Calotis multicaulis	X	X	Discrete	Annual
	Calotis sp. Perrinvale Station (R.J. Cranfield 7096) (P3)	X	X	Discrete	Annual
	**Carthamus lanatus*		X	Discrete	Annual
	**Centaurea melitensis*	X	X	Discrete	Annual
	Centipeda thespidioides		X	Discrete	Annual
	Cephalipterum drummondii	X	X	Discrete	Annual
	Ceratogyne obionoides	X	X	Discrete	Annual

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Asteraceae cont.	*Chthonocephalus pseudevax*	X	X	Discrete	Annual
	Cotula cotuloides	X		Discrete	Annual
	Cratystylis subspinescens		X	Discrete	Perennial
	Dithyrostegia amplexicaulis	X		Discrete	Annual
	Epitriche demissus (P2)	X		Discrete	Annual
	Erymophyllum glossanthus	X	X	Discrete	Annual
	Erymophyllum ramosum subsp. *ramosum*	X	X	Discrete	Annual
	Erymophyllum tenellum		X	Discrete	Annual
	Feldstonia nitens	X	X	Discrete	Annual
	Fitzwillia axilliflora (P2)	X		Discrete	Annual
	**Gazania linearis*	X		Discrete	Perennial
	Gilberta tenuifolia	X	X	Discrete	Annual
	Gilruthia osbornei	X	X	Discrete	Annual
	Gnephosis acicularis		X	Discrete	Annual
	Gnephosis angianthoides	X		Discrete	Annual
	Gnephosis brevifolia	X	X	Discrete	Annual
	Gnephosis macrocephala	X		Discrete	Annual
	Gnephosis setifera (P1)	X		Discrete	Annual
	Gnephosis tenuissima	X	X	Discrete	Annual
	Gnephosis trifida	X		Discrete	Annual
	**Gorteria personata*		X	Discrete	Perennial
	Helipterum craspedioides	X	X	Discrete	Annual
	Hyalochlamys globifera	X	X	Discrete	Annual
	Hyalosperma demissum	X	X	Discrete	Annual
	Hyalosperma glutinosum subsp. *glutinosum*	X	X	Discrete	Annual
	Hyalosperma glutinosum subsp. *venustum*	X	X	Discrete	Annual
	**Hypochaeris glabra*	X	X	Discrete	Annual
	Isoetopsis graminifolia	X	X	Discrete	Annual
	Lawrencella davenportii	X	X	Discrete	Annual
	Lawrencella rosea	X	X	Discrete	Annual
	Lemooria burkittii	X	X	Discrete	Annual
	**Leontodon rhagadioloides*	X		Discrete	Annual
	Millotia dimorpha (P1)		X	Discrete	Annual
	Millotia myosotidifolia	X	X	Discrete	Annual
	**Monoculus monstrosus*	X	X	Discrete	Annual
	Myriocephalus gueriniae	X	X	Discrete	Annual
	Myriocephalus pygmaeus	X		Discrete	Annual
	Myriocephalus rudallii		X	Discrete	Annual
	Olearia humilis	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Asteraceae cont.	*Olearia muelleri*	X	X	Discrete	Perennial
	Olearia pimeleoides	X	X	Discrete	Perennial
	Olearia sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)	X	X	Discrete	Perennial
	Olearia sp. Kennedy Range (G. Byrne 66)		X	Discrete	Perennial
	Panaetia lessonii	X	X	Discrete	Annual
	Podolepis aristata subsp. *affinis*	X	X	Discrete	Annual
	Podolepis aristata subsp. *aristata*	X		Discrete	Annual
	Podotheca gnaphalioides	X	X	Discrete	Annual
	Podotheca uniseta (P3)	X		Discrete	Annual
	Pogonolepis muelleriana	X	X	Discrete	Annual
	Pogonolepis stricta	X	X	Discrete	Annual
	Rhodanthe battii	X	X	Discrete	Annual
	Rhodanthe charsleyae	X		Discrete	Annual
	Rhodanthe chlorocephala subsp. *rosea*		X	Discrete	Annual
	Rhodanthe chlorocephala subsp. *splendida*	X	X	Discrete	Annual
	Rhodanthe citrina	X	X	Discrete	Annual
	Rhodanthe collina (P3)	X	X	Discrete	Annual
	Rhodanthe humboldtiana	X		Discrete	Annual
	Rhodanthe laevis	X	X	Discrete	Annual
	Rhodanthe manglesii	X	X	Discrete	Annual
	Rhodanthe maryonii	X	X	Discrete	Annual
	Rhodanthe oppositifolia subsp. *oppositifolia*	X		Discrete	Annual
	Rhodanthe polycephala		X	Discrete	Annual
	Rhodanthe pygmaea	X	X	Discrete	Annual
	Rhodanthe spicata	X		Discrete	Annual
	Rhodanthe stricta		X	Discrete	Annual
	Roebuckiella cheilocarpa	X	X	Discrete	Annual
	Roebuckiella ciliocarpa	X	X	Discrete	Annual
	Roebuckiella halophila (P3)	X		Discrete	Annual
	Schoenia cassiniana	X	X	Discrete	Annual
	Schoenia filifolia subsp. *filifolia*		X	Discrete	Annual
	Senecio glossanthus	X	X	Discrete	Annual
	Senecio lacustrinus	X	X	Discrete	Annual
	Senecio pinnatifolius		X	Discrete	Annual
	Siemssenia capillaris	X	X	Discrete	Annual
	**Sonchus oleraceus*	X	X	Discrete	Annual
	Sondottia connata	X	X	Discrete	Annual
	Trichanthodium skirrophorum		X	Discrete	Annual

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Asteraceae cont.	**Ursinia anthemoides* subsp. *anthemoides*	X	X	Discrete	Annual
	Waitzia acuminata var. *acuminata*	X	X	Discrete	Annual
	Waitzia nitida	X	X	Discrete	Annual
	Walshia kendallii	X	X	Discrete	Annual
Boraginaceae	**Echium plantagineum*	X	X	Discrete	Annual
	Cynoglossum sp. Inland Ranges (C.A. Gardner 14499)	X		Discrete	Annual
	Halgania cyanea var. Allambi Stn (B.W. Strong 676)	X	X	Discrete	Perennial
	Omphalolappula concava	X	X	Discrete	Annual
Boryaceae	*Borya sphaerocephala*	X	X	Discrete	Perennial
Brassicaceae	**Brassica tournefortii*	X	X	Discrete	Annual
	**Carrichtera annua*	X		Discrete	Annual
	Lepidium oxytrichum	X	X	Discrete	Annual
	Menkea australis	X	X	Discrete	Annual
	Menkea draboides (P3)	X		Discrete	Annual
	Phlegmatospermum drummondii	X		Discrete	Annual
	**Raphanus raphanistrum*	X	X	Discrete	Annual
	**Sisymbrium erysimoides*	X	X	Discrete	Annual
	**Sisymbrium orientale*	X	X	Discrete	Annual
	**Sisymbrium runcinatum*	X		Discrete	Annual
	Stenopetalum anfractum		X	Discrete	Annual
	Stenopetalum filifolium	X	X	Discrete	Annual
	Stenopetalum pedicellare		X	Discrete	Annual
	Stenopetalum salicola	X		Discrete	Annual
	Stenopetalum sphaerocarpum	X	X	Discrete	Annual
Campanulaceae	*Isotoma scapigera*	X		Discrete	Annual
	Lithotoma petraea		X	Discrete	Perennial
	Lobelia cleistogamoides	X		Discrete	Annual
	Lobelia rhytidosperma	X	X	Discrete	Annual
	Lobelia winfridae	X	X	Discrete	Annual
	Wahlenbergia gracilenta	X	X	Discrete	Annual
	Wahlenbergia preissii	X	X	Discrete	Annual
Caryophyllaceae	**Petrorhagia dubia*	X	X	Discrete	Annual
	**Silene nocturna*	X	X	Discrete	Annual
	Spergularia marina	X		Discrete	Annual
	**Spergula pentandra*	X	X	Discrete	Annual
	**Spergularia rubra*	X		Discrete	Annual

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Casuarinaceae	*Allocasuarina acutivalvis* subsp. *prinsepiana*	X	X	Discrete	Perennial
	Allocasuarina campestris		X	Discrete	Perennial
	Allocasuarina dielsiana		X	Discrete	Perennial
	Allocasuarina huegeliana		X	Discrete	Perennial
	Allocasuarina humilis		X	Discrete	Perennial
	Allocasuarina tessellata (P3)	X		Discrete	Perennial
	Casuarina obesa	X		Discrete	Perennial
Centrolepidaceae	*Centrolepis aristida*		X	Discrete	Annual
	Centrolepis cephaloformis subsp. *cephaloformis*	X		Discrete	Annual
	Centrolepis pilosa	X		Discrete	Annual
	Centrolepis polygyna	X		Discrete	Annual
	Centrolepis sp. Kalannie (B.J. Lepschi et al. BJL 3517)	X		Discrete	Annual
Chenopodiaceae	*Atriplex amnicola*	X	X	Discrete	Perennial
	Atriplex bunburyana		X	Discrete	Perennial
	Atriplex ?cinerea		X	Discrete	Perennial
	Atriplex codonocarpa	X	X	Discrete	Annual
	Atriplex holocarpa	X	X	Discrete	Annual
	Atriplex hymenotheca		X	Discrete	Perennial
	Atriplex lindleyi subsp. *inflata*		X	Discrete	Annual
	Atriplex nana		X	Discrete	Perennial
	Atriplex semibaccata		X	Discrete	Perennial
	Atriplex semilunaris	X	X	Discrete	Perennial
	Atriplex ?suberecta		X	Discrete	Perennial
	Atriplex stipitata subsp. *stipitata*		X	Discrete	Perennial
	Atriplex vesicaria	X		Discrete	Perennial
	Chenopodium gaudichaudianum	X	X	Discrete	Perennial
	Didymanthus roei	X	X	Discrete	Perennial
	Dysphania glandulosa	X	X	Discrete	Annual
	Dysphania melanocarpa	X	X	Discrete	Annual
	Enchylaena lanata	X	X	Discrete	Perennial
	Enchylaena tomentosa var. *tomentosa*	X	X	Discrete	Perennial
	Eriochiton sclerolaenoides		X	Discrete	Perennial
	Maireana amoena	X	X	Discrete	Perennial
	Maireana atkinsiana	X	X	Discrete	Perennial
	Maireana brevifolia	X	X	Discrete	Perennial
	Maireana carnosa	X	X	Discrete	Perennial
	Maireana convexa	X		Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Chenopodiaceae cont.	*Maireana diffusa*		X	Discrete	Perennial
	Maireana eriosphaera	X	X	Discrete	Perennial
	Maireana georgei	X	X	Discrete	Perennial
	Maireana glomerifolia	X		Discrete	Perennial
	Maireana marginata	X	X	Discrete	Perennial
	Maireana oppositifolia		X	Discrete	Perennial
	Maireana planifolia	X	X	Discrete	Perennial
	Maireana planifolia x *villosa* (A. Markey & S. Dillon 3482)		X	Putative Hybrid	Perennial
	Maireana thesioides	X	X	Discrete	Perennial
	Maireana tomentosa subsp. *tomentosa*	X	X	Discrete	Perennial
	Maireana trichoptera	X	X	Discrete	Perennial
	Maireana triptera		X	Discrete	Perennial
	Maireana villosa		X	Discrete	Perennial
	Rhagodia drummondii	X	X	Discrete	Perennial
	Rhagodia preissii		X	Discrete	Perennial
	Salsola australis	X	X	Discrete	Annual
	Sclerolaena alata	X	X	Discrete	Perennial
	Sclerolaena densiflora		X	Discrete	Perennial
	Sclerolaena diacantha	X	X	Discrete	Perennial
	Sclerolaena drummondii	X	X	Discrete	Perennial
	Sclerolaena eriacantha		X	Discrete	Perennial
	Sclerolaena eurotioides	X	X	Discrete	Perennial
	Sclerolaena fusiformis	X	X	Discrete	Perennial
	Sclerolaena gardneri	X	X	Discrete	Perennial
	Tecticornia calyptrata		X	Discrete	Perennial
	Tecticornia disarticulata	X	X	Discrete	Perennial
	Tecticornia doliiformis		X	Discrete	Perennial
	Tecticornia fimbriata (P3)	X	X	Discrete	Perennial
	Tecticornia halocnemoides		X	Discrete	Perennial
	Tecticornia indica subsp. *bidens*	X	X	Discrete	Perennial
	Tecticornia lepidosperma		X	Discrete	Perennial
	Tecticornia loriae	X		Discrete	Perennial
	Tecticornia peltata	X	X	Discrete	Perennial
	Tecticornia pergranulata		X	Discrete	Perennial
	Tecticornia pterygosperma subsp. *pterygosperma*		X	Discrete	Perennial
	Tecticornia syncarpa	X		Discrete	Perennial
	Tecticornia undulata	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Chenopodiaceae cont.	*Tecticornia* sp. 'Karara 1' (Potentially undescribed)	X		Discrete	Perennial
	Tecticornia sp. 'Karara 2' (Potentially undescribed)	X		Discrete	Perennial
	Tecticornia sp. 'Karara 3'	X		Discrete	Perennial
	Tecticornia sp. 'Karara 4'	X		Discrete	Perennial
Colchicaceae	*Burchardia congesta*	X		Discrete	Perennial
	Wurmbea densiflora	X	X	Discrete	Perennial
	Wurmbea dilatata	X		Discrete	Perennial
	Wurmbea flavanthera	X	X	Discrete	Perennial
	Wurmbea tenella	X	X	Discrete	Perennial
Convolvulaceae	*Convolvulus ?remotus*		X	Discrete	Perennial
	**Cuscuta epithymum*		X	Discrete	Annual
	**Cuscuta planiflora*	X	X	Discrete	Annual
	Duperreya sericea	X	X	Discrete	Perennial
Crassulaceae	*Crassula closiana*	X	X	Discrete	Annual
	Crassula colorata var. *acuminata*	X	X	Discrete	Annual
	Crassula colorata var. *colorata*		X	Discrete	Annual
	Crassula exserta	X	X	Discrete	Annual
	Crassula extrorsa	X	X	Discrete	Annual
	Crassula tetramera		X	Discrete	Annual
Cucurbitaceae	**Citrullus amarus*		X	Discrete	Perennial
	Cucumis melo		X	Discrete	Annual
	**Cucumis myriocarpus*		X	Discrete	Annual
Cupressaceae	*Callitris arenaria*		X	Discrete	Perennial
	Callitris columellaris	X	X	Discrete	Perennial
Cyperaceae	*Chrysitrix distigmatosa*	X	X	Discrete	Perennial
	Cyperus gymnocaulos		X	Discrete	Perennial
	**Ficinia marginata*	X		Discrete	Annual
	Gahnia drummondii		X	Discrete	Perennial
	Isolepis congrua	X		Discrete	Annual
	Lepidosperma costale	X	X	Discrete	Perennial
	Lepidosperma sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	X	X	Discrete	Perennial
	Schoenus humilis	X		Discrete	Annual
	Schoenus nanus	X	X	Discrete	Annual
	Schoenus sculptus	X		Discrete	Annual
	Schoenus variicellae	X		Discrete	Annual
Dilleniaceae	*Hibbertia arcuata*	X	X	Discrete	Perennial
	Hibbertia cockertoniana (P3)		X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Dilleniaceae cont.	*Hibbertia glomerosa*	X	X	Discrete	Perennial
	Hibbertia stenophylla	X	X	Discrete	Perennial
Dioscoreaceae	*Dioscorea hastifolia*	X	X	Discrete	Perennial
Droseraceae	*Drosera bulbosa* subsp. *bulbosa*		X	Discrete	Perennial
	Drosera eremaea	X	X	Discrete	Perennial
	Drosera glanduligera	X	X	Discrete	Annual
	Drosera macrantha		X	Discrete	Perennial
	Drosera major	X		Discrete	Annual
	Drosera sp. Branched styles (S.C. Coffey 193)	X		Discrete	Perennial
Ecdeiocoleaceae	*Ecdeiocolea monostachya*	X	X	Discrete	Perennial
Ericaceae	*Leucopogon* sp. Clyde Hill (M.A. Burgman 1207)	X	X	Discrete	Perennial
	Styphelia serratifolia s. lat.	X	X	Discrete	Perennial
Euphorbiaceae	*Calycopeplus paucifolius*	X	X	Discrete	Perennial
	Euphorbia drummondii		X	Discrete	Annual
	Euphorbia porcata	X	X	Discrete	Annual
	Euphorbia tannensis subsp. *eremophila*	X		Discrete	Annual
	Ricinocarpos velutinus	X	X	Discrete	Perennial
	Stachystemon intricatus	X	X	Discrete	Perennial
Fabaceae	*Acacia acanthoclada* subsp. *glaucescens*	X	X	Discrete	Perennial
	Acacia acuaria	X	X	Discrete	Perennial
	Acacia acuminata	X	X	Discrete	Perennial
	Acacia aestivalis		X	Discrete	Perennial
	Acacia andrewsii	X	X	Discrete	Perennial
	Acacia aneura	X	2	Discrete	Perennial
	Acacia anthochaera	X	X	Discrete	Perennial
	Acacia assimilis subsp. *assimilis*	X	X	Discrete	Perennial
	Acacia aulacophylla		X	Discrete	Perennial
	Acacia blakelyi		X	Discrete	Perennial
	Acacia burkittii	X	X	Discrete	Perennial
	Acacia caesaneura	X	X	Discrete	Perennial
	Acacia colletioides	X	X	Discrete	Perennial
	Acacia coolgardiensis	X		Discrete	Perennial
	Acacia daphnifolia		X	Discrete	Perennial
	Acacia daviesioides		X	Discrete	Perennial
	Acacia dielsii		X	Discrete	Perennial
	Acacia duriuscula	X	X	Discrete	Perennial
	Acacia effusifolia		X	Discrete	Perennial
	Acacia eremaea	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Fabaceae cont.	*Acacia ericksoniae*		X	Discrete	Perennial
	Acacia erinacea	X	X	Discrete	Perennial
	Acacia exocarpoides	X	X	Discrete	Perennial
	Acacia inceana subsp. *conformis*	X	X	Discrete	Perennial
	Acacia incognita	X	X	Discrete	Perennial
	Acacia jibberdingensis	X	X	Discrete	Perennial
	Acacia karinae (P3)	X	X	Discrete	Perennial
	Acacia kochii	X	X	Discrete	Perennial
	Acacia latior	X	X	Discrete	Perennial
	Acacia ligulata		X	Discrete	Perennial
	Acacia longispinea	X	X	Discrete	Perennial
	Acacia microbotrya		X	Discrete	Perennial
	Acacia mulganeura	X	X	Discrete	Perennial
	Acacia murrayana	X		Discrete	Perennial
	Acacia neurophylla subsp. ?*erugata*		X	Discrete	Perennial
	Acacia ?*nigripilosa* subsp. *nigripilosa*		X	Discrete	Perennial
	Acacia nyssophylla		X	Discrete	Perennial
	Acacia obtecta	X	X	Discrete	Perennial
	Acacia ?*oswaldii*		X	Discrete	Perennial
	Acacia prainii	X	X	Discrete	Perennial
	Acacia ?*pteraneura*		X	Discrete	Perennial
	Acacia puncticulata		X	Discrete	Perennial
	Acacia quadrimarginea		X	Discrete	Perennial
	Acacia ramulosa var. *linophylla*		X	Discrete	Perennial
	Acacia ramulosa var. *ramulosa*	X	X	Discrete	Perennial
	Acacia resinosa		X	Discrete	Perennial
	Acacia restiacea		X	Discrete	Perennial
	Acacia rostellifera		X	Discrete	Perennial
	Acacia saligna subsp. Wheatbelt (B.R. Maslin 8602)		X	Discrete	Perennial
	Acacia sibina	X	X	Discrete	Perennial
	Acacia sibirica		X	Discrete	Perennial
	Acacia ?*sphacelata*		X	Discrete	Perennial
	Acacia stereophylla var. *stereophylla*	X	X	Discrete	Perennial
	Acacia ?*synchronicia*		X	Discrete	Perennial
	Acacia tetragonophylla	X	X	Discrete	Perennial
	Acacia tysonii		X	Discrete	Perennial
	Acacia umbraculiformis	X	X	Discrete	Perennial
	Daviesia benthamii	X	X	Discrete	Perennial
	Daviesia hakeoides subsp. *hakeoides*		X	Discrete	Perennial

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Fabaceae cont.	*Daviesia hakeoides* subsp. *subnuda*	X	X	Discrete	Perennial
	Gastrolobium callistachys		X	Discrete	Perennial
	Gastrolobium laytonii	X	X	Discrete	Perennial
	Gastrolobium ?spinosum		X	Discrete	Perennial
	Glycine canescens	X		Discrete	Perennial
	Jacksonia acicularis	X	X	Discrete	Perennial
	Labichea lanceolata subsp. *brevifolia*		X	Discrete	Perennial
	**Lupinus angustifolius*		X	Discrete	Annual
	**Lupinus cosentinii*	X	X	Discrete	Annual
	**Medicago ?truncatula*		X	Discrete	Annual
	**Medicago minima*	X	X	Discrete	Annual
	**Medicago polymorpha*		X	Discrete	Annual
	Mirbelia ?depressa		X	Discrete	Perennial
	Mirbelia microphylla	X	X	Discrete	Perennial
	Mirbelia ramulosa	X	X	Discrete	Perennial
	Mirbelia sp. Bursarioides (T.R. Lally 760)		X	Discrete	Perennial
	Senna artemisioides subsp. *filifolia*	X	X	Discrete	Perennial
	Senna artemisioides subsp. x *artemisioides*		X	Named Hybrid	Perennial
	Senna artemisioides subsp. x *petiolaris*		X	Named Hybrid	Perennial
	Senna charlesiana	X	X	Discrete	Perennial
	Senna glutinosa subsp. *chatelainiana*	X	X	Discrete	Perennial
	Senna stowardii	X	X	Discrete	Perennial
	Senna sp. Austin (A. Strid 20210)	X	X	Discrete	Perennial
	Swainsona affinis		X	Discrete	Perennial
	Swainsona gracilis	X		Discrete	Perennial
	Swainsona picta (P1)	X		Discrete	Annual
	Templetonia smithiana	X	X	Discrete	Perennial
	**Trifolium glomeratum*		X	Discrete	Annual
Frankeniaceae	*Frankenia pauciflora*	X	X	Discrete	Perennial
	Frankenia setosa	X	X	Discrete	Perennial
Gentianaceae	*Sebaea ovata*	X		Discrete	Annual
Geraniaceae	**Erodium cicutarium*	X	X	Discrete	Annual
	Erodium cygnorum	X	X	Discrete	Annual
Goodeniaceae	*Brunonia australis*	X	X	Discrete	Annual
	Dampiera lavandulacea	X	X	Discrete	Perennial
	Dampiera salahae		X	Discrete	Perennial
	Goodenia berardiana	X	X	Discrete	Annual
	Goodenia capillosa	X	X	Discrete	Annual

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Goodeniaceae cont.	*Goodenia cycnopotamica*	X	X	Discrete	Annual
	Goodenia ?*glabrata*		X	Discrete	Annual
	Goodenia havilandii	X	X	Discrete	Annual
	Goodenia krauseana	X		Discrete	Annual
	Goodenia mimuloides		X	Discrete	Annual
	Goodenia occidentalis	X	X	Discrete	Annual
	Goodenia pusilliflora	X	X	Discrete	Annual
	Goodenia rosea	X	X	Discrete	Annual
	Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	X		Discrete	Annual
	Scaevola spinescens	X	X	Discrete	Perennial
Haloragaceae	*Glischrocaryon flavescens*		X	Discrete	Perennial
	Gonocarpus nodulosus	X	X	Discrete	Annual
	Haloragis odontocarpa forma *pterocarpa*	X	X	Discrete	Annual
	Haloragis trigonocarpa	X	X	Discrete	Annual
	Myriophyllum decussatum	X		Discrete	Annual
Hemerocallidaceae	*Caesia micrantha*		X	Discrete	Perennial
	Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	X	X	Discrete	Perennial
	Caesia sp. Wongan (K.F. Kenneally 8820)	X	X	Discrete	Perennial
	Caesia aff. sp. Wongan (K.F. Kenneally 8820)	X		Discrete	Perennial
	Dianella revoluta var. *divaricata*	X	X	Discrete	Perennial
	Tricoryne ?*elatior*		X	Discrete	Perennial
	Tricoryne soullierae (P3)	X		Discrete	Perennial
	Tricoryne ?*tenella*		X	Discrete	Perennial
	Tricoryne tuberosa	X		Discrete	Perennial
Hypoxidaceae	*Pauridia glabella* var. *glabella*	X	X	Discrete	Perennial
Juncaceae	**Juncus bufonius*	X		Discrete	Annual
	Juncus radula		X	Discrete	Perennial
Juncaginaceae	*Triglochin isingiana*	X	X	Discrete	Annual
	Triglochin longicarpa	X		Discrete	Annual
	Triglochin mucronata	X		Discrete	Annual
	Triglochin nana	X		Discrete	Annual
	Triglochin sp. A Flora of Australia (G.J. Keighery 2477)	X	X	Discrete	Annual
Lamiaceae	*Hemigenia benthamii*		X	Discrete	Perennial
	Hemigenia botryphylla	X	X	Discrete	Perennial
	Hemigenia divaricata		X	Discrete	Perennial
	Hemigenia macphersonii		X	Discrete	Perennial
	Hemigenia yalgensis	X	X	Discrete	Perennial

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Lamiaceae cont.	*Hemigenia* sp. aff. *botryphylla* (Potentially undescribed)	X		Discrete	Perennial
	Hemigenia sp. Yalgoo (A.M. Ashby 2624)	X	X	Discrete	Perennial
	Microcorys sp. Mt Gibson (S. Patrick 2098)		X	Discrete	Perennial
	Pityrodia viscida (P4)		X	Discrete	Perennial
	Prostanthera althoferi subsp. *althoferi*	X	X	Discrete	Perennial
	Prostanthera campbellii	X		Discrete	Perennial
	Prostanthera eckersleyana		X	Discrete	Perennial
	Prostanthera magnifica	X	X	Discrete	Perennial
	Prostanthera patens	X	X	Discrete	Perennial
	Prostanthera prostantheroides	X	X	Discrete	Perennial
	Prostanthera sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)	X		Discrete	Perennial
	Teucrium disjunctum		X	Discrete	Perennial
Lauraceae	*Cassytha nodiflora*	X	X	Discrete	Perennial
	Cassytha pomiformis		X	Discrete	Perennial
Loganiaceae	*Phyllangium sulcatum*	X	X	Discrete	Annual
Loranthaceae	*Amyema fitzgeraldii*		X	Discrete	Perennial
	Amyema gibberula var. *tatei*		X	Discrete	Perennial
	Amyema miquelii		X	Discrete	Perennial
	Lysiana casuarinae	X	X	Discrete	Perennial
Malvaceae	*Abutilon cryptopetalum*	X	X	Discrete	Perennial
	Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	X	X	Discrete	Perennial
	Alyogyne ?*pinoniana*		X	Discrete	Perennial
	Androcalva luteiflora	X	X	Discrete	Perennial
	Brachychiton gregorii	X	X	Discrete	Perennial
	Corchorus sp.		X	Discrete	Perennial
	Hannafordia bissillii subsp. *latifolia*		X	Discrete	Perennial
	Lawrencia squamata	X	X	Discrete	Perennial
	Seringia exastia (EPBC: CR)	X		Discrete	Perennial
	Seringia velutina		X	Discrete	Perennial
	Sida sp. dark green fruits (S. van Leeuwen 2260)	X	X	Discrete	Perennial
	Sida sp. Golden calyces *glabrous* (H.N. Foote 32)	X	X	Discrete	Perennial
Montiaceae	*Calandrinia baccata*	X	X	Discrete	Annual
	Calandrinia calyptrata		X	Discrete	Annual
	Calandrinia disperma	X		Discrete	Annual
	Calandrinia eremaea	X	X	Discrete	Annual

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Montiaceae cont.	*Calandrinia eremaea* s. lat. (non-papillate variant)	X		Variant	Annual
	Calandrinia aff. *eremaea* (A. Markey & S. Dillon 3472)		X	Discrete	Annual
	Calandrinia flava	X		Discrete	Annual
	Calandrinia granulifera	X	X	Discrete	Annual
	Calandrinia polyandra	X	X	Discrete	Annual
	Calandrinia primuliflora	X	X	Discrete	Annual
	Calandrinia ptychosperma	X		Discrete	Annual
	Calandrinia pumila	X		Discrete	Annual
	Calandrinia remota		X	Discrete	Annual
	Calandrinia translucens	X	X	Discrete	Perennial
	Calandrinia sp. *Bungalbin* (G.J. Keighery & N. Gibson 1656)	X	X	Discrete	Annual
	Calandrinia sp. Needilup (K.R. Newbey 4892)	X		Discrete	Annual
	Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	X	X	Discrete	Annual
Myrtaceae	*Aluta aspera* subsp. *hesperia*	X	X	Discrete	Perennial
	Babingtonia camphorosmae		X	Discrete	Perennial
	Baeckea sp. Dudawa (M.E. Trudgen MET 5369)		X	Discrete	Perennial
	Baeckea sp. Perenjori (J.W. Green 1516) (P2)		X	Discrete	Perennial
	Calothamnus gilesii		X	Discrete	Perennial
	Calothamnus quadrifidus		X	Discrete	Perennial
	Calytrix glutinosa		X	Discrete	Perennial
	Calytrix sp. Paynes Find (F. & J. Hort 1188)	X	X	Discrete	Perennial
	Chamelaucium pauciflorum subsp. Perenjori (B.J. Conn 2181)	X		Discrete	Perennial
	Darwinia capitellata	X	X	Discrete	Perennial
	Darwinia sp. Karonie (K. Newbey 8503)		X	Discrete	Perennial
	Enekbatus stowardii	X	X	Discrete	Perennial
	Eremaea beaufortioides var. ?*beaufortioides*		X	Discrete	Perennial
	Eucalyptus arctata	X	X	Discrete	Perennial
	Eucalyptus camaldulensis subsp. *arida*	X	X	Discrete	Perennial
	Eucalyptus camaldulensis subsp. *obtusa*		X	Discrete	Perennial
	Eucalyptus clelandiorum	X	X	Discrete	Perennial
	Eucalyptus ebbanoensis subsp. *ebbanoensis*		X	Discrete	Perennial
	Eucalyptus eudesmioides		X	Discrete	Perennial

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Myrtaceae cont.	*Eucalyptus ewartiana*		X	Discrete	Perennial
	Eucalyptus gittinsii subsp. *illucida*		X	Discrete	Perennial
	Eucalyptus gomphocephala		X	Discrete	Perennial
	Eucalyptus horistes	X	X	Discrete	Perennial
	Eucalyptus jucunda		X	Discrete	Perennial
	Eucalyptus kochii subsp. *amaryssia*	X	X	Discrete	Perennial
	Eucalyptus kochii subsp. *borealis*	X	X	Discrete	Perennial
	Eucalyptus kochii subsp. *plenissima*	X	X	Discrete	Perennial
	Eucalyptus loxophleba subsp. *lissophloia*		X	Discrete	Perennial
	Eucalyptus loxophleba subsp. *loxophleba*		X	Discrete	Perennial
	Eucalyptus loxophleba subsp. *supralaevis*	X	X	Discrete	Perennial
	Eucalyptus pyriformis		X	Discrete	Perennial
	Eucalyptus redunca subsp. *pluricaulis*		X	Discrete	Perennial
	Eucalyptus rigidula		X	Discrete	Perennial
	Eucalyptus salubris	X	X	Discrete	Perennial
	Eucalyptus subangusta subsp. ?*pusilla*		X	Discrete	Perennial
	Eucalyptus todtiana		X	Discrete	Perennial
	Homalocalyx thryptomenoides		X	Discrete	Perennial
	Hysterobaeckea setifera subsp. *setifera*	X	X	Discrete	Perennial
	Malleostemon roseus	X		Discrete	Perennial
	Malleostemon tuberculatus	X	X	Discrete	Perennial
	Melaleuca acutifolia	X	X	Discrete	Perennial
	Melaleuca adnata	X	X	Discrete	Perennial
	Melaleuca ?*atroviridis*		X	Discrete	Perennial
	Melaleuca barlowii (P3)		X	Discrete	Perennial
	Melaleuca concreta	X	X	Discrete	Perennial
	Melaleuca cordata	X	X	Discrete	Perennial
	Melaleuca eleuterostachya	X	X	Discrete	Perennial
	Melaleuca fulgens subsp. *steedmanii*	X	X	Discrete	Perennial
	Melaleuca hamata	X	X	Discrete	Perennial
	Melaleuca leiocarpa	X	X	Discrete	Perennial
	Melaleuca marginata		X	Discrete	Perennial
	Melaleuca nematophylla	X	X	Discrete	Perennial
	Melaleuca nematophylla x	X		Putative Hybrid	Perennial
	Melaleuca radula	X	X	Discrete	Perennial
	Melaleuca stereophloia	X	X	Discrete	Perennial
	Melaleuca tinkeri		X	Discrete	Perennial
	Micromyrtus trudgenii (P3)		X	Discrete	Perennial
	Scholtzia uniovulata	X		Discrete	Perennial

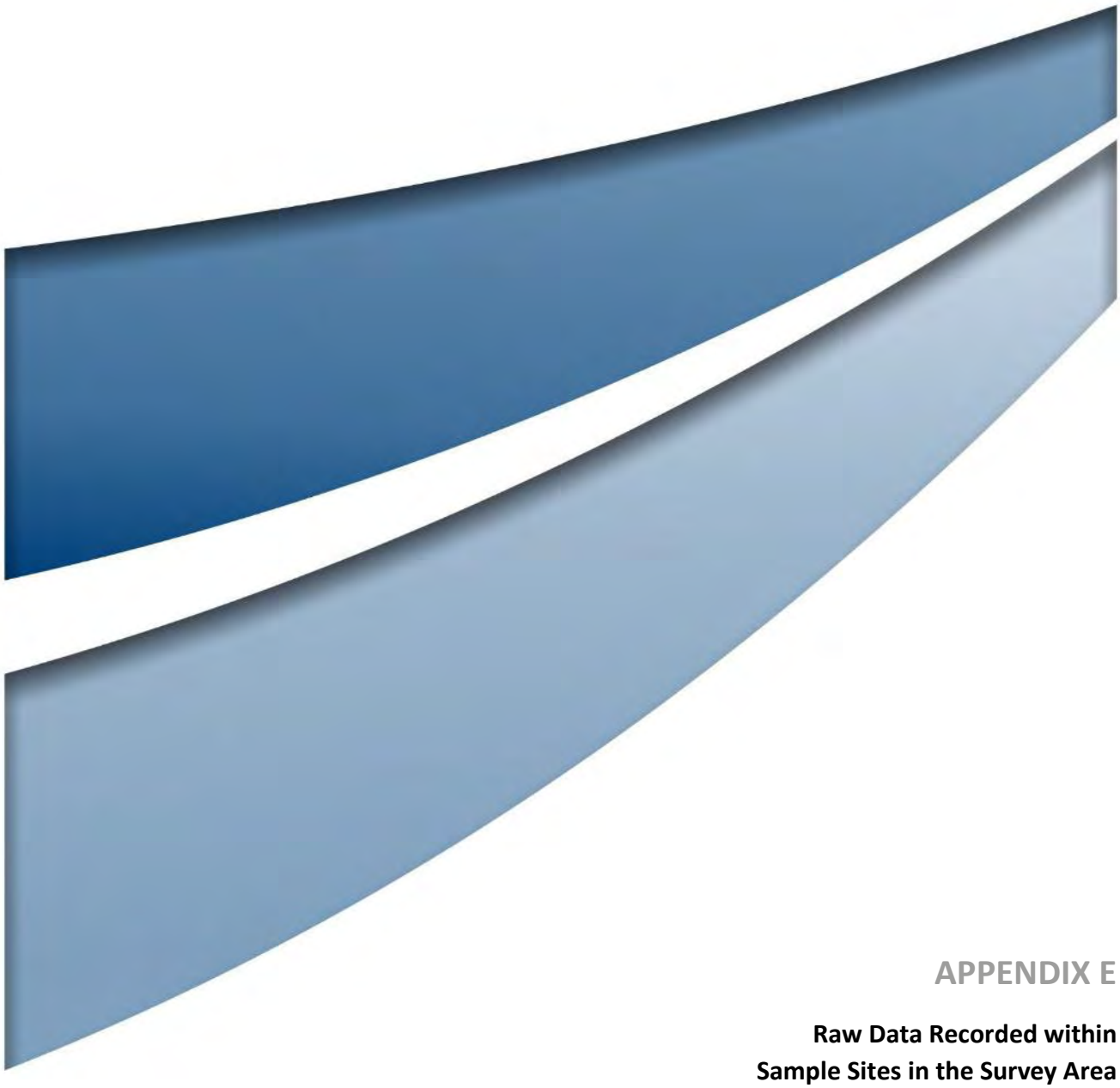
Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Myrtaceae cont.	*Thryptomene costata*	X	X	Discrete	Perennial
	Thryptomene denticulata		X	Discrete	Perennial
	Thryptomene hyporhytis	X		Discrete	Perennial
Ophioglossaceae	*Ophioglossum lusitanicum*	X		Discrete	Perennial
Orchidaceae	*Caladenia hirta* subsp. *rosea*	X	X	Discrete	Perennial
	Caladenia petrensis	X	X	Discrete	Perennial
	Caladenia remota		X	Discrete	Perennial
	Caladenia roei	X	X	Discrete	Perennial
	Cyanicula amplexans	X	X	Discrete	Annual
	Ericksonella saccharata	X		Discrete	Perennial
	Pheladenia deformis	X	X	Discrete	Perennial
	Prasophyllum gracile	X		Discrete	Perennial
	Pterostylis setulosa	X	X	Discrete	Perennial
	Thelymitra petrophila		X	Discrete	Perennial
Orobanchaceae	**Parentucellia latifolia*	X		Discrete	Annual
Phrymaceae	*Glossostigma diandrum*	X		Discrete	Annual
Phyllanthaceae	*Dendrophyllanthus erwinii*	X	X	Discrete	Annual
	Poranthera leiosperma	X		Discrete	Annual
	Poranthera microphylla		X	Discrete	Annual
Pittosporaceae	*Bursaria occidentalis*	X	X	Discrete	Perennial
	Cheiranthera simplicifolia	X	X	Discrete	Perennial
	Pittosporum angustifolium		X	Discrete	Perennial
Plantaginaceae	**Plantago coronopus* subsp. *commutata*		X	Discrete	Annual
	Plantago debilis	X	X	Discrete	Annual
	Plantago ?drummondii		X	Discrete	Annual
Plumbaginaceae	**Limonium lobatum*	X		Discrete	Perennial
Poaceae	**Aira caryophyllea*		X	Discrete	Annual
	Amphibromus nervosus	X		Discrete	Perennial
	Amphipogon caricinus var. *caricinus*	X	X	Discrete	Perennial
	Anthosachne scabra	X	X	Discrete	Perennial
	Aristida contorta	X	X	Discrete	Perennial
	Aristida holathera var. *holathera*		X	Discrete	Perennial
	Austrostipa elegantissima	X	X	Discrete	Perennial
	Austrostipa eremophila		X	Discrete	Perennial
	Austrostipa flavescens		X	Discrete	Perennial
	Austrostipa hemipogon		X	Discrete	Perennial
	Austrostipa macalpinei	X		Discrete	Annual
	Austrostipa nitida		X	Discrete	Perennial
	Austrostipa nodosa		X	Discrete	Perennial
	Austrostipa scabra subsp. *scabra*	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Poaceae cont.	*Austrostipa ?tenuifolia*		X	Discrete	Perennial
	Austrostipa trichophylla	X	X	Discrete	Perennial
	Austrostipa variabilis	X		Discrete	Perennial
	**Avena barbata*	X	X	Discrete	Annual
	**Avena fatua*		X	Discrete	Annual
	**Avena ?sativa*		X	Discrete	Annual
	**Briza maxima*		X	Discrete	Annual
	Bromus arenarius	X	X	Discrete	Annual
	**Bromus diandrus*		X	Discrete	Annual
	**Bromus rubens*	X	X	Discrete	Annual
	**Cynodon dactylon*		X	Discrete	Perennial
	**Ehrharta calycina*	X	X	Discrete	Perennial
	**Ehrharta longiflora*	X	X	Discrete	Annual
	Eragrostis dielsii	X	X	Discrete	Annual
	Eragrostis falcata	X		Discrete	Perennial
	Eriachne pulchella subsp. *pulchella*	X	X	Discrete	Annual
	**Hordeum ?glaucum*		X	Discrete	Annual
	**Hordeum leporinum*	X		Discrete	Annual
	Lachnagrostis plebeia	X	X	Discrete	Annual
	**Lamarckia aurea*	X	X	Discrete	Annual
	**Lolium perenne*	X		Discrete	Perennial
	**Lolium rigidum*		X	Discrete	Annual
	Monachather paradoxus	X	X	Discrete	Perennial
	**Parapholis incurva*	X		Discrete	Annual
	Paspalidium basicladum		X	Discrete	Annual
	Paspalidium clementii	X		Discrete	Annual
	**Pentameris airoides* subsp. *airoides*	X	X	Discrete	Annual
	**Phalaris ?minor*		X	Discrete	Annual
	**Polypogon monspeliensis*		X	Discrete	Annual
	**Rostraria pumila*	X	X	Discrete	Annual
	Rytidosperma caespitosum	X	X	Discrete	Perennial
	Rytidosperma setaceum	X	X	Discrete	Perennial
	Rytidosperma sp. Goomalling (A.G. Gunness et al. OAKP 10/63)		X	Discrete	Perennial
	Thyridolepis multiculmis		X	Discrete	Perennial
	Triodia danthonioides	X	X	Discrete	Perennial
	Tripogonella loliiformis	X	X	Discrete	Perennial
	**Vulpia myuros* forma *myuros*	X		Discrete	Annual
Polygalaceae	*Comesperma drummondii*		X	Discrete	Perennial
	Comesperma integerrimum	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Polygalaceae cont.	*Comesperma volubile*		X	Discrete	Perennial
Polygonaceae	*Duma florulenta*		X	Discrete	Perennial
	**Rumex hypogaeus*		X	Discrete	Annual
	**Rumex vesicarius*	X		Discrete	Annual
Primulaceae	**Lysimachia arvensis*	X	X	Discrete	Annual
	Samolus repens var. *floribundus*		X	Discrete	Perennial
Proteaceae	*Grevillea amplexans* subsp. ?*amplexans*		X	Discrete	Perennial
	Grevillea biformis subsp. *biformis*		X	Discrete	Perennial
	Grevillea extorris		X	Discrete	Perennial
	Grevillea globosa (P3)	X	X	Discrete	Perennial
	Grevillea granulosa (P3)	X		Discrete	Perennial
	Grevillea hakeoides subsp. *stenophylla*	X	X	Discrete	Perennial
	Grevillea juncifolia subsp. *temulenta*	X		Discrete	Perennial
	Grevillea leptopoda (P3)		X	Discrete	Perennial
	Grevillea levis	X	X	Discrete	Perennial
	Grevillea nematophylla subsp. *supraplana*	X	X	Discrete	Perennial
	Grevillea obliquistigma subsp. *obliquistigma*	X	X	Discrete	Perennial
	Grevillea ?*paniculata*		X	Discrete	Perennial
	Grevillea paradoxa	X	X	Discrete	Perennial
	Grevillea petrophiloides subsp. *petrophiloides*		X	Discrete	Perennial
	Grevillea pityophylla	X	X	Discrete	Perennial
	Grevillea sarissa subsp. *sarissa*	X	X	Discrete	Perennial
	Grevillea scabrida (P3)	X	X	Discrete	Perennial
	Grevillea subtiliflora (P3)		X	Discrete	Perennial
	Hakea francisiana		X	Discrete	Perennial
	Hakea invaginata	X	X	Discrete	Perennial
	Hakea minyma	X	X	Discrete	Perennial
	Hakea multilineata		X	Discrete	Perennial
	Hakea preissii		X	Discrete	Perennial
	Hakea recurva subsp. *arida*		X	Discrete	Perennial
	Hakea recurva subsp. *recurva*	X	X	Discrete	Perennial
	Hakea scoparia		X	Discrete	Perennial
	Persoonia hexagona	X	X	Discrete	Perennial
	Persoonia manotricha		X	Discrete	Perennial
	Persoonia pentasticha (P3)	X	X	Discrete	Perennial
	Petrophile pauciflora (P3)		X	Discrete	Perennial
Pteridaceae	*Cheilanthes adiantoides*		X	Discrete	Perennial
	Cheilanthes brownii		X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Pteridaceae cont.	*Cheilanthes sieberi* subsp. *sieberi*	X	X	Discrete	Perennial
Ranunculaceae	*Ranunculus sessiliflorus* var. *sessiliflorus*	X	X	Discrete	Annual
Rhamnaceae	*Cryptandra apetala* var. *apetala*	X	X	Discrete	Perennial
	Cryptandra imbricata	X	X	Discrete	Perennial
	Stenanthemum poicilum (P3)		X	Discrete	Perennial
Rubiaceae	**Galium aparine*	X	X	Discrete	Annual
	Opercularia ?spermacocea		X	Discrete	Perennial
Rutaceae	*Drummondita fulva* (P3)	X	X	Discrete	Perennial
	Drummondita microphylla		X	Discrete	Perennial
	Phebalium lepidotum		X	Discrete	Perennial
	Phebalium lepidotum x *tuberculosum*	X		Putative Hybrid	Perennial
	Phebalium ?megaphyllum		X	Discrete	Perennial
	Phebalium tuberculosum		X	Discrete	Perennial
	Philotheca brucei subsp. *brucei*	X	X	Discrete	Perennial
	Philotheca deserti subsp. *deserti*	X	X	Discrete	Perennial
	Philotheca glabra	X	X	Discrete	Perennial
	Philotheca sericea	X	X	Discrete	Perennial
	Philotheca tomentella	X	X	Discrete	Perennial
Santalaceae	*Exocarpos aphyllus*	X	X	Discrete	Perennial
	Santalum acuminatum	X	X	Discrete	Perennial
	Santalum spicatum	X	X	Discrete	Perennial
Sapindaceae	*Dodonaea inaequifolia*	X	X	Discrete	Perennial
	Dodonaea petiolaris	X	X	Discrete	Perennial
	Dodonaea pinifolia		X	Discrete	Perennial
	Dodonaea viscosa subsp. *angustissima*		X	Discrete	Perennial
Scrophulariaceae	*Eremophila clarkei*	X	X	Discrete	Perennial
	Eremophila compacta subsp. *compacta*		X	Discrete	Perennial
	Eremophila decipiens subsp. *decipiens*		X	Discrete	Perennial
	Eremophila decipiens subsp. *linearifolia*		X	Discrete	Perennial
	Eremophila eriocalyx	X	X	Discrete	Perennial
	Eremophila forrestii subsp. *forrestii*	X	X	Discrete	Perennial
	Eremophila georgei		X	Discrete	Perennial
	Eremophila glabra		X	Discrete	Perennial
	Eremophila granitica		X	Discrete	Perennial
	Eremophila latrobei subsp. *latrobei*	X	X	Discrete	Perennial
	Eremophila miniata		X	Discrete	Perennial
	Eremophila oldfieldii subsp. *angustifolia*		X	Discrete	Perennial
	Eremophila oldfieldii subsp. *oldfieldii*	X	X	Discrete	Perennial

Family	Taxon	2023/24 Survey	Previous Surveys	Type	Longevity
Scrophulariaceae cont.	*Eremophila oppositifolia* subsp. *angustifolia*	X	X	Discrete	Perennial
	Eremophila pantonii	X	X	Discrete	Perennial
	Eremophila platycalyx		X	Discrete	Perennial
	Eremophila serrulata	X		Discrete	Perennial
Solanaceae	*Anthotroche pannosa*	X		Discrete	Perennial
	Nicotiana hesperis		X	Discrete	Annual
	Nicotiana karara	X		Discrete	Annual
	Nicotiana rosulata subsp. *rosulata*		X	Discrete	Annual
	Nicotiana rotundifolia		X	Discrete	Annual
	Nicotiana salina (P1)	X		Discrete	Annual
	Solanum cleistogamum	X	X	Discrete	Perennial
	Solanum lasiophyllum	X	X	Discrete	Perennial
	Solanum nummularium	X	X	Discrete	Perennial
	Solanum oldfieldii		X	Discrete	Perennial
Stylidiaceae	*Levenhookia leptantha*	X	X	Discrete	Annual
	Stylidium perpusillum		X	Discrete	Annual
	Stylidium warriedarense	X	X	Discrete	Perennial
Surianaceae	*Stylobasium australe*	X		Discrete	Perennial
Thymelaeaceae	*Pimelea avonensis*		X	Discrete	Perennial
	Pimelea forrestiana		X	Discrete	Perennial
	Pimelea microcephala subsp. *microcephala*	X	X	Discrete	Perennial
	Pimelea spiculigera var. *thesioides*	X	X	Discrete	Perennial
Typhaceae	*Typha orientalis*		X	Discrete	Perennial
Urticaceae	*Parietaria cardiostegia*	X	X	Discrete	Annual
Violaceae	*Pigea curvifolia*	X		Discrete	Perennial
Zygophyllaceae	*Roepera apiculata*		X	Discrete	Annual
	Roepera aurantiaca subsp. *aurantiaca*	X	X	Discrete	Perennial
	Roepera eremaea	X	X	Discrete	Perennial
	Roepera ?fruticulosa		X	Discrete	Perennial
	Roepera iodocarpa		X	Discrete	Annual
	Roepera lobulata	X		Discrete	Annual
	Roepera ovata	X	X	Discrete	Annual
	Roepera similis	X	X	Discrete	Annual
Aizoaceae	**Cleretum papulosum* subsp. *papulosum*	X	X	Discrete	Annual
	**Mesembryanthemum nodiflorum*	X	X	Discrete	Annual



APPENDIX E

Raw Data Recorded within Sample Sites in the Survey Area

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

Quadrats

Site Name: FAC-01

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 24/08/2009

GPS Location: GDA94 Zone 50 469477E 6771985N

Community: A

Landform Type: Upper slope

Slope Class: Very gentle

Aspect: E

Soil Type: Silty clay loam (some granite in area)

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia umbraculiformis	5		
Actinobole uliginosum	0.05		
Blennospora drummondii	0.1		
Borya sphaerocephala	0.2		
Caesia ?*sp. Wongan (K.F. Keneally 8820)*	0.3		
Caladenia hirta subsp. *rosea*	0.1		
Calandrinia ?*eremaea*	0.1		
Calandrinia granulifera	0.1		
Cephalipterum drummondii	0.3		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Drosera bulbosa	0.05		
Drosera glanduligera	0.05		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Goodenia berardiana	0.1		
Helipterum craspedioides	0.2		
Hyalosperma glutinosum	0.1		
Hydrocotyle pilifera var. *glabrata*	0.2		

Isoetopsis graminifolia	0.05		
Lawrencella davenportii	0.3		
Lawrencella rosea	0.2		
Mirbelia microphylla	0.5		
Nicotiana rotundifolia	0.2		
Pheladenia deformis	0.1		
Phyllangium sulcatum	0.1		
Podolepis canescens	0.2		
Podolepis kendallii	0.1		
Pogonolepis muelleriana	0.1		
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Rhodanthe chlorocephala subsp. *splendida*	0.3		
Schoenia cassiniana	0.3		
Schoenus nanus	0.05		
Stenopetalum anfractum	0.2		
Thryptomene costata	2.5		
Trachymene ornata	0.1		
Triglochin sp. A Flora of Australia (G.J. Keighery 2477)	0.1		
Velleia cycnopotamica	0.1		
Velleia rosea	0.1		
Wurmbea densiflora	0.2		

PHOTOS

Site Name:	FAC-02
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	25/08/2009
GPS Location:	GDA94 Zone 50 469400E 6771863N
Community:	O
Landform Type:	Upper slope
Slope Class:	Very gentle
Aspect:	E
Soil Type:	Silty clay loam with granite pebbles and some granite outcropping
Soil Colour:	Pale brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.5		
Acacia ramulosa var. *ramulosa*	4		
Acacia tetragonophylla	3		
Actinobole uliginosum	0.05		
Allocasuarina acutivalvis subsp. *prinsepiana*	3		
Aluta aspera subsp. *hesperia*	1.5		
Amphipogon caricinus var. *caricinus*	0.3		
Angianthus prostratus (P3)	0.05		
Arthropodium dyeri	0.2		
Austrostipa elegantissima	1		
Blennospora drummondii	0.1		
Borya sphaerocephala	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Caladenia hirta subsp. *rosea*	0.1		
Callitris columellaris	3.5		
Calotis hispidula	0.1		
Calotis multicaulis	0.1		
Cephalipterum drummondii	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		

Eremophila clarkei	0.2		
Eremophila latrobei subsp. *latrobei*	2		
Erodium cygnorum	0.1		
Gnephosis brevifolia	0.05		
Goodenia pusilliflora	0.05		
Grevillea extorris	2		
Hakea recurva subsp. *recurva*	1.8		
Helipterum craspedioides	0.1		
Hibbertia arcuata	1		
Hyalosperma glutinosum	0.1		
Lawrencella rosea	0.2		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		
Mirbelia bursarioides ms	2		
Philotheca brucei subsp. *brucei*	1		
Pimelea spiculigera var. *thesioides*	0.2		
Podolepis lessonii	0.1		
Prostanthera magnifica	0.5		
Prostanthera patens	0.5		
Pterostylis sp. inland (A.C. Beauglehole 11880)	0.1		
Rhodanthe manglesii	0.1		
Rhodanthe polycephala	0.05		
Schoenia cassiniana	0.1		
Schoenus nanus	0.1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		
Solanum lasiophyllum	0.3		
Trachymene ornata	0.1		
Velleia cycnopotamica	0.1		
Velleia rosea	0.1		
Waitzia acuminata var. *acuminata*	0.1		
Wurmbea densiflora	0.1		
Xanthosia bungei	1		

PHOTOS

Site Name: FAC-03

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 469442E 6771705N

Community: P

Landform Type: Flat

Soil Type: Silty clay loam with BIF gravel

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		
Allocasuarina acutivalvis subsp. *prinsepiana*	4		
Aluta aspera subsp. *hesperia*	2		
Amphipogon caricinus var. *caricinus*	0.3		
Angianthus prostratus (P3)	0.05		
Bellida graminea	0.1		
Blennospora drummondii	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		
Drosera macrantha subsp. *macrantha*			
Gnephosis brevifolia	0.05		
Grevillea paradoxa	1.5		
Lawrencella rosea	0.1		
Melaleuca nematophylla	3		
Monachather paradoxus	0.3		
Pheladenia deformis	0.1		
Philotheca brucei subsp. *brucei*	1		
Philotheca deserti subsp. *deserti*	0.5		
Rhodanthe chlorocephala subsp. *splendida*	0.1		
Rhodanthe manglesii	0.1		
Trachymene ornata	0.1		
Velleia cycnopotamica	0.05		

Velleia hispida	1		
Xanthosia bungei	1		

PHOTOS

Site Name: FAC-04

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 470769E 6766905N

Community: P

Landform Type: Upper slop

Slope Class: Very gentle

Aspect: SE

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		
Acacia latior	4		
Acacia sibina	3		
Aluta aspera subsp. *hesperia*	1.8		
Amphipogon caricinus var. *caricinus*	0.1		
Baeckea benthamii ms	2		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Calycopeplus paucifolius	3		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Gnephosis brevifolia	0.1		
Goodenia pusilliflora	0.1		
Hakea invaginata	2.5		
Helipterum craspedioides	0.1		
Hemigenia benthamii	0.5		
Melaleuca nematophylla	3		
Podolepis canescens	0.2		

Thysanotus speckii	0.1		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		
Xanthosia bungei	1		

PHOTOS

Site Name: FAC-05

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 470568E 6767384N

Community: Q

Landform Type: Flat

Soil Type: Sandy loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	4		
Acacia longispinea	4		
Acacia sibina	2.5		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Cryptandra imbricata	1.8		
Dianella revoluta	0.5		
Enekbatus stowardii	0.5		
Erodium cygnorum	0.1		
Eucalyptus leptopoda	4		
Helipterum craspedioides	0.2		
Hydrocotyle pilifera var. *glabrata*	0.1		
Lawrencella davenportii	0.2		
Melaleuca leiocarpa	4		
Monachather paradoxus	0.3		
Philotheca glabra	0.5		
Plantago debilis	0.1		
Trachymene ornata	0.1		
Velleia hispida	0.1		

PHOTOS

Site Name: FAC-06

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 471406E 6768656N

Community: Q

Landform Type: Flat

Soil Type: Sandy loam

Soil Colour: Brown-red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	4		
Acacia sibina	3		
Aluta aspera subsp. *hesperia*	0.5		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	0.3		
Baeckea benthamii ms	2		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Chamaexeros macranthera	0.2		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.1		
Cryptandra imbricata	0.5		
Dianella revoluta	0.5		
Drosera bulbosa	0.05		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Eucalyptus leptopoda	4		
Gilberta tenuifolia	0.1		
Gonocarpus nodulosus	0.1		
Helipterum craspedioides	0.2		
Hemigenia botryphylla	0.5		
Homalocalyx thryptomenoides	0.5		
Lawrencella davenportii	0.2		
Malleostemon tuberculatus			

Monachather paradoxus	0.3		
Rhyncharrhena linearis			
Solanum lasiophyllum	0.3		
Stachystemon intricatus	0.5		
Stylidium warriedarense	0.1		
Trachymene ornata	0.1		
Velleia hispida	0.1		

PHOTOS

Site Name: FAC-07

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 470216E 6768605N

Community: D

Landform Type: Flat

Soil Type: Clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.5		
Acacia colletioides	2.5		
Acacia effusifolia	3		
Acacia ramulosa var. *ramulosa*	3		
Calandrinia granulifera	0.05		
Calandrinia sp. Blackberry (D.M. Porter 171)	0.05		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		
Callitris columellaris	6		
Cephalipterum drummondii	0.2		
**Cleretum papulosum* subsp. *papulosum*	0.05		
Crassula colorata var. *colorata*	0.05		
Eremophila eriocalyx	0.5		
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	9		
Gnephosis brevifolia	0.05		
Hakea recurva subsp. *recurva*	1.5		
Hemigenia botryphylla	0.5		
Hydrocotyle pilifera var. *glabrata*	0.05		
Maireana trichoptera	0.3		
Minuria cunninghamii	0.5		
Monachather paradoxus	0.3		
Philotheca brucei subsp. *brucei*	0.5		
Ptilotus obovatus	0.5		
Rhagodia drummondii	0.4		

Rhodanthe chlorocephala subsp. *splendida*	0.1		
Rhyncharrhena linearis			
Sclerolaena diacantha	0.2		
Senna artemisioides subsp. *filifolia*	1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		
Stenopetalum anfractum	0.3		
Velleia hispida	0.1		
Waitzia acuminata var. *acuminata*	0.1		

PHOTOS

Site Name: FAC-08

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 469829E 6768137N

Community: D

Landform Type: Flat

Soil Type: Clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		
Acacia tetragonophylla	1		
Brachyscome ciliocarpa	0.1		
Callitris columellaris	3		
Calotis hispidula	0.1		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.05		
Cryptandra imbricata	1		
Dianella revoluta	1		
Erodium cygnorum	0.1		
Eucalyptus loxophleba subsp. *supralaevis*	9		
Goodenia berardiana	0.2		
Hakea recurva subsp. *recurva*	1.5		
Hydrocotyle pilifera var. *glabrata*	0.2		
Lawrencella rosea	0.2		
Maireana planifolia	0.4		
Monachather paradoxus	0.3		
Nicotiana rotundifolia	0.2		
Persoonia pentasticha (P3)	0.4		
Pimelea microcephala subsp. *microcephala*	0.5		
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Ptilotus obovatus	0.5		
Rhagodia drummondii	0.5		

Rhodanthe maryonii	0.1		
Sclerolaena diacantha	0.3		
Senna artemisioides subsp. *filifolia*	1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		
Solanum lasiophyllum	0.5		
Stenopetalum filifolium	0.2		
Thysanotus manglesianus			
Trachymene ornata	0.1		
Velleia cycnopotamica	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		
Waitzia acuminata var. *acuminata*	0.2		

PHOTOS

Site Name: FAC-09

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 468305E 6768400N

Community: R

Landform Type: Flat

Soil Type: Clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	4		
Amphipogon caricinus var. *caricinus*	0.3		
Bellida graminea	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.1		
Comesperma integerrimum			
Cryptandra imbricata	0.5		
Cyanicula amplexans	0.1		
Dianella revoluta	0.5		
Enchylaena tomentosa	0.3		
Eremophila eriocalyx	1.8		
Erodium cygnorum	0.1		
Eucalyptus ewartiana	5		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.8		
Melaleuca eleuterostachya	4		
Melaleuca leiocarpa	3		
Monachather paradoxus	0.5		
Podolepis lessonii	0.1		
Prostanthera eckersleyana			
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Rhodanthe manglesii	0.1		
Schoenia cassiniana	0.1		
Stenopetalum filifolium	0.2		

Trachymene ornata	0.1		
Velleia hispida	0.1		
Waitzia acuminata var. *acuminata*	0.1		

PHOTOS

Site Name: FAC-10

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 469268E 6767379N

Community: Q

Landform Type: Flat

Soil Type: Silty clay loam with fine BIF gravel

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	4		
Acacia sibina	4		
Amphipogon caricinus var. *caricinus*	0.3		
Bellida graminea	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Cyanicula amplexans	0.1		
Dianella revoluta	0.5		
Drosera macrantha subsp. *macrantha*			
Eremophila latrobei subsp. *latrobei*	0.5		
Erodium cygnorum	0.1		
Gonocarpus nodulosus	0.05		
Goodenia pusilliflora	0.05		
Helipterum craspedioides	0.1		
Monachather paradoxus	0.3		
Podolepis lessonii	0.1		
Schoenia cassiniana	0.2		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name:	FAC-11
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	26/08/2009
GPS Location:	GDA94 Zone 50 469680E 6767188N
Community:	S
Landform Type:	Upper slope
Slope Class:	Gentle
Soil Type:	Silty clay loam with BIF gravel
Soil Colour:	Brown-red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		
Acacia sibina	2		
Aluta aspera subsp. *hesperia*	2		
Amphipogon caricinus var. *caricinus*	0.5		
Bellida graminea	0.1		
Borya sphaerocephala	0.1		
Brachyscome ciliocarpa	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Caladenia petrensis			
Caladenia roei			
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		
Drosera glanduligera	0.05		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Gilberta tenuifolia	0.1		
Gnephosis brevifolia	0.05		
Goodenia pusilliflora	0.05		
Hakea recurva subsp. *recurva*	2.5		
Helipterum craspedioides	0.1		
Malleostemon tuberculatus	2		
Monachather paradoxus	0.3		

Pheladenia deformis	0.1		
Podolepis lessonii	0.1		
Schoenus nanus	0.05		
Trachymene ornata	2.5		
Velleia hispida	0.05		
Velleia rosea	0.1		
Waitzia acuminata var. *acuminata*	0.1		

PHOTOS

Site Name: FAC-12

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 468500E 6767343N

Community: D

Landform Type: Flat

Soil Type: Clay loam with fine BIF gravel

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		
Acacia ramulosa var. *ramulosa*	4		
Acacia tetragonophylla	2.5		
Actinobole uliginosum	0.05		
Bellida graminea	0.05		
Calandrinia granulifera	0.05		
Callitris columellaris	6		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
**Cleretum papulosum* subsp. *papulosum*	0.1		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.05		
Cryptandra imbricata	1.5		
Erodium cygnorum	5		
Eucalyptus loxophleba subsp. *supralaevis*	7		
Gnephosis brevifolia	0.05		
Goodenia berardiana	0.1		
Hakea recurva subsp. *recurva*	2.5		
Helipterum craspedioides	0.1		
Hyalosperma demissum	0.05		
Hydrocotyle pilifera var. *glabrata*	0.05		
Lawrencella rosea	0.3		
Menkea australis	0.05		
Monachather paradoxus	0.4		

Pimelea spiculigera var. *thesioides*	0.5		
Plantago debilis	0.1		
Pterostylis sp. inland (A.C. Beauglehole 11880)	0.1		
Ptilotus gaudichaudii var. *parviflorus*	0.05		
Ptilotus obovatus	0.4		
Rhagodia drummondii	1.5		
Rhyncharrhena linearis			
Sclerolaena diacantha	0.1		
Senna artemisioides subsp. *filifolia*	0.5		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.5		
Stenopetalum anfractum	0.3		
Trachymene ornata	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-13

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 469471E 6767268N

Community: S

Landform Type: simple slope

Slope Class: Very gentle

Soil Type: Clay loam with fine BIF gravel

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		
Acacia incognita	4		
Acacia tetragonophylla	3		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	0.1		
Brachyscome ciliocarpa	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.3		
Caladenia hirta subsp. *rosea*	0.1		
Calandrinia ?polyandra	0.05		
Calotis hispidula			
Cephalipterum drummondii	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		
Drosera macrantha subsp. *macrantha*	0.1		
Eremophila clarkei	0.5		
Erodium cygnorum	0.1		
Gnephosis brevifolia	0.05		
Gonocarpus nodulosus	0.05		
Goodenia pusilliflora	0.05		
Hakea recurva subsp. *recurva*	3		
Hyalosperma demissum	0.05		
Hyalosperma glutinosum	0.1		

Isoetopsis graminifolia	0.1		
Lawrencella rosea	0.1		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	2		
Mirbelia microphylla	0.1		
Monachather paradoxus	0.3		
Pimelea spiculigera var. *thesioides*	0.5		
Plantago debilis	0.1		
Podolepis lessonii	0.1		
Pterostylis sp. inland (A.C. Beauglehole 11880)	0.1		
Rhodanthe manglesii	0.1		
Rhodanthe polycephala	0.1		
Rhyncharrhena linearis			
Schoenia cassiniana	0.2		
Senna charlesiana	0.3		
Trachymene ornata	0.1		
Velleia cycnopotamica	0.05		
Velleia hispida	0.1		
Waitzia acuminata var. *acuminata*	0.1		
Wurmbea densiflora	0.05		

PHOTOS

Site Name: FAC-14

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 469245E 6768938N

Community: C

Landform Type: Flat

Soil Type: Silty clay loam

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		
Acacia colletioides	2		
Acacia latior	3		
Acacia longispinea	5		
Acacia sp.	3		
Amphipogon caricinus var. *caricinus*			
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Caladenia hirta subsp. *rosea*	0.1		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		
Callitris columellaris	0.4		
Chthonocephalus pseudevax	0.1		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.1		
Cryptandra imbricata	1.5		
Cyanicula amplexans	0.1		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	7		
Gnephosis brevifolia	0.1		
Goodenia berardiana	0.1		
Grevillea pityophylla	0.3		
Hakea minyma	4		
Helipterum craspedioides	0.1		

Hibbertia stenophylla	0.3		
Lawrencella rosea	0.1		
Melaleuca eleuterostachya	4		
Mirbelia ramulosa	0.2		
Monachather paradoxus	0.3		
Pimelea microcephala subsp. *microcephala*	0.8		
Plantago debilis	0.1		
Podolepis canescens	0.1		
Podolepis lessonii	0.1		
Ptilotus obovatus	0.1		
Rhodanthe polycephala	0.1		
Stenopetalum filifolium	0.3		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-15

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 469506E 6769028N

Community: Q

Landform Type: Flat

Soil Type: Silty clay loam

Soil Colour: Orange-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	4		
Acacia longispinea	3.5		
Amphipogon caricinus var. *caricinus*	0.3		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Calandrinia ?polyandra	0.1		
Cephalipterum drummondii	0.1		
Cheilanthes adiantoides	0.1		
Cryptandra imbricata	0.5		
Cyanicula amplexans	0.1		
Dianella revoluta	0.4		
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	6		
Eucalyptus leptopoda	6		
Hakea minyma	3		
Helipterum craspedioides	0.1		
Minuria cunninghamii	0.5		
Monachather paradoxus	0.3		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Waitzia acuminata var. *acuminata*	0.1		
Wrixonia prostantheroides	0.2		

PHOTOS

Site Name: FAC-16

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 24/08/2009

GPS Location: GDA94 Zone 50 471955E 6772606N

Community: C

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3.5		
Acacia ramulosa var. *ramulosa*	2		
Angianthus prostratus (P3)	0.1		
Aristida ?holathera	0.2		
Calandrinia eremaea	0.05		
Calandrinia granulifera	0.05		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Dichopogon sp.	0.2		
Erodium cygnorum	0.1		
?*Gnephosis brevifolia*	0.05		
Goodenia berardiana	0.1		
Helipterum craspedioides	0.2		
Hemigenia botryphylla			
Menkea australis	0.1		
Monachather paradoxus	0.3		
Podolepis canescens	0.2		
Podolepis capillaris	0.2		
Ptilotus obovatus	0.4		
Schoenia cassiniana	0.2		
Solanum lasiophyllum	0.6		
Stenopetalum anfractum	0.3		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-17

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 24/08/2009

GPS Location: GDA94 Zone 50 471575E 6772364N

Community: Q

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.5		
Angianthus prostratus (P3)	0.1		
Bellida graminea	0.1		
Calandrinia eremaea	0.05		
Calotis hispidula	0.1		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Cyanicula amplexans	0.1		
Dianella revoluta	1		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
?*Gnephosis brevifolia*	0.05		
Haloragis odontocarpa	0.3		
Helipterum craspedioides	0.2		
Lawrencella davenportii	0.3		
Melaleuca hamata	3.5		
Monachather paradoxus	0.3		
Podolepis canescens	0.2		
Schoenia cassiniana	0.2		
Velleia hispida	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-18

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 471414E 6772863N

Community: C

Landform Type: Flat

Soil Type: clayey sand

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia ramulosa var. *ramulosa*	1.5		
Angianthus prostratus (P3)	0.1		
Aristida ?holathera	0.3		
Calandrinia granulifera	0.1		
Cephalipterum drummondii	0.2		
Chthonocephalus pseudevax	0.1		
Crassula colorata var. *colorata*	0.1		
Erodium cygnorum	0.1		
**Gorteria personata*	0.2		
Gunniopsis rubra	0.1		
Helipterum craspedioides	0.1		
Maireana carnosa	0.1		
Menkea australis	0.1		
**Mesembryanthemum nodiflorum*	0.1		
Monachather paradoxus	0.3		
**Monoculus monstrosus*	0.2		
Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus obovatus	0.4		
Solanum lasiophyllum	0.5		
Velleia hispida	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-19

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 472471E 6773110N

Community: C

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		
Acacia burkittii	2		
Acacia ramulosa var. *ramulosa*	1		
Actinobole uliginosum	0.05		
Angianthus prostratus (P3)	0.1		
Aristida ?holathera	0.2		
Austrostipa trichophylla	0.1		
Calandrinia eremaea	0.05		
Calandrinia granulifera	0.05		
Calandrinia remota	0.1		
Calandrinia sp. Blackberry (D.M. Porter 171)	0.05		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.05		
Cephalipterum drummondii	0.2		
Chenopodium gaudichaudianum	0.3		
Crassula colorata var. *colorata*	0.05		
Dichopogon sp.	0.2		
**Emex australis*	0.2		
Erodium cygnorum	0.1		
Helipterum craspedioides	0.2		
**Hypochaeris glabra*	0.1		
Menkea australis	0.05		
Monachather paradoxus	0.3		
**Monoculus monstrosus*	0.1		
Podolepis canescens	0.2		

Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus obovatus	0.4		
Sclerolaena densiflora	0.1		
Solanum lasiophyllum	1.2		

PHOTOS

Site Name: FAC-20

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 471341E 6771948N

Community: C

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	2.5		
Aristida ?holathera	0.1		
Austrostipa trichophylla	0.3		
Calandrinia eremaea	0.05		
Cephalipterum drummondii	0.2		
Chenopodium gaudichaudianum	0.3		
Chthonocephalus pseudevax	0.1		
Crassula colorata var. *colorata*	0.05		
**Cuscuta ?epithymum*			
**Emex australis*	0.2		
Erodium cygnorum	0.1		
**Gorteria personata*	0.1		
Hakea recurva subsp. *recurva*			
Helipterum craspedioides	0.2		
Maireana carnosa	0.1		
**Medicago minima*	0.1		
Menkea australis	0.05		
**Mesembryanthemum nodiflorum*	0.1		
Monachather paradoxus	0.2		
Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus obovatus	0.4		

PHOTOS

Site Name: FAC-21

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 472289E 6771883N

Community: C

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		
Acacia burkittii	3.5		
Acacia ramulosa var. *ramulosa*	3		
Actinobole uliginosum	0.05		
Calandrinia eremaea	0.05		
Calandrinia granulifera	0.05		
Calandrinia remota	0.1		
Calandrinia sp. Blackberry (D.M. Porter 171)	0.05		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.05		
Calandrinia translucens	0.05		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
**Emex australis*	0.2		
Erodium cygnorum	0.1		
Helipterum craspedioides	0.2		
Menkea australis	0.05		
Monachather paradoxus	0.3		
**Monoculus monstrosus*	0.2		
Ptilotus obovatus	0.4		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Schoenia cassiniana	0.2		
Solanum lasiophyllum	0.5		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-22

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 470875E 6771362N

Community: S

Landform Type: Flat

Soil Type: Clayey sand with ironstone gravel

Soil Colour: Red-orange

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		
Acacia ramulosa var. *ramulosa*	3		
Acacia sibina	2.5		
Acacia tetragonophylla	2.5		
Actinobole uliginosum	0.05		
Aluta aspera subsp. *hesperia*	1.2		
Amphipogon caricinus var. *caricinus*	0.3		
Angianthus prostratus (P3)	0.1		
Bellida graminea	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.2		
Calotis hispidula	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Comesperma integerrimum			
Cyanicula amplexans	0.1		
Drosera glanduligera	0.1		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Hakea invaginata			
Hakea recurva subsp. *recurva*	2		
Helipterum craspedioides	0.2		
Lawrencella rosea	0.1		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.2		
Monachather paradoxus	0.3		

Persoonia hexagona	2.5		
Philotheca brucei subsp. *brucei*	1.2		
Pimelea spiculigera var. *thesioides*	1.2		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		
Wurmbea densiflora	0.1		

PHOTOS

Site Name: FAC-23

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 471270E 6771426N

Community: D

Landform Type: Plain

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		
Acacia tetragonophylla	0.5		
Austrostipa elegantissima	0.3		
Calandrinia eremaea	0.05		
Calandrinia translucens	0.05		
Calotis hispidula	0.1		
Cephalipterum drummondii	0.2		
**Cleretum papulosum* subsp. *papulosum*	0.05		
Crassula colorata var. *colorata*	0.05		
Cryptandra imbricata	1		
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	3		
?*Gnephosis brevifolia*	0.05		
Goodenia berardiana	0.1		
Maireana planifolia	0.3		
Minuria cunninghamii	0.4		
Pimelea microcephala subsp. *microcephala*	1		
Podolepis canescens	0.2		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus	0.3		
Schoenia cassiniana	0.2		
Sclerolaena diacantha	0.2		
Senecio ?glossanthus	0.1		
Senna artemisioides subsp. *filifolia*	0.8		
Senna charlesiana	0.5		

Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		
Stenopetalum anfractum	0.3		
Thysanotus manglesianus			
Trachymene ornata	0.1		
Velleia hispida	0.2		
Velleia rosea	0.1		
Waitzia acuminata var. *acuminata*	0.1		

PHOTOS

Site Name: FAC-24

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 472059E 6771152N

Community: C

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	3		
Acacia incognita	2.5		
Acacia latior	2.5		
Acacia ramulosa var. *ramulosa*	2.5		
Angianthus prostratus (P3)	0.05		
Austrostipa ?scabra	0.2		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Calandrinia granulifera	0.05		
Calandrinia translucens	0.05		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.05		
Cryptandra imbricata	1.2		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
?*Gnephosis brevifolia*	0.1		
Goodenia berardiana	0.1		
Hemigenia botryphylla	1		
Melaleuca eleuterostachya	3		
Melaleuca hamata	3		
Monachather paradoxus	0.3		
Ptilotus obovatus	0.4		

Rhodanthe chlorocephala subsp. *splendida*	0.2		
Schoenia cassiniana	0.1		
Sclerolaena densiflora	0.2		
Sclerolaena diacantha	0.3		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		
Solanum lasiophyllum	0.5		
Thysanotus manglesianus			
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-25

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 25/08/2009

GPS Location: GDA94 Zone 50 472477E 6770944N

Community: D

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.3		
Austrostipa ?scabra	0.3		
Bellida graminea	0.1		
**Brassica tournefortii*	0.2		
Calandrinia translucens	0.05		
Comesperma integerrimum			
Cryptandra imbricata	0.8		
Enchylaena tomentosa	0.2		
Eremophila clarkei	1.2		
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	9		
?*Gnephosis brevifolia*	0.1		
Hakea recurva subsp. *recurva*	1.8		
Maireana planifolia	0.2		
Minuria cunninghamii	0.2		
Persoonia hexagona	2.5		
Pimelea microcephala subsp. *microcephala*	1.2		
Ptilotus obovatus	0.4		
Rhagodia drummondii	0.4		
Sclerolaena diacantha	0.4		
Senna artemisioides subsp. *filifolia*	1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		

PHOTOS

Site Name: FAC-26

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 471685E 6768574N

Community: S

Landform Type: Flat

Soil Type: Clayey sand with ironstone gravel

Soil Colour: red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		
Acacia ramulosa var. *ramulosa*	1		
Acacia sibina	3		
Actinobole uliginosum	0.05		
Aluta aspera subsp. *hesperia*	1.2		
Amphipogon caricinus var. *caricinus*	0.2		
Angianthus prostratus (P3)	0.1		
Austrostipa ?*scabra*	0.3		
Bellida graminea	0.1		
Borya sphaerocephala	0.1		
Brachyscome ciliocarpa	0.1		
Caesia ?*sp. Wongan (K.F. Keneally 8820)*	0.2		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.05		
Chamaexeros macranthera	0.3		
Chthonocephalus pseudevax	0.05		
Drosera glanduligera	0.05		
Drosera macrantha subsp. *macrantha*			
Eremophila clarkei	1.2		
Eremophila ?*eriocalyx*	1		
Eremophila forrestii subsp. *forrestii*	1		
Erodium cygnorum	0.1		
?*Gnephosis brevifolia*	0.1		
Grevillea extorris	0.6		
Helipterum craspedioides	0.2		

Monachather paradoxus	0.3		
Podolepis canescens	0.2		
Prostanthera althoferi subsp. *althoferi*	0.5		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Schoenia cassiniana	0.2		
Stachystemon intricatus	0.5		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-27

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 471667E 6769568N

Community: G

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	1.2		
Acacia ramulosa var. *ramulosa*	1.2		
Austrostipa elegantissima	0.3		
Austrostipa ?scabra	0.3		
Calandrinia translucens	0.05		
Calotis hispidula	0.1		
Crassula colorata var. *colorata*	0.1		
Enchylaena tomentosa	0.2		
Erodium cygnorum	0.1		
Eucalyptus loxophleba subsp. *supralaevis*	12		
?Gnephosis brevifolia	0.1		
Goodenia berardiana	0.1		
Maireana planifolia	0.2		
Monachather paradoxus	0.3		
Pimelea microcephala subsp. *microcephala*	1.2		
Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Ptilotus obovatus	0.4		
Rhagodia drummondii	0.4		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Rhodanthe pygmaea	0.1		
Rhodanthe stricta	0.2		
Sclerolaena densiflora	0.2		
Sclerolaena diacantha	0.3		
Stenopetalum anfractum	0.3		

Trachymene ornata	0.1		
Velleia rosea	0.1		
Zygophyllum aurantiacum	0.1		

PHOTOS

Site Name: FAC-28

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 471641E 6770151N

Community: C

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	0.8		
Acacia colletioides	1.5		
Acacia latior	3		
Acacia ramulosa var. *ramulosa*	3		
Angianthus prostratus (P3)	0.1		
Angianthus sp.	0.1		
**Arctotheca calendula*	0.2		
Austrostipa ?scabra	0.3		
Brachyscome perpusilla var. *tenella*	0.1		
Calandrinia remota	0.1		
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		
Calotis hispidula	0.1		
Calotis multicaulis	0.1		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Comesperma integerrimum			
Crassula colorata var. *colorata*	0.1		
**Cuscuta ?epithymum*			
Daucus glochidiatus	0.1		
**Ehrharta longiflora*	0.3		
**Emex australis*	0.2		
Eremophila ?eriocalyx	1		
Erodium cygnorum	0.1		
Eucalyptus loxophleba subsp. *supralaevis*	10		

Goodenia pusilliflora	0.1		
Helipterum craspedioides	0.2		
Hemigenia botryphylla	1		
Lawrencella rosea	0.2		
**Medicago polymorpha*	0.3		
Monachather paradoxus	0.3		
**Monoculus monstrosus*	0.2		
Parietaria cardiostegia	0.2		
Persoonia pentasticha (P3)	0.5		
**Petrorhagia dubia*	0.2		
Plantago debilis	0.2		
Podolepis lessonii	0.2		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus gaudichaudii var. *parviflorus*	0.2		
Ptilotus obovatus	0.4		
Rhagodia drummondii	0.5		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
**Rostraria pumila*	0.2		
Schoenia cassiniana	0.2		
Senecio ?pinnatifolius	0.3		
**Sisymbrium erysimoides*	0.3		
Solanum lasiophyllum	1		
**Sonchus oleraceus*	0.3		
Tetragonia ?diptera	0.2		
Thysanotus manglesianus			
Trachymene ornata	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-29

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 471867E 6770895N

Community: D

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia incognita	4		
Acacia tetragonophylla	0.5		
Angianthus prostratus (P3)	0.1		
Austrostipa elegantissima	0.3		
Austrostipa ?scabra	0.3		
Bellida graminea	0.1		
Caladenia petrensis	0.2		
Calandrinia translucens	0.05		
Cheilanthes adiantoides	0.1		
Comesperma integerrimum			
Dichopogon sp.	0.2		
Eremophila ?eriocalyx	1		
Erodium cygnorum	0.1		
Eucalyptus kochii subsp. *plenissima*	10		
Eucalyptus loxophleba subsp. *supralaevis*	9		
?Gnephosis brevifolia	0.1		
Goodenia berardiana	0.1		
Gunniopsis rubra	0.05		
Hakea recurva subsp. *recurva*	2.5		
Lawrencella rosea	0.1		
Maireana planifolia	0.2		
**Medicago polymorpha*	0.2		
Monachather paradoxus	0.3		
Nicotiana rotundifolia	0.1		

Parietaria cardiostegia	0.2		
Pimelea microcephala subsp. *microcephala*	1		
Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Ptilotus obovatus	0.5		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Rhodanthe manglesii	0.2		
Rhodanthe ?maryonii	0.1		
Rhyncharrhena linearis			
Schoenia cassiniana	0.2		
Sclerolaena diacantha	0.2		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		
Stenopetalum anfractum	0.2		
Tetragonia ?diptera	0.2		
Trachymene ornata	0.2		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-30

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 472376E 6771283N

Community: E

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		
Acacia ramulosa var. *ramulosa*	2.5		
Acacia tetragonophylla	2		
Amphipogon caricinus var. *caricinus*	0.2		
Angianthus prostratus (P3)	0.1		
Austrostipa elegantissima	0.3		
Austrostipa ?scabra	0.3		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Calandrinia eremaea	0.05		
Calotis multicaulis	0.1		
Cephalipterum drummondii	0.2		
Cheilanthes adiantoides	0.1		
Cryptandra imbricata	1.2		
Dichopogon sp.	0.3		
Drosera bulbosa	0.05		
Eremophila clarkei	2.5		
Erodium cygnorum	0.1		
Goodenia berardiana	0.1		
Gunniopsis rubra	0.05		
Hakea recurva subsp. *recurva*	2		
Helipterum craspedioides	0.2		
Hemigenia botryphylla	0.4		
Hypoxis glabella	0.1		
Maireana planifolia	0.2		

Melaleuca eleuterostachya	5		
Melaleuca hamata	4		
Podolepis lessonii	0.2		
Ptilotus obovatus	0.4		
Rhodanthe chlorocephala subsp. *splendida*	0.2		
Rhodanthe manglesii	0.1		
Schoenia cassiniana	0.2		
Solanum ellipticum	0.3		
Solanum lasiophyllum	0.6		
Trachymene ornata	0.1		
Velleia rosea	0.1		
Wurmbea densiflora	0.1		

PHOTOS

Site Name: FAC-31

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 470806E 6771083N

Community: Q

Landform Type: Flat

Soil Type: Clayey sand

Soil Colour: Red-orange

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		
Asteraceae sp.	0.1		
Austrostipa ?scabra	0.3		
Bellida graminea	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.2		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Cyanicula amplexans	0.1		
Darwinia capitellata	0.4		
Dianella revoluta	1		
Drosera bulbosa			
Drosera glanduligera	0.1		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.1		
Gonocarpus nodulosus	0.1		
Goodenia berardiana	0.2		
Haloragis odontocarpa	0.1		
Helipterum craspedioides	0.2		
Lawrencella rosea	0.1		
Melaleuca hamata	3		
Monachather paradoxus	0.2		
Trachymene ornata	0.1		
Velleia hispida	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name: FAC-32

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 470901E 6771478N

Community: R

Landform Type: Flat

Soil Type: Sandy clay loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3.5		
Amphipogon caricinus var. *caricinus*	0.3		
Angianthus prostratus (P3)	0.1		
Austrostipa ?scabra	0.3		
Bellida graminea	0.1		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.1		
Caladenia hirta subsp. *rosea*	0.1		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Comesperma integerrimum			
Cyanicula amplexans	0.1		
Dianella revoluta	1		
Dichopogon ?tyleri	0.3		
Drosera macrantha subsp. *macrantha*			
Eremophila ?eriocalyx	1		
Erodium cygnorum	0.1		
Goodenia berardiana	0.1		
Hakea recurva subsp. *recurva*	2		
Helipterum craspedioides	0.2		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.2		
Podolepis canescens	0.1		
Schoenia cassiniana	0.2		

Senna charlesiana	1.2		
Stenopetalum anfractum	0.2		
Trachymene ornata	0.1		
Velleia rosea	0.1		

PHOTOS

Site Name:	FAC-33
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	26/08/2009
GPS Location:	GDA94 Zone 50 470601E 6766687N
Community:	A
Landform Type:	Mid slope
Slope Class:	Very gentle
Aspect:	S
Soil Type:	Clay loam with coarse granite gravel and some granite outcropping
Soil Colour:	Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia umbraculiformis	5		
Actinobole uliginosum	0.05		
Blennospora drummondii	0.05		
Caesia ?sp. Wongan (K.F. Keneally 8820)	0.2		
Caladenia hirta subsp. *rosea*	0.1		
Calandrinia granulifera	0.05		
Calandrinia ?polyandra	0.1		
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.05		
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		
Calotis hispidula	0.1		
Calotis multicaulis	0.1		
Cheilanthes adiantoides	0.1		
Chthonocephalus pseudevax	0.05		
Crassula colorata var. *colorata*	0.05		
Drosera bulbosa	0.05		
Drosera macrantha subsp. *macrantha*			
Erodium cygnorum	0.05		
Goodenia berardiana	0.1		
Helipterum craspedioides	0.1		
Hyalosperma glutinosum	0.2		
Hypoxis glabella	0.1		

Lawrencella davenportii	0.1		
Menkea australis	0.05		
Millotia myosotidifolia	0.05		
Mirbelia microphylla	1		
Monachather paradoxus	0.3		
Nicotiana rotundifolia	0.3		
Pimelea spiculigera var. *thesioides*	0.3		
Podolepis canescens	0.1		
Ptilotus gaudichaudii var. *parviflorus*	0.1		
Ptilotus obovatus	0.3		
Rhyncharrhena linearis			
**Rostraria pumila*	0.1		
Schoenia cassiniana	0.1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		
Stenopetalum anfractum	0.05		
Thryptomene costata	0.5		
Trachymene cyanopetala	0.1		
Velleia cycnopotamica	0.05		
Velleia rosea	0.1		
Waitzia acuminata var. *acuminata*	0.1		
Wurmbea densiflora	0.1		

PHOTOS

Site Name: FAC-34

Site Type: QUADRAT

Dimensions: 20m x 20m

Survey Date: 26/08/2009

GPS Location: GDA94 Zone 50 470394E 6767620N

Community: Q

Landform Type: Flat

Aspect: E

Soil Type: Silty clay loam

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	5		
Acacia longispinea	6		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	1		
Bellida graminea	0.1		
Brachyscome ciliocarpa	0.1		
Callitris columellaris	0.2		
Cheilanthes adiantoides	0.1		
Cryptandra imbricata	1		
Erodium cygnorum	0.1		
Eucalyptus leptopoda	4		
Gilberta tenuifolia	0.1		
Gnephosis brevifolia	0.05		
Hakea minyma	4		
Helipterum craspedioides	0.1		
Homalocalyx thryptomenoides	0.5		
Lawrencella davenportii	0.2		
Monachather paradoxus	0.4		
Philotheca glabra	0.4		
Stylidium warriedarense	0.1		
Trachymene ornata	0.1		
Velleia hispida	0.05		

PHOTOS

Site Name:	GIND-01
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	15/05/2006
GPS Location:	GDA94 Zone 50 480181E 6774668N
Community:	D
Landform Type:	Plain
Slope Class:	Flat
Aspect:	N
Soil Type:	Sandy clay loam
Soil Colour:	Red
Comments:	E of Blue Hills, near haul road, W8 (but mapped as W1)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	2		
Acacia prainii	6		
Acacia tetragonophylla	0.4		
Austrostipa elegantissima	0.4		
Austrostipa trichophylla	0.1		
Calandrinia sp.	0.05		
Callitris columellaris	6		
Calocephalus multiflorus	0.05		
Comesperma integerrimum			
Eremophila pantonii	1		
Eremophila sp.	1		
Eucalyptus loxophleba subsp. *supralaevis*	10		
Exocarpos aphyllus	0.5		
Hakea recurva subsp. *recurva*	0.2		
Maireana sp.	0.05		
Maireana thesioides	0.4		
Maireana villosa	0.3		
Minuria cunninghamii	0.3		
Monachather paradoxus	0.1		
Pimelea microcephala subsp. *microcephala*	0.5		
Ptilotus exaltatus var. *exaltatus*	0.2		

Ptilotus obovatus var. *obovatus*	0.3		
Rhagodia drummondii	0.4		
Rhyncharrhena linearis			
Santalum acuminatum	4		
Sclerolaena diacantha	0.15		
Sclerolaena fusiformis	0.2		
Senna artemisioides subsp. *filifolia*	0.5		
Sida atrovirens ms	0.2		

PHOTOS

Site Name:	GIND-02
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	16/05/2006
GPS Location:	GDA94 Zone 50 481169E 6775021N
Community:	D
Landform Type:	Plain
Slope Class:	Flat
Aspect:	NW
Soil Type:	Silty clay loam with scattered ironstone pebbles
Soil Colour:	Red
Comments:	W of Blue Hills, off Haul road

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		
Acacia coolgardiensis subsp. *coolgardiensis*	2.5		
Acacia obtecta	0.3		
Acacia ramulosa var. *ramulosa*	2.5		
Acacia tetragonophylla	2.5		
Austrostipa elegantissima	0.4		
Austrostipa scabra	0.4		
Austrostipa trichophylla	0.2		
Calocephalus multiflorus	0.05		
Comesperma integerrimum			
Eremophila eriocalyx	1.5		
Eremophila pantonii	0.4		
Erodium cygnorum	0.05		
Hakea recurva subsp. *recurva*	3		
Maireana villosa	0.2		
?*Marsdenia australis*	0.4		
Monachather paradoxus	0.2		
Persoonia pentasticha (P3)	0.4		
Ptilotus obovatus var. *obovatus*	0.3		
Ptilotus schwartzii	0.3		
Rhagodia drummondii	0.4		

Rhyncharrhena linearis			
Santalum acuminatum	6		
Sida atrovirens ms	0.3		
Solanum lasiophyllum	0.4		
Solanum nummularium	0.3		

PHOTOS

Site Name:	GIND-03
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	16/05/2006
GPS Location:	GDA94 Zone 50 481086E 6775134N
Community:	D
Landform Type:	Plain
Slope Class:	Flat
Aspect:	NW
Soil Type:	Silty clay loam with scattered ironstone pebbles
Soil Colour:	Red
Comments:	W of Blue Hills, off Haul road

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		
Acacia obtecta	1.5		
Acacia tetragonophylla	2.5		
Austrodanthonia caespitosa	0.4		
Austrostipa elegantissima	0.4		
Austrostipa scabra	0.3		
Callitris columellaris	4		
Calocephalus multiflorus	0.05		
Comesperma integerrimum			
Cryptandra imbricata	1		
Dodonaea viscosa subsp. *angustissima*	2.5		
Eremophila clarkei	0.6		
Eremophila pantonii	2.5		
Erodium cygnorum	0.01		
Hakea recurva subsp. *recurva*	2		
Maireana villosa	0.3		
Minuria cunninghamii	0.5		
Monachather paradoxus	0.2		
**Pentaschistis airoides*	0.1		
Persoonia pentasticha (P3)	0.5		
Rhagodia drummondii	0.7		

Rhyncharrhena linearis			
Senna artemisioides subsp. *filifolia*	0.6		
Sida atrovirens ms	0.3		
Solanum nummularium	0.3		

PHOTOS

Site Name:	GIND-04
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	16/05/2006
GPS Location:	GDA94 Zone 50 482717E 6775455N
Community:	O
Landform Type:	Upper slope/Crest
Slope Class:	Moderate
Aspect:	WSW
Soil Type:	Silty clay loam on BIF
Soil Colour:	Red-brown
Comments:	Near turnaround point of Blue Hills track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.3		
Acacia exocarpoides	1.5		
Acacia tetragonophylla	2		
Arthropodium dyeri	0.1		
Austrostipa elegantissima	0.3		
Austrostipa scabra	0.2		
Calycopeplus paucifolius	2.5		
Cheilanthes sieberi subsp. *sieberi*	0.1		
Comesperma integerrimum			
Dodonaea inaequifolia	1.7		
Eremophila clarkei	0.8		
Eremophila latrobei subsp. *latrobei*	1		
Hakea recurva subsp. *recurva*	2.5		
Hibbertia arcuata	0.4		
Maireana villosa	0.2		
Mirbelia bursarioides ms	0.6		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca sericea	1.7		
Ptilotus obovatus var. *obovatus*	0.7		
Rhagodia drummondii	0.3		
Sida atrovirens ms	0.3		

Sida excedentifolia ms	0.3		
Solanum lasiophyllum	0.1		
Xanthosia bungei	0.4		

PHOTOS

Site Name:	GIND-05
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	17/05/2006
GPS Location:	GDA94 Zone 50 483153E 6775897N
Community:	O
Landform Type:	Ridge/Crest
Slope Class:	Gentle
Aspect:	N
Soil Type:	Silty clay loam on BIF
Soil Colour:	Red-brown
Comments:	N/E of turnaround point at end of Blue Hills track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1		
Acacia aneura var. ?*argentea*	4		
Acacia assimilis subsp. *assimilis*	2		
Allocasuarina acutivalvis subsp. *prinsepiana*	3		
Aluta aspera subsp. *hesperia*	0.4		
Astroloma serratifolium	0.3		
Austrostipa elegantissima	0.5		
Calycopeplus paucifolius	2.5		
**Cuscuta epithymum*			
Eremophila latrobei subsp. *latrobei*	0.5		
Erodium cygnorum	0.05		
Grevillea paradoxa	1.5		
Hakea recurva subsp. *recurva*	0.2		
Hibbertia arcuata	0.4		
Melaleuca nematophylla	2		
Micromyrtus sp. Warriedar (S. Patrick 1879A)	1.7		
Mirbelia bursarioides ms	1.5		
Monachather paradoxus	0.3		
Persoonia hexagona	2.5		
Philotheca sericea	1.5		

Prostanthera magnifica	0.4		
Ptilotus obovatus var. *obovatus*	0.4		
Rhyncharrhena linearis			
Solanum lasiophyllum	0.4		
Xanthosia bungei	0.5		

PHOTOS

Site Name:	GIND-06
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	17/05/2006
GPS Location:	GDA94 Zone 50 483040E 6776102N
Community:	D
Landform Type:	Simple slope
Slope Class:	Gentle
Aspect:	N
Soil Type:	Silty clay loam with ironstone rocks
Soil Colour:	Red-brown
Comments:	NE of turnaround point at end of Blue Hills track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.5		
Acacia tetragonophylla	3		
Austrostipa elegantissima	0.4		
Austrostipa scabra	0.2		
Comesperma integerrimum			
Cryptandra imbricata	0.3		
Dodonaea inaequifolia	1.6		
Eremophila clarkei	2		
Eremophila latrobei subsp. *latrobei*	1.8		
Hakea recurva subsp. *recurva*	1.5		
Maireana sp.	0.2		
Minuria cunninghamii	0.4		
Mirbelia bursarioides ms	0.8		
Monachather paradoxus	0.1		
Philotheca brucei subsp. *brucei*	2		
Pimelea microcephala subsp. *microcephala*	0.7		
Ptilotus obovatus var. *obovatus*	0.3		
Ptilotus schwartzii	0.2		
Rhagodia drummondii	0.3		
Rhyncharrhena linearis			
Scaevola spinescens	1.5		

Senna sp. Austin (A. Strid 20210)	2.5		
Sida atrovirens ms	0.15		

PHOTOS

Site Name:	GIND-07
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	17/05/2006
GPS Location:	GDA94 Zone 50 482454E 6775713N
Community:	P
Landform Type:	Simple slope
Slope Class:	Gentle/moderate
Aspect:	NNW
Soil Type:	Silty clay loam with ironstone rocks
Soil Colour:	Red-brown
Comments:	NW of Blue Hills, near fauna transect in aluta

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.8		
Aluta aspera subsp. *hesperia*	1.5		
Hakea recurva subsp. *recurva*	0.2		
Monachather paradoxus	0.3		
Philotheca sericea	1		
Stylidium ?*warriedarense*	0.05		

PHOTOS

Site Name:	GIND-08
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	17/05/2006
GPS Location:	GDA94 Zone 50 482048E 6776155N
Community:	D
Landform Type:	Plain
Slope Class:	Flat
Soil Type:	Silty clay loam with scattered ironstone pebbles
Soil Colour:	Red
Comments:	NW of Blue Hills, in Callitris woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		
Acacia exocarpoides	1		
Acacia obtecta	1		
Acacia tetragonophylla	0.4		
Austrostipa elegantissima	0.3		
Austrostipa scabra	0.3		
Callitris columellaris	6		
Calocephalus multiflorus	0.01		
Comesperma integerrimum			
Cryptandra imbricata	1		
Eremophila eriocalyx	1.8		
Erodium cygnorum	0.01		
Exocarpos aphyllus	3.5		
Hakea recurva subsp. *recurva*	2		
Maireana sp.	0.01		
Maireana thesioides	0.3		
Maireana villosa	0.1		
Minuria cunninghamii	0.3		
Monachather paradoxus	0.2		
Olearia pimeleoides	0.6		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	0.7		
Rhyncharrhena linearis			

Sida atrovirens ms	0.4		
Solanum lasiophyllum	0.4		
Zygophyllum sp.	0.3		

PHOTOS

Site Name:	GIND-09
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	17/05/2006
GPS Location:	GDA94 Zone 50 478473E 6771846N
Community:	D
Landform Type:	Midslope
Slope Class:	Gentle
Aspect:	SE
Soil Type:	Silty clay loam with ironstone rocks
Soil Colour:	Red-brown
Comments:	E of Mt Karara, bottom of downslope track near fauna transect

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1		
Acacia assimilis subsp. *assimilis*	2.5		
Acacia ramulosa var. *ramulosa*	3		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.3		
Comesperma integerrimum			
Dianella revoluta	0.8		
Dodonaea inaequifolia	2		
Eremophila clarkei	2		
Eremophila latrobei subsp. *latrobei*	0.6		
Erodium cygnorum	0.01		
Eucalyptus kochii subsp. ?*plenissima*	6		
Minuria cunninghamii	0.4		
Monachather paradoxus	0.2		
Philotheca brucei subsp. *brucei*	1		
Pimelea microcephala subsp. *microcephala*	1.7		
Ptilotus obovatus var. *obovatus*	0.4		
Ptilotus schwartzii	0.2		
Rhagodia drummondii	0.4		
Rhyncharrhena linearis			
Scaevola spinescens	1		

Senna artemisioides subsp. *filifolia*	2		
Senna charlesiana	2		
Sida atrovirens ms	0.3		
Solanum lasiophyllum	0.3		

PHOTOS

Site Name:	GIND-10
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	18/05/2006
GPS Location:	GDA94 Zone 50 478975E 6771502N
Community:	R
Landform Type:	Lower slope
Slope Class:	Very Gentle
Aspect:	ESE
Soil Type:	Silty clay loam with scattered ironstone pebbles
Soil Colour:	Red-brown
Comments:	E of Mt Karara, before junction of southern circuit track and track towards mungada

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1		
Acacia assimilis subsp. *assimilis*	2.5		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		
Acacia tetragonophylla	1.5		
Amphipogon caricinus var. *caricinus*	0.1		
Calocephalus multiflorus	0.01		
Comesperma integerrimum			
Eremophila clarkei	2		
Erodium cygnorum	0.01		
Eucalyptus kochii subsp. ?*plenissima*	6		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		
Microcorys sp. Mt Gibson (S. Patrick 2098)	0.7		
Minuria cunninghamii	0.3		
Monachather paradoxus	0.1		
Olearia pimeleoides	0.5		
Philotheca deserti subsp. *deserti*	1		
Senna artemisioides subsp. *filifolia*	1.5		
Sida atrovirens ms	0.2		
Stylidium ?*warriedarense*	0.05		

PHOTOS

Site Name:	GIND-11
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	18/05/2006
GPS Location:	GDA94 Zone 50 478034E 6770274N
Community:	D
Landform Type:	Lower slope
Slope Class:	Very Gentle
Aspect:	SE
Soil Type:	Silty clay loam with ironstone rocks
Soil Colour:	Red-brown
Comments:	S of Mt Karara, very southern end, north of circuit track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.3		
Acacia assimilis subsp. *assimilis*	1		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		
Acacia ramulosa var. *ramulosa*	2.5		
Acacia sibina	1		
Acacia tetragonophylla	2		
Eremophila clarkei	0.5		
Erodium cygnorum	0.01		
Eucalyptus kochii subsp. ?*plenissima*	6		
Hibbertia arcuata	1		
Maireana villosa	0.1		
Minuria cunninghamii	0.4		
Monachather paradoxus	0.2		
Philotheca brucei subsp. *brucei*	1.5		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	0.4		
Senna charlesiana	2		
Sida atrovirens ms	0.3		
Thysanotus sp.			

PHOTOS

Site Name:	GIND-12
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	18/05/2006
GPS Location:	GDA94 Zone 50 479440E 6770614N
Community:	K
Landform Type:	Plain
Slope Class:	Flat
Aspect:	SE
Soil Type:	Silty clay loam with ironstone pebbles and quartz
Soil Colour:	Red-brown
Comments:	S of Mt Karara, about 350m east of junction of circuit track and mungada track, then south of the mungada track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia erinacea	0.3		
Acacia obtecta	2		
Austrostipa elegantissima	0.3		
Eremophila oppositifolia subsp. *angustifolia*	2.5		
Eremophila pantonii	2.5		
Eucalyptus salubris	10		
Exocarpos aphyllus	2		
Maireana sp.	0.01		
Maireana thesioides	0.4		
Maireana villosa	0.2		
Olearia pimeleoides	0.4		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	0.3		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.2		
Senna artemisioides subsp. *filifolia*	0.3		
Senna stowardii	0.6		
Solanum lasiophyllum	0.3		

PHOTOS

Site Name:	GIND-13
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	18/05/2006
GPS Location:	GDA94 Zone 50 479956E 6771116N
Community:	K
Landform Type:	Plain
Slope Class:	Flat
Soil Type:	Silty clay loam with few ironstone pebbles
Soil Colour:	Red-brown
Comments:	SE of Mt Karara, along track towards mungada, approx 1.1km from junction with Karara circuit track

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia erinacea	1		
Atriplex ?suberecta	0.05		
Austrostipa elegantissima	0.2		
Eremophila pantonii	2		
Eucalyptus striaticalyx subsp. *striaticalyx*	8		
Euphorbia drummondii subsp. *drummondii*	0.01		
Maireana sp.	0.01		
Maireana villosa	0.1		
Ptilotus exaltatus var. *exaltatus*	0.1		
Rhagodia drummondii	0.4		
Sclerolaena eurotioides	0.1		
Sclerolaena fusiformis	0.2		
Senna artemisioides subsp. *filifolia*	0.2		
Senna stowardii	0.1		

PHOTOS

Site Name:	GIND-15
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	18/05/2006
GPS Location:	GDA94 Zone 50 480886E 6773254N
Community:	G
Landform Type:	Plain
Slope Class:	Very Gentle
Aspect:	WSW
Soil Type:	Silty clay loam with ironstone pebbles
Soil Colour:	Red-brown
Comments:	E of Mt Karara, near N/S fenceline track that joins haulroad, about 1.5km south of haulroad then 350m west

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		
Acacia acuminata	2		
Acacia obtecta	2		
Acacia ramulosa var. *ramulosa*	0.3		
Acacia tetragonophylla	2.5		
Austrostipa elegantissima	0.3		
Austrostipa trichophylla	0.1		
Eucalyptus loxophleba subsp. *supralaevis*	9		
Maireana sp.	0.01		
Maireana villosa	0.1		
Minuria cunninghamii	0.3		
Ptilotus exaltatus var. *exaltatus*	0.2		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	0.3		
Sclerolaena fusiformis	0.1		
Senna artemisioides subsp. *filifolia*	0.3		
Sida atrovirens ms	0.2		

PHOTOS

Site Name:	GIND-16
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	19/05/2006
GPS Location:	GDA94 Zone 50 480154E 6773955N
Community:	P
Landform Type:	Midslope
Slope Class:	Moderate
Aspect:	NNW
Soil Type:	Silty loam on BIF
Soil Colour:	Red-brown
Comments:	N end of Mt Karara, near haulroad and new track (starts on haulroad about 2.2km from Karara camp)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia ramulosa var. *ramulosa*	2		
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		
Aluta aspera subsp. *hesperia*	0.5		
Calycopeplus paucifolius	2.5		
Daviesia benthamii subsp. *benthamii*	0.4		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.7		
Melaleuca nematophylla	2.5		
Philotheca sericea	1		
Xanthosia bungei	0.4		

PHOTOS

Site Name:	GIND-17
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	19/05/2006
GPS Location:	GDA94 Zone 50 480466E 6773950N
Community:	P
Landform Type:	Upper slope
Slope Class:	Moderate
Aspect:	SE
Soil Type:	Silty loam with large iron stones
Soil Colour:	Red-brown
Comments:	N end of Mt Karara, near haulroad and new track (which starts about 2.2km from Karara camp on haulroad)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia ramulosa var. *ramulosa*	4		
Allocasuarina acutivalvis subsp. *prinsepiana*	5		
Baeckea benthamii ms	1.5		
Calycopeplus paucifolius	2.5		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Dianella revoluta	0.4		
Grevillea obliquistigma subsp. *obliquistigma*	3		
Grevillea paradoxa	1.5		
Monachather paradoxus	0.1		
Xanthosia bungei	0.3		

PHOTOS

Site Name:	GIND-18
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	19/05/2006
GPS Location:	GDA94 Zone 50 480996E 6773980N
Community:	O
Landform Type:	Midslope
Slope Class:	Gentle
Aspect:	SE
Soil Type:	Silty clay loam with ironstone pebbles and quartz
Soil Colour:	Red-brown
Comments:	N end of Mt Karara, near N/S fenceline track, about 800m S of haulroad then 200m W

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		
Acacia acuminata	3.5		
Acacia assimilis subsp. *assimilis*	2		
Acacia ramulosa var. *ramulosa*	3.5		
Aluta aspera subsp. *hesperia*	1		
Amphipogon caricinus var. *caricinus*	0.3		
Calocephalus multiflorus	0.01		
Comesperma integerrimum			
Dianella revoluta	0.4		
Eremophila clarkei	0.3		
Erodium cygnorum	0.01		
Eucalyptus loxophleba subsp. *supralaevis*	9		
Maireana villosa	0.2		
Melaleuca nematophylla	3		
Monachather paradoxus	0.2		
Philotheca brucei subsp. *brucei*	0.2		
Ptilotus obovatus var. *obovatus*	0.4		
Rhyncharrhena linearis			
Thysanotus sp.			

PHOTOS

Site Name:	GIND-19
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/06/2006
GPS Location:	GDA94 Zone 50 476728E 6773046N
Community:	O
Landform Type:	Lower slope
Slope Class:	Very Gentle
Aspect:	E
Soil Type:	Silty loam with small ironstone pebbles
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		
Acacia assimilis subsp. *assimilis*	2		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	3		
Acacia sibina	2		
Acacia tetragonophylla	0.5		
Aluta aspera subsp. *hesperia*	1.5		
Amphipogon caricinus var. *caricinus*	0.2		
Calycopeplus paucifolius	3		
Cheilanthes sieberi subsp. *sieberi*	0.1		
Cheiranthera filifolia var. *simplicifolia*			
Comesperma integerrimum			
Dianella revoluta	0.5		
Eremophila clarkei	0.2		
Eremophila latrobei subsp. *latrobei*	2		
Hibbertia arcuata	1.2		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.5		
Melaleuca nematophylla	2.5		
Monachather paradoxus	0.3		
Persoonia hexagona	3		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca deserti subsp. *deserti*	1		

Pimelea forrestiana	0.4		
Podolepis capillaris	0.05		
Sida atrovirens ms	0.2		
Thysanotus sp.			

PHOTOS

Site Name:	GIND-20
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/06/2006
GPS Location:	GDA94 Zone 50 478472E 6773707N
Community:	P
Landform Type:	Simple slope
Slope Class:	Gentle
Aspect:	NE
Soil Type:	Silty clay loam with frequent ironstone pebbles, some exposed ironstone
Soil Colour:	Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	3		
Acacia ramulosa var. *ramulosa*	1.5		
Allocasuarina acutivalvis subsp. *prinsepiana*	3		
Aluta aspera subsp. *hesperia*	1.5		
Amphipogon caricinus var. *caricinus*	0.1		
Aristida contorta	0.1		
Calycopeplus paucifolius	2		
Hibbertia arcuata	1.2		
Melaleuca nematophylla	2.5		
Mirbelia bursarioides ms	1.5		
Philotheca sericea	1.5		
Thysanotus sp.			

PHOTOS

Site Name:	GIND-21
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/06/2006
GPS Location:	GDA94 Zone 50 479528E 6774370N
Community:	G
Landform Type:	Plain
Slope Class:	Flat
Aspect:	NE
Soil Type:	Silty clay loam with very occasional ironstone pebbles
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		
Acacia obtecta	2		
Acacia sp. nov 2 (gind_21-1)	1.5		
Acacia tetragonophylla	1.5		
Austrostipa elegantissima	0.3		
Comesperma integerrimum			
Eucalyptus loxophleba subsp. *supralaevis*	8		
Maireana sp.	0.2		
Maireana villosa	0.2		
Minuria cunninghamii	0.3		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	1.3		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.05		
Sida atrovirens ms	0.5		

PHOTOS

Site Name:	GIND-23
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	03/10/2023
GPS Location:	GDA94 Zone 50 489862E 6777475N
Community:	P
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Silty Clay Loam (other)
Soil Colour:	Brown-Orange (other)
Rock Outcrop:	Ironstone, <2% bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Comments:	Clearing/rehab track through centre of plot. Lots of dead annual daisies; too poor condition for ID

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		
Acacia exocarpoides	1.7		
Acacia latior	3		
Acacia sibina	2.5		
Calycopeplus paucifolius	2.1		
Comesperma integerrimum			
Drummondita fulva (P3)	1		
Grevillea obliquistigma subsp. *obliquistigma*	2		
Hibbertia arcuata	1.7		
Philotheca sericea	1.5		

PHOTOS

Site Name:	GIND-25
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	03/10/2023
GPS Location:	GDA94 Zone 50 489821E 6778056N
Community:	P
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Silty Loam (other)
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia caesaneura	3.5		
Acacia exocarpoides	1		
Acacia latior	3		
Acacia sibina	3.5		
Aluta aspera subsp. *hesperia*	1.4		
Comesperma integerrimum			
Eucalyptus kochii subsp. *plenissima*	8		
Grevillea obliquistigma subsp. *obliquistigma*	1.8		
Hibbertia arcuata	1		
Monachather paradoxus	0.3		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca sericea	1		

PHOTOS

Site Name: GIND-26

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 26/06/2006

GPS Location: GDA94 Zone 50 480560E 6773362N

Community: Q

Landform Type: Lower slope

Slope Class: Gentle

Aspect: SE

Soil Type: Silty loam

Soil Colour: Brown-red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	5		
Amphipogon caricinus var. *caricinus*	0.15		
Dianella revoluta	0.6		
Drosera sp.			
Grevillea obliquistigma subsp. *obliquistigma*	2		
Hakea invaginata	1		
Hemigenia sp. Cue (K.F. Kenneally 47A)	0.4		
Hibbertia arcuata	0.6		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.6		
Monachather paradoxus	0.15		
Philotheca deserti subsp. *deserti*	0.7		
Thysanotus sp.			

PHOTOS

Site Name:	GIND-27
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 481750E 6772802N
Community:	P
Landform Type:	Lower slope
Slope Class:	Very gentle
Aspect:	SE
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	3		
Acacia sibina	2		
Aluta aspera subsp. *hesperia*	1.3		
Amphipogon caricinus var. *caricinus*	0.1		
Cheiranthera filifolia var. *simplicifolia*			
Comesperma integerrimum			
Dianella revoluta	0.3		
Melaleuca hamata	5		
Melaleuca nematophylla	2		
Monachather paradoxus	0.2		
Philotheca deserti subsp. *deserti*	1		

PHOTOS

Site Name:	GIND-28
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 482504E 6773681N
Community:	O
Landform Type:	Crest
Slope Class:	Steep
Aspect:	SW
Soil Type:	Silty loam
Soil Colour:	Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		
Acacia assimilis subsp. *assimilis*	3		
Acacia exocarpoides	2		
Austrostipa elegantissima	0.4		
Austrostipa sp.	0.5		
Callitris columellaris	0.1		
Calycopeplus paucifolius	2		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Comesperma integerrimum			
Dodonaea inaequifolia	1		
Eremophila clarkei	1.8		
Eremophila latrobei subsp. *latrobei*	1.5		
Grevillea extorris	2		
Melaleuca nematophylla	2		
Minuria cunninghamii	0.2		
Mirbelia bursarioides ms	0.6		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca sericea	1		
Prostanthera magnifica	0.4		
Sida atrovirens ms	0.4		
Thysanotus sp.			
Xanthosia bungei	0.4		

PHOTOS

Site Name:	GIND-43
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/06/2006
GPS Location:	GDA94 Zone 50 488532E 6777971N
Community:	O
Landform Type:	Upper slope
Slope Class:	Moderate-steep
Aspect:	ESE
Soil Type:	Silty loam
Soil Colour:	Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		
Acacia aneura var. ?*intermedia*	4		
Acacia assimilis subsp. *assimilis*	2		
Acacia exocarpoides	1		
Acacia ramulosa var. *ramulosa*	4		
Acacia sibina	3		
Allocasuarina acutivalvis subsp. *prinsepiana*	4		
Austrostipa elegantissima	0.3		
Calycopeplus paucifolius	3		
Cheilanthes sieberi subsp. *sieberi*	0.02		
Comesperma integerrimum			
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		
Eremophila clarkei	2		
Eremophila latrobei subsp. *latrobei*	2		
Hibbertia arcuata	0.4		
Maireana planifolia	0.3		
Melaleuca nematophylla	3		
Micromyrtus sp. Warriedar (S. Patrick 1879A)	1		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca sericea	1		
Plantago ?*drummondii*	0.05		

Poaceae sp.	0.1		
Prostanthera magnifica	0.4		
Sida atrovirens ms	0.2		
Xanthosia bungei	0.3		

PHOTOS

Site Name:	GIND-44
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	31/07/2006
GPS Location:	GDA94 Zone 50 488236E 6777797N
Community:	O
Landform Type:	Lower slope
Slope Class:	Very gentle
Aspect:	W
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		
Acacia aneura var. ?*argentea*	5		
Acacia assimilis subsp. *assimilis*	2.5		
Acacia ramulosa var. *ramulosa*	3		
Austrostipa elegantissima	0.3		
Austrostipa sp.	0.1		
Austrostipa sp.	0.2		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1.2		
Eremophila clarkei	0.1		
Eremophila latrobei subsp. *latrobei*	1.5		
Grevillea obliquistigma subsp. *obliquistigma*			
Hibbertia arcuata	0.6		
Melaleuca leiocarpa	3		
Minuria cunninghamii	0.3		
Monachather paradoxus	0.3		
Philotheca brucei subsp. *brucei*	1.6		
Rhyncharrhena linearis			
Santalum spicatum	3		
Solanum lasiophyllum	0.6		

PHOTOS

Site Name:	GIND-45
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	01/08/2006
GPS Location:	GDA94 Zone 50 488235E 6778818N
Community:	H
Landform Type:	Flat
Slope Class:	Level
Soil Type:	Medium clay
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		
Acacia aneura var. ?*argentea*	4		
Acacia ramulosa var. *ramulosa*	2.5		
Austrostipa sp.	0.1		
Enchylaena lanata	0.4		
Maireana planifolia	0.4		
Maireana sp.	0.5		
Melaleuca hamata	2.5		
Melaleuca leiocarpa	2.5		
Ptilotus obovatus var. *obovatus*	0.3		
Rhagodia drummondii	0.3		
Salsola tragus	0.5		
Senna charlesiana	0.2		

PHOTOS

Site Name: GIND-46

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 01/08/2006

GPS Location: GDA94 Zone 50 488902E 6778655N

Community: G

Landform Type: Flat

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	2.5		
Acacia ramulosa var. *ramulosa*	3.5		
Acacia tetragonophylla	2.5		
Austrostipa elegantissima	0.3		
Austrostipa sp.	0.2		
Enchylaena tomentosa var. *tomentosa*	0.3		
Eucalyptus loxophleba subsp. *supralaevis*	7		
Maireana carnosa	0.1		
Olearia pimeleoides	0.7		
Pimelea microcephala subsp. *microcephala*	1.3		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	0.4		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.1		
Senna artemisioides subsp. *filifolia*	0.3		
Sida atrovirens ms	0.2		
Solanum nummularium	0.4		
Zygophyllum aurantiacum	0.3		

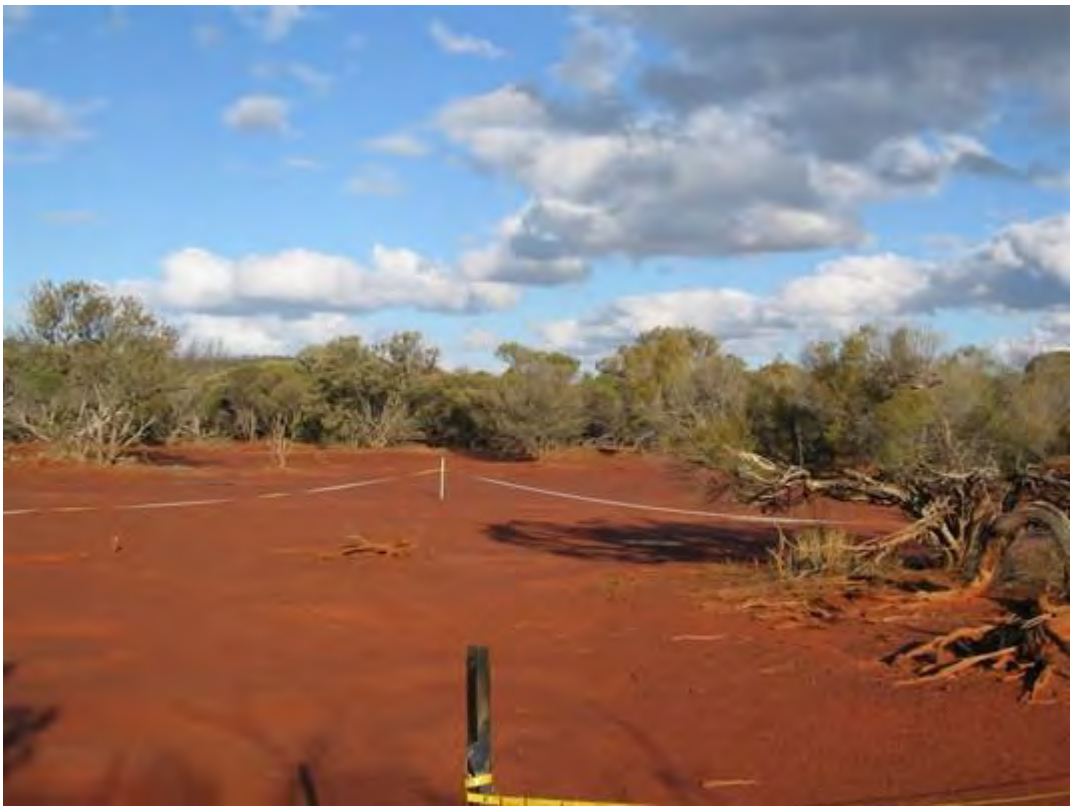
PHOTOS

Site Name:	GIND-51
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	01/08/2006
GPS Location:	GDA94 Zone 50 487152E 6777598N
Community:	C
Landform Type:	Drainage depression
Slope Class:	Flat
Soil Type:	Medium clay
Soil Colour:	Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura var. ?*argentea*	3		
Melaleuca eleuterostachya	2.5		
Rhagodia drummondii	0.2		

PHOTOS



Site Name: GIND-52

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 482962E 6775087N

Community: G

Landform Type: Lower slope

Slope Class: Very gentle

Aspect: S

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Austrostipa elegantissima	0.3		
Eucalyptus loxophleba subsp. *supralaevis*	6		
Maireana carnosa	0.2		
Maireana georgei	0.3		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus var. *obovatus*	0.4		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.1		
Senna artemisioides subsp. *filifolia*	0.3		
Zygophyllum sp.			

PHOTOS

Site Name: GIND-53

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 483176E 6775506N

Community: O

Landform Type: Midslope

Slope Class: Gentle-moderate

Aspect: ESE

Soil Type: Silty loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		
Aluta aspera subsp. *hesperia*	2		
Austrostipa elegantissima	0.5		
Callitris columellaris	0.2		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Comesperma integerrimum			
Eremophila clarkei	0.5		
Eremophila latrobei subsp. *latrobei*	2		
Melaleuca nematophylla	2.5		
Mirbelia bursarioides ms	1.2		
Monachather paradoxus	0.1		
Philotheca sericea	1.5		
Prostanthera magnifica	0.4		
Solanum lasiophyllum	0.1		
Thryptomene costata	1.2		
Xanthosia bungei	0.5		

PHOTOS

Site Name: GIND-54

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 483440E 6774176N

Community: O

Landform Type: Crest

Slope Class: Steep

Aspect: SE

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		
Acacia exocarpoides	1.5		
Acacia sibina			
Acacia sp. Karara (C. Godden 14)	2.5		
Acacia tetragonophylla	0.8		
Austrostipa sp.	0.2		
Calycopeplus paucifolius	3		
Cheilanthes ?*adiantoides*			
Comesperma integerrimum			
Eremophila clarkei	1.6		
Eremophila latrobei subsp. *latrobei*	3		
Gastrolobium laytonii	0.3		
Hakea recurva subsp. *recurva*	2.5		
Lepidosperma sp. Karara BIF			
Melaleuca nematophylla			
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2.5		
Mirbelia bursarioides ms	1.5		
Philotheca brucei subsp. *brucei*	1.5		
Philotheca sericea	1.5		
Ptilotus drummondii	0.4		
Sida atrovirens ms	0.2		
Solanum lasiophyllum	0.5		

PHOTOS

Site Name:	GIND-55
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/08/2006
GPS Location:	GDA94 Zone 50 485167E 6775453N
Community:	O
Landform Type:	Crest
Slope Class:	Gentle
Aspect:	W
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1.8		
Acacia aneura var. ?*argentea*	3		
Acacia assimilis subsp. *assimilis*	2.5		
Acacia ramulosa var. *ramulosa*	3.5		
Aluta aspera subsp. *hesperia*	1.8		
Calycopeplus paucifolius	2		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Eremophila clarkei	1.25		
Eremophila latrobei subsp. *latrobei*	2		
Grevillea obliquistigma subsp. *obliquistigma*	2		
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2		
Mirbelia bursarioides ms	1.25		
Monachather paradoxus	0.3		
Philotheca sericea	1.6		
Prostanthera magnifica	1		
Thysanotus sp.			
Xanthosia bungei	0.3		

PHOTOS

Site Name: GIND-56

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 484454E 6776192N

Community: H

Landform Type: Flat

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		
Acacia anthochaera	4		
Acacia obtecta	2		
Acacia tetragonophylla	1.7		
Austrostipa elegantissima	0.3		
Austrostipa sp.	0.1		
Cheilanthes sieberi subsp. *sieberi*			
Maireana carnosa	0.01		
Maireana georgei	0.4		
Minuria cunninghamii	0.4		
Rhagodia drummondii	0.4		
Sclerolaena fusiformis	0.1		

PHOTOS

Site Name:	GIND-57
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/08/2006
GPS Location:	GDA94 Zone 50 484349E 6776601N
Community:	Q
Landform Type:	Lower slope
Slope Class:	Very gentle
Aspect:	SSE
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	3		
Aluta aspera subsp. *hesperia*	1.5		
Amphipogon caricinus var. *caricinus*	0.2		
Baeckea benthamii ms	1.2		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Cryptandra imbricata			
Dianella revoluta	1		
Eucalyptus leptopoda subsp. *arctata*	4.5		
Grevillea obliquistigma subsp. *obliquistigma*	1.75		
Melaleuca leiocarpa	1.5		
Monachather paradoxus	0.2		
Persoonia pentasticha (P3)			
Philotheca deserti subsp. *deserti*	1		
Stylidium ?*warriedarense*			

PHOTOS

Site Name: GIND-58

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 484996E 6776755N

Community: H

Landform Type: Flat

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		
Acacia aneura var. ?*argentea*	3		
Acacia obtecta	2		
Acacia ramulosa var. *ramulosa*	4		
Acacia tetragonophylla	2.5		
Austrostipa sp.	0.1		
Chamaexeros macranthera	0.3		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Cheiranthera filifolia var. *simplicifolia*			
Eremophila granitica	0.8		
Hakea recurva subsp. *recurva*	3		
Maireana georgei	0.1		
Melaleuca leiocarpa	4		
Minuria cunninghamii	0.4		
Persoonia pentasticha (P3)			
Rhagodia drummondii	0.8		
Sclerolaena fusiformis	0.2		
Senna charlesiana	0.6		
Sida atrovirens ms	0.4		

PHOTOS

Site Name: GIND-59

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 02/08/2006

GPS Location: GDA94 Zone 50 484369E 6775630N

Community: Q

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Silty loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia longispinea	5		
Acacia ramulosa var. *ramulosa*	3.5		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Drummondita aff. *microphylla (R. Cranfield 8586 A)*			
Melaleuca leiocarpa			
Melaleuca nematophylla	3		
Monachather paradoxus	0.2		
Philotheca deserti subsp. *deserti*	0.5		

PHOTOS

Site Name:	GIND-62
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA94 Zone 50 488190E 6773371N
Community:	K
Landform Type:	Flat plain
Slope Class:	Flat
Soil Type:	Silty Loam (other)
Soil Colour:	Red-Brown
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:	Track to south, old drought deaths (other)
Fire:	>15 years
Comments:	2024 - near track, old pastoral station, long-lasting grazing impacts? Mid stratum depauperate although this may be its natural state. A lot of small herbs which are likely to be Sclerolaena spp. seedlings

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera			
Acacia erinacea	0.5		1.5
Acacia inceana subsp. *conformis*	3		0.5
Acacia tetragonophylla	1.3		0.2
Austrostipa elegantissima	0.3		0.1
Cephalipterum drummondii	0.05		0.1
Crassula colorata var. *acuminata*	0.01		0.1
Eremophila oppositifolia subsp. *angustifolia*	3		1.5
Eremophila pantonii	2.2		1
Eucalyptus clelandiorum	7		12
Eucalyptus loxophleba subsp. *supralaevis*	8		4
Exocarpos aphyllus	2.2		3

Gunniopsis rubra	0.01		0.1
Hydrocotyle intertexta	0.1		0.1
Maireana georgei	0.2		0.1
Maireana marginata	0.1		0.1
Menkea australis	0.01		1
Myriocephalus gueriniae	0.1		0.1
Olearia muelleri	0.5		0.3
Poaceae sp.	0.05		0.1
Ptilotus ?gaudichaudii	0.3		0.1
Ptilotus obovatus	0.4		0.1
Rhagodia drummondii	0.5		0.2
Roepera sp.	0.3		0.1
Scaevola spinescens	0.5		0.2
Sclerolaena fusiformis	0.05		0.01
Senna stowardii	0.5		0.5

PHOTOS

Site Name: GIND-73

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 485470E 6779171N

Community: R

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Silty loam

Soil Colour: Brown-red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		
Acacia sibina	4		
Amphipogon caricinus var. *caricinus*	0.2		
Austrostipa sp.	0.3		
Cassytha sp.			
Cheilanthes sieberi subsp. *sieberi*	0.05		
Cryptandra imbricata	1		
Dianella revoluta	0.8		
Eremophila latrobei (variant)	1.3		
Lysiana casuarinae			
Melaleuca hamata	3		
Monachather paradoxus	0.2		
Persoonia pentasticha (P3)	0.3		
Philotheca brucei subsp. *brucei*	1		
Philotheca deserti subsp. *deserti*	1.1		
Prostanthera patens	1		

PHOTOS

Site Name: GIND-76

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 483594E 6778066N

Community: D

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Clay loam sandy

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.5		
Acacia sp. nov 3 (gind_71-05, KM_103-2)	3.5		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.6		
Austrostipa sp.	0.4		
Callitris columellaris			
Cheilanthes sieberi subsp. *sieberi*	0.05		
Comesperma integerrimum			
Eremophila latrobei subsp. *latrobei*	0.3		
Exocarpos aphyllus	2		
Hakea recurva subsp. *recurva*	0.5		
Monachather paradoxus	0.4		
**Pentaschistis airoides*	0.1		
Rhagodia drummondii	0.4		
Rhyncharrhena linearis			

PHOTOS

Site Name: GIND-77

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 483509E 6778596N

Community: D

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	0.4		
Acacia inceana subsp. *conformis*	3.5		
Acacia obtecta	2		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.4		
Austrostipa sp.	0.3		
Comesperma integerrimum			
Eremophila glabra	0.4		
Eremophila granitica	0.3		
Eremophila pantonii	3		
Exocarpos aphyllus	3		
Maireana carnosa	0.2		
Maireana georgei	0.2		
Maireana thesioides	1.2		
Monachather paradoxus	0.1		
Podolepis capillaris	0.2		
Ptilotus divaricatus var. *divaricatus*	0.4		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	1		
Sclerolaena diacantha	0.1		
Sida atrovirens ms	0.3		
Solanum lasiophyllum	0.4		
Solanum nummularium	0.15		

PHOTOS

Site Name: GIND-78

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 483012E 6777939N

Community: H

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Sandy clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.2		
Acacia obtecta	2.5		
Alyxia buxifolia	1.6		
Austrostipa elegantissima	0.4		
Austrostipa sp.	0.2		
Comesperma integerrimum			
Dianella revoluta	0.4		
Eucalyptus loxophleba subsp. *supralaevis*	9		
Exocarpos aphyllus	2		
Lomandra effusa	0.4		
Monachather paradoxus	0.3		
Olearia dampieri subsp. *eremicola* ms	1		
Podolepis capillaris	0.2		
Ptilotus exaltatus var. *exaltatus*	0.1		
Ptilotus obovatus var. *obovatus*	0.2		
Santalum acuminatum	3.5		
Thysanotus sp.			
Zygophyllum apiculatum	0.3		

PHOTOS

Site Name: GIND-80

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 479780E 6776571N

Community: J

Landform Type: Clay pan

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	2		
Atriplex semilunaris	0.1		
Cephalipterum drummondii	0.01		
Corchorus sp.	0.01		
**Echium plantagineum*	0.1		
**Erodium cicutarium*	0.01		
Euphorbia drummondii subsp. *drummondii*	0.01		
Maireana carnosa	0.4		
Ptilotus obovatus var. *obovatus*	0.3		
Salsola tragus	0.3		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.1		
Sclerostegia disarticulata	0.6		
Solanum nummularium	0.2		
Zygophyllum aurantiacum	0.2		
Zygophyllum sp.	0.1		

PHOTOS

Site Name: GIND-81

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 479494E 6776716N

Community: J

Landform Type: Clay pan

Slope Class: Flat

Soil Type: Clay loam

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Austrodanthonia caespitosa	0.1		
Austrostipa elegantissima	0.6		
Austrostipa sp.	0.2		
Austrostipa ?*tenuifolia*	0.1		
Convolvulus ?*remotus*			
Corchorus sp.	0.1		
**Echium plantagineum*	0.1		
Eremophila glabra	1.2		
Exocarpos aphyllus	1.5		
Maireana brevifolia	0.2		
Maireana carnosa	0.2		
Muehlenbeckia florulenta	2		
Ptilotus obovatus var. *obovatus*	0.1		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.1		
Sclerostegia disarticulata	0.6		

PHOTOS

Site Name: GIND-82

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 480645E 6776488N

Community: D

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Sandy clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		
Acacia inceana subsp. *conformis*			
Alyxia buxifolia	0.2		
Austrostipa elegantissima	0.5		
Austrostipa sp.	0.3		
Comesperma integerrimum			
Eremophila glabra	0.1		
Eremophila pantonii	1		
Maireana carnosa	0.3		
Maireana diffusa	0.4		
Maireana thesioides	1		
Monachather paradoxus	0.2		
**Pentaschistis airoides*	0.2		
Persoonia pentasticha (P3)			
Podolepis capillaris	0.2		
Ptilotus divaricatus var. *divaricatus*	0.3		
Ptilotus drummondii	0.4		
Rhagodia drummondii	1.3		
Sclerolaena diacantha	0.2		
Senna charlesiana	0.6		
Sida atrovirens ms	0.3		
Solanum nummularium	0.3		
Templetonia smithiana			

PHOTOS

Site Name: GIND-83

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 06/08/2006

GPS Location: GDA94 Zone 50 481559E 6776446N

Community: H

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Sandy clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	2		
Acacia tetragonophylla			
Austrostipa elegantissima	0.5		
Austrostipa sp.	0.6		
Dodonaea viscosa subsp. *angustissima*	1		
Eremophila decipiens			
Eucalyptus loxophleba subsp. *supralaevis*	10		
Lomandra effusa	0.4		
Maireana carnosa	0.3		
Olearia dampieri subsp. *eremicola* ms	1.2		
Ptilotus exaltatus var. *exaltatus*	0.1		
Rhagodia drummondii	0.4		
Rhagodia preissii	1		
Scaevola spinescens	0.4		
Sclerolaena diacantha	0.2		
Sclerolaena fusiformis	0.3		
Zygophyllum aurantiacum	0.3		

PHOTOS

Site Name: GIND-84

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 06/08/2006

GPS Location: GDA94 Zone 50 482024E 6776463N

Community: D

Landform Type: Flat plain

Slope Class: Flat

Soil Type: Silty clay loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	0.5		
Acacia acuminata	3		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	0.7		
Acacia inceana subsp. *conformis*	2		
Acacia obtecta	2.2		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.5		
Austrostipa sp.	0.3		
Callitris columellaris	5		
Chamaexeros macranthera	0.5		
Comesperma integerrimum			
Exocarpos aphyllus	3		
Hakea recurva subsp. *recurva*	0.2		
Maireana carnosa	0.1		
Maireana thesioides	1.4		
Minuria cunninghamii	0.4		
Monachather paradoxus	0.2		
Olearia pimeleoides	1.5		
**Pentaschistis airoides*	0.2		
Ptilotus obovatus var. *obovatus*	0.4		
Rhagodia drummondii	1.35		
Senna artemisioides subsp. *filifolia*	0.2		
Sida atrovirens ms	0.2		

PHOTOS

Site Name:	GIND-92
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	05/08/2006
GPS Location:	GDA94 Zone 50 483303E 6772098N
Community:	F
Landform Type:	Simple slope
Slope Class:	Gentle-moderate
Aspect:	N
Soil Type:	Silty loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	0.5		
Acacia ramulosa var. *ramulosa*	2		
Acacia sp. Murchison (B.R. Maslin 7331)	3		
Acacia tetragonophylla	2		
Allocasuarina dielsiana	4		
Austrostipa sp.	0.1		
Cheilanthes sieberi subsp. *sieberi*	0.01		
Dianella revoluta	1		
Dodonaea inaequifolia	1		
Eremophila oldfieldii subsp. *oldfieldii*	3.5		
Grevillea scabrida (P3)	0.5		
Hemigenia ?sp. Yuna (A.C. Burns 95)			
Maireana sp.	0.3		
Pimelea microcephala subsp. *microcephala*	1		
Ptilotus obovatus var. *obovatus*	0.4		
Santalum acuminatum			
Sida atrovirens ms	0.2		
Thysanotus sp.			
Zygophyllum ?fruticulosum	0.05		

PHOTOS

Site Name:	GIND-97
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/08/2006
GPS Location:	GDA94 Zone 50 478849E 6769811N
Community:	Q
Landform Type:	Hillslope
Slope Class:	Very gentle
Aspect:	WNW
Soil Type:	Silty loam with ironstone
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		
Amphipogon caricinus var. *caricinus*	0.3		
Arthropodium dyeri	0.01		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Daviesia hakeoides subsp. *subnuda*	1		
Grevillea globosa (P3)	1.7		
Monachather paradoxus	0.3		
Thysanotus sp.			

PHOTOS

Site Name: GIND-98

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 06/08/2006

GPS Location: GDA94 Zone 50 477059E 6769301N

Community: D

Landform Type: Valley flat

Slope Class: Flat

Soil Type: Silty loam

Soil Colour: Red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?coolgardiensis subsp. *effusa*	3		
Acacia sibina	2.5		
Acacia tetragonophylla	2		
Austrostipa elegantissima	0.5		
Austrostipa sp.	0.4		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Cheiranthera filifolia var. *simplicifolia*			
Comesperma integerrimum			
Dianella revoluta	1		
Drosera macrantha subsp. *macrantha*			
Exocarpos aphyllus	3		
Hakea recurva subsp. *recurva*	1.5		
Minuria cunninghamii	0.4		
Monachather paradoxus	0.3		
Persoonia pentasticha (P3)	0.5		
Prostanthera magnifica	0.2		
Ptilotus obovatus var. *obovatus*	1.4		
Rhyncharrhena linearis			
Sida atrovirens ms	0.3		
Solanum nummularium	0.3		
Thysanotus sp.			

PHOTOS

Site Name:	GIND-99
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/08/2006
GPS Location:	GDA94 Zone 50 475456E 6769230N
Community:	Q
Landform Type:	Hillslope
Slope Class:	Very gentle
Aspect:	ENE
Soil Type:	Silty loam with ironstone
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura var. ?*argentea*	0.3		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		
Acacia sibina	2.5		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	0.5		
Cheilanthes sieberi subsp. *sieberi*	0.05		
Comesperma integerrimum			
Dianella revoluta	1		
Enekbatus stowardii	0.5		
Eremophila oldfieldii subsp. *oldfieldii*			
Grevillea obliquistigma subsp. *obliquistigma*	2.5		
Hibbertia stenophylla	0.4		
Monachather paradoxus	0.3		
Philotheca deserti subsp. *deserti*	0.5		
Stylidium ?*warriedarense*	0.05		
Wrixonia prostantheroides	0.4		

PHOTOS

Site Name:	GINM-01
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2006
GPS Location:	WGS84 Zone 50 476505E 6773331N
Community:	K
Landform Type:	Breakaway
Slope Class:	Gentle
Aspect:	S
Soil Type:	Clay loam sandy
Soil Colour:	Pale brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii	0.5		
Acacia assimilis subsp. *assimilis*	1.5		
Allocasuarina acutivalvis subsp. *prinsepiana*	2		
Arthropodium dyeri	0.2		
Astroloma serratifolium	0.5		
Cheilanthes sieberi subsp. *sieberi*	0.01		
Eremophila latrobei subsp. *latrobei*	1.5		
Eremophila oppositifolia subsp. *angustifolia*	1.5		
Exocarpos aphyllus	2		
Hibbertia arcuata	0.4		
Maireana georgei	0.15		
Maireana thesioides	0.5		
Melaleuca hamata	4		
Persoonia hexagona	0.5		
Scaevola spinescens	1		
Xanthosia bungei	0.5		
Xerolirion divaricata	0.2		

Site Name:	GINM-02
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2006
GPS Location:	WGS84 Zone 50 476318E 6772553N
Community:	O
Landform Type:	Hillslope
Slope Class:	Moderate
Aspect:	SE
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		
Acacia exocarpoides	1		
Acacia ramulosa var. *ramulosa*	3		
Acacia tetragonophylla	1		
Amphipogon caricinus var. *caricinus*	0.2		
Calycopeplus paucifolius			
Cheilanthes sieberi subsp. *sieberi*	0.01		
Comesperma integerrimum			
Dianella revoluta	1		
Eremophila clarkei	1.5		
Eremophila latrobei subsp. *latrobei*	0.4		
Grevillea obliquistigma subsp. *obliquistigma*	2.5		
Hibbertia arcuata	1		
Minuria cunninghamii	0.4		
Monachather paradoxus	0.3		
Philotheca brucei subsp. *brucei*	1.5		
Ptilotus obovatus var. *obovatus*			
Senna charlesiana	1		
Senna sp. Austin (A. Strid 20210)	1		
Thysanotus sp.			
Xanthosia bungei	1		

PHOTOS

Site Name: GINM-03

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 07/08/2006

GPS Location: WGS84 Zone 50 474933E 6772962N

Community: Q

Landform Type: Hillslope

Slope Class: Gentle

Aspect: SW

Soil Type: Sandy loam

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	3		
Aluta aspera subsp. *hesperia*	1.5		
Amphipogon caricinus var. *caricinus*	0.2		
Callitris columellaris			
Dianella revoluta	0.5		
Enekbatus stowardii	0.3		
Eucalyptus leptopoda subsp. *arctata*	4.5		
Monachather paradoxus	0.3		
Olearia pimeleoides	0.7		
Persoonia hexagona	2		
Philotheca deserti subsp. *deserti*	1		
Stylidium ?*warriedarense*	0.1		
Thysanotus sp.			
Wrixonia prostantheroides	0.3		

PHOTOS

Site Name:	GINM-04
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2006
GPS Location:	WGS84 Zone 50 474431E 6772273N
Community:	S
Landform Type:	Hillslope
Slope Class:	Gentle
Aspect:	ESE
Soil Type:	Silty loam with ironstone
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1.5		
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*	2		
Acacia sibina	1.5		
Aluta aspera subsp. *hesperia*	1		
Amphipogon caricinus var. *caricinus*	0.2		
Cheilanthes sieberi subsp. *sieberi*	0.01		
Comesperma integerrimum			
Eremophila compacta subsp. *compacta*	1.5		
Eremophila forrestii subsp. *forrestii*	1.5		
Hibbertia arcuata			
Melaleuca hamata	3		
Monachather paradoxus	0.3		
Philotheca deserti subsp. *deserti*	1		
Solanum lasiophyllum	0.4		

PHOTOS

Site Name:	GINM-05
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2006
GPS Location:	WGS84 Zone 50 474318E 6770213N
Community:	A
Landform Type:	Hillslope
Soil Type:	Sandy clay loam with quartz
Soil Colour:	Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		
Acacia tetragonophylla	2		
Austrostipa sp.	0.2		
Austrostipa trichophylla	0.2		
Borya sphaerocephala	0.1		
Eremophila latrobei (variant)			
Grevillea extorris	1		
Melaleuca hamata	3.5		
Mirbelia microphylla	0.3		
Monachather paradoxus	0.3		
Ptilotus obovatus var. *obovatus*	0.4		
Ptilotus schwartzii	0.4		
Rhodanthe chlorocephala subsp. *rosea*			
Schoenia cassiniana	0.1		
Sida atrovirens ms	0.3		
Solanum lasiophyllum	0.4		
Thryptomene costata	1.2		

PHOTOS

Site Name: GINM-06

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 07/08/2006

GPS Location: WGS84 Zone 50 474685E 6769079N

Community: O

Landform Type: Hillslope

Slope Class: Gentle

Aspect: WSW

Soil Type: Silty loam

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		
Acacia sp. Murchison (B.R. Maslin 7331)			
Acacia tetragonophylla			
Aluta aspera subsp. *hesperia*	1		
Arthropodium dyeri			
Astroloma serratifolium	0.4		
Austrostipa elegantissima	0.5		
Austrostipa sp.	0.3		
Borya sphaerocephala	0.1		
Calycopeplus paucifolius	2		
Cheilanthes sieberi subsp. *sieberi*			
Comesperma integerrimum			
Eremophila clarkei	0.5		
Eremophila compacta subsp. *compacta*	1		
Eremophila forrestii subsp. *forrestii*	1		
Eremophila latrobei subsp. *latrobei*	0.5		
Hemigenia sp. Cue (K.F. Kenneally 47A)	0.5		
Maireana planifolia	0.2		
Melaleuca hamata			
Mirbelia bursarioides ms	1		
Monachather paradoxus	0.3		
Philotheca brucei subsp. *brucei*	1.5		
Solanum lasiophyllum			

Solanum oldfieldii			

PHOTOS

Site Name:	GINM-07
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2006
GPS Location:	GDA94 Zone 50 474522E 6769016N
Community:	A
Landform Type:	Simple slope
Slope Class:	Gentle
Aspect:	SW
Soil Type:	Sandy loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia kochii	1.5		
Acacia ramulosa var. *ramulosa*			
Acacia sp. Murchison (B.R. Maslin 7331)			
Acacia tetragonophylla	3		
Austrostipa elegantissima	1		
Austrostipa sp.	0.3		
Austrostipa trichophylla	0.3		
Borya sphaerocephala	0.1		
Eremophila clarkei			
Eremophila compacta subsp. *compacta*	1		
Grevillea extorris	0.7		
Hakea recurva subsp. *recurva*	0.5		
Mirbelia microphylla	0.4		
**Pentaschistis airoides*	0.1		
Ptilotus obovatus var. *obovatus*	0.3		
Ptilotus schwartzii			
Sclerolaena alata	0.1		
Sida atrovirens ms	0.2		
Solanum lasiophyllum	0.4		
Thryptomene costata	1		

PHOTOS

Site Name: GINM-13

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 09/08/2006

GPS Location: GDA94 Zone 50 478260E 6771760N

Community: O

Landform Type: Simple slope

Slope Class: Moderate-steep

Aspect: SE

Soil Type: Silty loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		
Acacia sp. Karara (C. Godden 14)	2		
Allocasuarina acutivalvis subsp. *prinsepiana*	3		
Amphipogon caricinus var. *caricinus*	0.3		
Astroloma serratifolium	0.3		
Cassytha nodiflora			
Cheilanthes sieberi subsp. *sieberi*	0.01		
Comesperma integerrimum			
Dodonaea inaequifolia	2		
Drosera sp.			
Eremophila clarkei	1		
Eremophila latrobei subsp. *latrobei*	1		
Grevillea paradoxa	1.5		
Lepidosperma sp. Karara BIF	0.4		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.5		
?*Liliaceae* sp.	0.3		
Melaleuca nematophylla	2.5		
Philotheca brucei subsp. *brucei*	1.5		
Prostanthera magnifica	1		
Sida atrovirens ms	0.2		
Solanum lasiophyllum	0.4		
Thysanotus sp.			

Xanthosia bungei	0.4		

PHOTOS

Site Name: KARA01

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477945.950106603E 6770924.73867431N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Allocasuarina acutivalvis			
Arthropodium curvipes			
Arthropodium dyeri			
Austrostipa hemipogon			
Bromus arenarius			
Calandrinia calyptrata			
Calandrinia eremaea			
Calotis hispidula			
Calycopeplus paucifolius			
Cheilanthes adiantoides			
Comesperma integerrimum			
Crassula colorata var. *colorata*			
Crassula extrorsa			
Crassula tetramera			
**Cuscuta epithymum*			
Daucus glochidiatus			
Dodonaea inaequifolia			
Elymus scaber			
Eremophila clarkei			
Erodium cygnorum			
Eucalyptus leptopoda subsp. *elevata*			
Gastrolobium laytonii			
Goodenia berardiana			
Lawrencella rosea			
Lepidosperma sp. (A. Markey & S. Dillon 3468)			
Melaleuca radula			
Millotia myosotidifolia			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Parietaria cardiostegia			

**Pentaschistis airoides*			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Podolepis lessonii			
Rhodanthe battii			
Rhodanthe collina (P3)			
Rhodanthe maryonii			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Solanum lasiophyllum			
Thysanotus manglesianus			
Trachymene ornata			
Velleia rosea			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA02

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478041.624408815E 6770909.67412768N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia sp. Karara			
Actinobole uliginosum			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Astroloma serratifolium			
Austrostipa scabra			
Austrostipa trichophylla			
Blennospora drummondii			
Brachyscome cheilocarpa			
Brunonia australis			
Calandrinia eremaea			
Calotis hispidula			
Calycopeplus paucifolius			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Chthonocephalus pseudevax			
Crassula colorata var. *acuminata*			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Daucus glochidiatus			
Elymus scaber			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilberta tenuifolia			
Gilruthia osbornei			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea obliquistigma subsp. *obliquistigma*			

Hakea preissii			
Lawrencella davenportii			
Lawrencella rosea			
Lobelia rhytidosperma			
Melaleuca nematophylla			
Millotia myosotidifolia			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Parietaria cardiostegia			
**Pentaschistis airoides*			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis canescens			
Podolepis lessonii			
Prostanthera magnifica			
Rhodanthe battii			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Sida atrovirens ms			
Solanum lasiophyllum			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia rosea			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA03

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478301.942795102E 6770975.29973456N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *major*			
Acacia assimilis subsp. *assimilis*			
Acacia exocarpoides			
Acacia sp. Karara			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Austrostipa elegantissima			
Austrostipa trichophylla			
Calandrinia eremaea			
Calocephalus multiflorus			
Calycopeplus paucifolius			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Daviesia hakeoides subsp. *subnuda*			
Dodonaea inaequifolia			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilberta tenuifolia			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea obliquistigma subsp. *obliquistigma*			
Hydrocotyle pilifera var. *glabrata*			
**Hypochaeris glabra*			
Lawrencella rosea			
Lobelia rhytidosperma			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Parietaria cardiostegia			

Persoonia hexagona			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Phyllangium sulcatum			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis lessonii			
Prostanthera althoferi subsp. *althoferi*			
Prostanthera magnifica			
Ptilotus drummondii			
Ptilotus gaudichaudii var. *parviflorus*			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis			
Rhodanthe polycephala			
Sida atrovirens ms			
Stenopetalum filifolium			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA04

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478439.1357237E 6771116.09606736N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Allocasuarina acutivalvis			
Amphipogon caricinus var. *caricinus*			
Arthropodium dyeri			
Astroloma serratifolium			
Calocephalus multiflorus			
Calothamnus gilesii			
Calycopeplus paucifolius			
Cheilanthes adiantoides			
Comesperma integerrimum			
Crassula colorata var. *colorata*			
Drosera macrantha subsp. *macrantha*			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gastrolobium laytonii			
Gilberta tenuifolia			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea paradoxa			
Hakea recurva			
Hyalosperma demissum			
Lawrencella rosea			
Lepidosperma sp. (A. Markey & S. Dillon 3468)			
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Lobelia rhytidosperma			
Melaleuca nematophylla			
Millotia dimorpha (P1)			
**Pentaschistis airoides*			
Persoonia hexagona			
Philotheca brucei subsp. *brucei*			

Philotheca sericea			
Phyllangium sulcatum			
Podolepis canescens			
Podolepis lessonii			
Rhodanthe laevis			
Schoenus nanus			
Sida atrovirens ms			
Thysanotus manglesianus			
Trachymene ornata			
Velleia hispida			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA05

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477884.279374435E 6771239.75651807N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *major*			
Acacia assimilis subsp. *assimilis*			
Acacia sp. Karara			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Arthropodium curvipes			
Arthropodium dyeri			
Astroloma serratifolium			
Austrostipa trichophylla			
Brachyscome ciliocarpa			
Brunonia australis			
Calandrinia calyptrata			
Calandrinia eremaea			
Calotis hispidula			
Cheilanthes adiantoides			
Cheilanthes sieberi subsp. *sieberi*			
Comesperma integerrimum			
Crassula closiana			
Crassula colorata var. *acuminata*			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Daucus glochidiatus			
Eremophila clarkei			
Erodium cygnorum			
Gastrolobium laytonii			
Goodenia berardiana			
Goodenia occidentalis			
Hydrocotyle pilifera var. *glabrata*			
Lawrencella rosea			
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Lobelia rhytidosperma			

Melaleuca nematophylla			
Millotia dimorpha (P1)			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
**Pentaschistis airoides*			
Persoonia hexagona			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Phyllangium sulcatum			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podotheca gnaphalioides			
Ptilotus drummondii			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Sida atrovirens ms			
Sida excedentifolia ms			
Stenopetalum anfractum			
Thysanotus manglesianus			
Trachymene ornata			
Velleia hispida			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA06

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478490.985447504E 6770741.47291544N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Austrostipa elegantissima			
Austrostipa eremophila			
Bellida graminea			
Callitris glaucophylla			
Cheilanthes adiantoides			
Comesperma integerrimum			
Comesperma volubile			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Dianella revoluta var. *divaricata*			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Eucalyptus leptopoda subsp. *elevata*			
Gilberta tenuifolia			
Gonocarpus nodulosus			
Goodenia occidentalis			
Hibbertia arcuata			
Hydrocotyle rugulosa			
Lawrencella rosea			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Parietaria cardiostegia			
Philotheca brucei subsp. *brucei*			
Philotheca deserti subsp. *deserti*			
Podolepis lessonii			

Ptilotus drummondii var. *drummondii*			
Rhodanthe battii			
Rhodanthe laevis			
Rhyncharrhena linearis			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA07

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477768.242961319E 6771276.89192437N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *major*			
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Aluta aspera subsp. *hesperia*			
Angianthus tomentosus			
Arthropodium dyeri			
Austrostipa scabra			
Bellida graminea			
Blennospora drummondii			
Brachyscome ciliocarpa			
Calotis aff. *cuneifolia (A. Markey & S. Dillon 3447)*			
Calotis hispidula			
Calycopeplus paucifolius			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Comesperma integerrimum			
**Cuscuta epithymum*			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gonocarpus nodulosus			
Goodenia occidentalis			
Grevillea obliquistigma subsp. *obliquistigma*			
Helipterum craspedioides			
Hydrocotyle pilifera var. *glabrata*			
Mirbelia bursarioides ms			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			

Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis canescens			
Prostanthera magnifica			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis			
Rhodanthe polycephala			
Sida atrovirens ms			
Sida excedentifolia ms			
Solanum lasiophyllum			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			
Wurmbea densiflora			
Xanthosia bungei			

Site Name: KARA08

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477477.780595579E 6771419.99843147N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *aneura*			
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Arthropodium dyeri			
Bellida graminea			
Brachyscome cheilocarpa			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Comesperma integerrimum			
Crassula closiana			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilberta tenuifolia			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea obliquistigma subsp. *obliquistigma*			
Hibbertia arcuata			
**Hypochaeris glabra*			
Melaleuca leiocarpa			
Melaleuca nematophylla			
Monachather paradoxus			
Myriocephalus guerinae			
Myriocephalus rudallii			

Nicotiana rosulata subsp. *rosulata*			
Philotheca brucei subsp. *brucei*			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis lessonii			
Prostanthera magnifica			
Rhodanthe laevis			
Rhyncharrhena linearis			
Thysanotus manglesianus			
Thysanotus pyramidalis			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia rosea			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			

Site Name: KARA09

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477183.485534583E 6771491.27544558N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *aneura*			
Acacia cf. *aneura* var. *major*			
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Acacia sp. Karara			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Arthropodium dyeri			
Austrostipa scabra			
Bellida graminea			
Brachyscome cheilocarpa			
Brunonia australis			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Comesperma integerrimum			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Dianella revoluta var. *divaricata*			
Drosera macrantha subsp. *macrantha*			
Elymus scaber			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Eucalyptus leptopoda subsp. *elevata*			
Gilberta tenuifolia			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			

Haloragis odontocarpa f. pterocarpa			
Hibbertia arcuata			
Hydrocotyle pilifera var. *glabrata*			
Lawrencella davenportii			
Melaleuca nematophylla			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Olearia humilis			
Philotheca deserti subsp. *deserti*			
Phyllangium sulcatum			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis canescens			
Podolepis lessonii			
Poranthera microphylla			
Rhodanthe laevis			
**Rostraria pumila*			
Stenopetalum aff. *sphaerocarpum (A. Markey & S. Dillon 3414)*			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia rosea			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			

Site Name: KARA10

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478116.525586231E 6772065.07210745N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *major*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia sibina			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Amyema gibberula var. *tatei*			
**Anagallis arvensis*			
Arthropodium dyeri			
Astroloma serratifolium			
Bellida graminea			
Blennospora drummondii			
Brachyscome ciliocarpa			
Calandrinia eremaea			
Calotis hispidula			
Calycopeplus paucifolius			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Comesperma integerrimum			
Comesperma volubile			
Crassula colorata var. *colorata*			
Crassula extrorsa			
**Cuscuta epithymum*			
Daucus glochidiatus			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilberta tenuifolia			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea obliquistigma subsp. *obliquistigma*			

Grevillea paradoxa			
Hakea recurva			
Lawrencella rosea			
Lobelia rhytidosperma			
Melaleuca nematophylla			
Millotia dimorpha (P1)			
Mirbelia microphylla			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
**Pentaschistis airoides*			
Persoonia hexagona			
Philotheca brucei subsp. *brucei*			
Prostanthera magnifica			
Ptilotus drummondii			
Ptilotus helipteroides			
Rhodanthe polycephala			
Schoenia cassiniana			
Senecio pinnatifolius			
Senna charlesiana			
Sida atrovirens ms			
Sida excedentifolia ms			
Solanum lasiophyllum			
Stenopetalum filifolium			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia rosea			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA11

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477887.652422555E 6772090.69939113N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *aneura*			
Acacia cf. *aneura* var. *major*			
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Arthropodium dyeri			
Astroloma serratifolium			
Austrostipa hemipogon			
Brachyscome perpusilla			
Calocephalus multiflorus			
Calotis hispidula			
Calycopeplus paucifolius			
Centrolepis aristida			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Comesperma integerrimum			
Crassula colorata var. *acuminata*			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Dendrophyllanthus erwinii			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilberta tenuifolia			
Gilruthia osbornei			
Gonocarpus nodulosus			
Goodenia berardiana			

Goodenia occidentalis			
Hibbertia arcuata			
Hydrocotyle pilifera var. *glabrata*			
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Melaleuca leiocarpa			
Melaleuca nematophylla			
Mirbelia bursarioides ms			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Phyllangium sulcatum			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis canescens			
Prostanthera magnifica			
Ptilotus divaricatus var. *divaricatus*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Schoenus nanus			
Stylidium warriedarense			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia sp. cycnopotamica/rosea complex			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			

Site Name: KARA12

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 477627.659064907E 6772042.83084995N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii			
Acacia exocarpoides			
Acacia sp. Karara			
Acacia tetragonophylla			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Arthropodium dyeri			
Austrostipa elegantissima			
Austrostipa scabra			
Bellida graminea			
Brachyscome cheilocarpa			
Calocephalus multiflorus			
Cheilanthes adiantoides			
**Cuscuta epithymum*			
Eremophila clarkei			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Erymophyllum glossanthus			
Gilruthia osbornei			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea extorris			
Grevillea paradoxa			
Hibbertia arcuata			
Lawrencella rosea			
Mirbelia bursarioides ms			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
**Pentaschistis airoides*			
Philotheca brucei subsp. *brucei*			

Philotheca sericea			
Phyllangium sulcatum			
Podolepis canescens			
Podolepis lessonii			
Prostanthera magnifica			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Santalum spicatum			
Schoenus nanus			
Senna charlesiana			
Senna sp. Austin (A. Strid 20210)			
Solanum lasiophyllum			
Thysanotus manglesianus			
Trachymene ornata			
Velleia hispida			
Velleia rosea			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			
Wurmbea densiflora			

Site Name: KARA13

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478862.328455263E 6772751.60553704N

Community: P

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia sibina			
Allocasuarina acutivalvis			
Aluta aspera subsp. *hesperia*			
Bellida graminea			
Brachyscome ciliocarpa			
Brunonia australis			
Ceratogyne obionoides			
Cheilanthes adiantoides			
Crassula closiana			
Crassula colorata var. *colorata*			
Cyanicula amplexans			
Erodium cygnorum			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea paradoxa			
Hemigenia sp. Cue (K.F. Kenneally 47A)			
Lawrencella rosea			
Lepidosperma sp. (A. Markey & S. Dillon 3468)			
Melaleuca nematophylla			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Philotheca deserti subsp. *deserti*			
Philotheca sericea			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis lessonii			
Rhodanthe citrina			

Rhodanthe laevis			
Schoenia cassiniana			
Schoenus nanus			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Waitzia acuminata var. *acuminata*			
Waitzia nitida			
Xanthosia bungei			

Site Name: KARA14

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478896.890096084E 6772722.86190332N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia exocarpoides			
Acacia longispinea			
Acacia sp. Karara			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Arthropodium dyeri			
Austrostipa scabra			
Bellida graminea			
Calandrinia eremaea			
Calocephalus multiflorus			
Calotis aff. *cuneifolia (A. Markey & S. Dillon 3447)*			
Calotis hispidula			
Cheilanthes adiantoides			
Crassula closiana			
Crassula colorata var. *colorata*			
Eucalyptus kochii subsp. *amaryssia*			
Gilberta tenuifolia			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea paradoxa			
Helipterum craspedioides			
Hemigenia sp. Cue (K.F. Kenneally 47A)			
Hibbertia arcuata			
Hibbertia glomerosa var. *glomerosa*			
Hydrocotyle pilifera var. *glabrata*			
**Hypochaeris glabra*			
Lepidosperma sp. (A. Markey & S. Dillon 3468)			

Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Melaleuca nematophylla			
Melaleuca radula			
Mirbelia microphylla			
Monachather paradoxus			
Philotheca sericea			
Pimelea avonensis			
Podotheca gnaphalioides			
Poranthera microphylla			
Ptilotus gaudichaudii var. *parviflorus*			
Rhodanthe chlorocephala subsp. *splendida*			
Schoenus nanus			
Senna sp. Austin (A. Strid 20210)			
Sida atrovirens ms			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Waitzia acuminata var. *acuminata*			
Xanthosia bungei			

Site Name: KARA15

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478571.47249559E 6773113.952529N

Community: D

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia cf. *aneura* var. *aneura*			
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Allocasuarina acutivalvis			
Alyxia buxifolia			
Amphipogon caricinus var. *caricinus*			
Austrostipa elegantissima			
Brunonia australis			
Calocephalus multiflorus			
Calotis hispidula			
Calotis multicaulis			
Comesperma integerrimum			
**Cuscuta epithymum*			
Eremophila clarkei			
Eremophila oppositifolia var. *angustifolia* ms			
Erodium cygnorum			
Eucalyptus kochii subsp. *amaryssia*			
Exocarpos aphyllus			
Gilruthia osbornei			
Goodenia berardiana			
Hakea preissii			
Hibbertia arcuata			
Hydrocotyle pilifera var. *glabrata*			
Maireana thesioides			
Maireana trichoptera			
Monachather paradoxus			
Olearia humilis			
Philotheca brucei subsp. *brucei*			
Philotheca sericea			
Phyllangium sulcatum			

Podolepis canescens			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Rhodanthe chlorocephala subsp. *splendida*			
Santalum spicatum			
Scaevola spinescens			
Senna charlesiana			
Sida atrovirens ms			
Trachymene pilosa			
Velleia hispida			
Waitzia acuminata var. *acuminata*			

Site Name: KARA16

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 479223.500501421E 6773811.14996857N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Arthropodium dyeri			
Austrostipa elegantissima			
Austrostipa trichophylla			
Bellida graminea			
Calandrinia calyptrata			
Calandrinia eremaea			
Calandrinia sp. Blackberry (D.M. Porter 171)			
Calocephalus multiflorus			
Calotis aff. *cuneifolia (A. Markey & S. Dillon 3447)*			
Calotis hispidula			
Calotis multicaulis			
Calycopeplus paucifolius			
Cheilanthes brownii			
Cheilanthes sieberi subsp. *sieberi*			
Chthonocephalus pseudevax			
**Cleretum papulosum* subsp. *papulosum*			
Crassula colorata var. *acuminata*			
Crassula colorata var. *colorata*			
Crassula tetramera			
**Cuscuta epithymum*			
Daucus glochidiatus			
Dodonaea petiolaris			
Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
Gilruthia osbornei			
Goodenia berardiana			
Goodenia occidentalis			
Hakea preissii			

Isoetopsis graminifolia			
Mirbelia bursarioides ms			
Monachather paradoxus			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
**Pentaschistis airoides*			
Persoonia hexagona			
Philotheca sericea			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis lessonii			
Pogonolepis stricta			
Ptilotus divaricatus var. *divaricatus*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhodanthe laevis			
Rhodanthe maryonii			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Sida atrovirens ms			
Sida excedentifolia ms			
Solanum lasiophyllum			
Trachymene ornata			
Velleia rosea			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			

Site Name: KARA17

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 479438.854459887E 6773166.43690506N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *aneura*			
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Allocasuarina acutivalvis			
Aristida contorta			
Arthropodium dyeri			
Austrodanthonia sp. Goomalling (A.G. Gunness et al. OAKP 10/63)			
Austrostipa elegantissima			
Brachyscome cheilocarpa			
Bromus arenarius			
Calandrinia calyptrata			
Calandrinia aff. *corriguloides (A. Markey & S. Dillon 3475)*			
Calandrinia eremaea			
Calandrinia sp. Blackberry (D.M. Porter 171)			
Calotis hispidula			
Calotis multicaulis			
Calycopeplus paucifolius			
Cheilanthes sieberi subsp. *sieberi*			
Chthonocephalus pseudevax			
**Cleretum papulosum* subsp. *papulosum*			
Comesperma integerrimum			
Crassula colorata var. *acuminata*			
Crassula tetramera			
**Cuscuta epithymum*			
Daucus glochidiatus			
Dodonaea inaequifolia			
Dodonaea petiolaris			
Elymus scaber			
Enchylaena lanata			
Eremophila clarkei			

Eremophila latrobei var. *latrobei*			
Erodium cygnorum			
**Galium aparine*			
Gastrolobium laytonii			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Hakea recurva			
**Hypochaeris glabra*			
Isotoma petraea			
Lachnagrostis plebeia			
**Lamarckia aurea*			
Lawrencella rosea			
Lemooria burkittii			
Maireana marginata			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Parietaria cardiostegia			
**Pentaschistis airoides*			
Philotheca sericea			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Pleurosorus rutifolius			
Podolepis lessonii			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhodanthe battii			
Rhodanthe laevis			
Rhodanthe polycephala			
Rhyncharrhena linearis			
Santalum spicatum			
Senna charlesiana			
Sida atrovirens ms			
Trachymene ornata			
Velleia rosea			
Wahlenbergia gracilenta			
Wahlenbergia preissii			
Waitzia acuminata var. *acuminata*			

Site Name: KARA18

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 478905.541018265E 6771211.25543456N

Community: D

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Amphipogon caricinus var. *caricinus*			
Austrostipa trichophylla			
Bellida graminea			
Brachyscome ciliocarpa			
Calandrinia aff. eremaea (A. Markey & S. Dillon 3472)			
Calocephalus multiflorus			
Calotis hispidula			
Cephalipterum drummondii			
Cheilanthes adiantoides			
Crassula closiana			
Crassula colorata var. *acuminata*			
Daucus glochidiatus			
Eremophila clarkei			
Erodium cygnorum			
Eucalyptus kochii subsp. *amaryssia*			
Gilruthia osbornei			
Goodenia berardiana			
Hakea recurva			
Lobelia winfridae			
Maireana georgei			
Maireana planifolia x villosa (A. Markey & S. Dillon 3482)			
Millotia myosotidifolia			
Myriocephalus guerinae			
Olearia humilis			
Philotheca brucei subsp. *brucei*			
Plantago aff. *hispida (A. Markey & S. Dillon*			

3440)			
Podolepis canescens			
Podolepis lessonii			
Ptilotus drummondii			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Rhyncharrhena linearis			
Scaevola spinescens			
Sclerolaena diacantha			
Senna artemisioides subsp. *filifolia*			
Senna sp. Austin (A. Strid 20210)			
Sida atrovirens ms			
Solanum lasiophyllum			
Stenopetalum filifolium			
Trachymene cyanopetala			
Trachymene ornata			
Trachymene pilosa			
Trichanthodium skirrophorum			
Velleia hispida			
Waitzia acuminata var. *acuminata*			
Zygophyllum eremaeum			
Zygophyllum ovatum			

Site Name: KARA19

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 479124.395440028E 6772746.61737128N

Community: O

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*			
Acacia sibina			
Acacia sp. Karara			
Allocasuarina acutivalvis			
Amphipogon caricinus var. *caricinus*			
Austrostipa hemipogon			
Bellida graminea			
Blennospora drummondii			
Brunonia australis			
Caesia sp. Wongan (K.F. Keneally 8820)			
Calocephalus multiflorus			
Calothamnus gilesii			
Cheilanthes adiantoides			
Chthonocephalus pseudevax			
Crassula closiana			
Crassula colorata var. *colorata*			
**Cuscuta epithymum*			
Cyanicula amplexans			
Drosera macrantha subsp. *macrantha*			
Eremophila clarkei			
Gilberta tenuifolia			
Gonocarpus nodulosus			
Goodenia berardiana			
Goodenia occidentalis			
Grevillea paradoxa			
Hemigenia sp. Cue (K.F. Kenneally 47A)			
Hibbertia arcuata			
Hydrocotyle callicarpa			
Hydrocotyle pilifera var. *glabrata*			
Lawrencella rosea			

Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Lobelia rhytidosperma			
Melaleuca nematophylla			
Millotia dimorpha (P1)			
Myriocephalus guerinae			
**Pentaschistis airoides*			
Persoonia hexagona			
Philotheca brucei subsp. *brucei*			
Phyllangium sulcatum			
Podolepis lessonii			
Poranthera microphylla			
Rhodanthe laevis			
Schoenus nanus			
Sida atrovirens ms			
Stylidium perpusillum			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Velleia hispida			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			
Wurmbea densiflora			
Xanthosia bungei			

Site Name: KARA20

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 479448.451457077E 6773137.17303999N

Community: G

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia cf. *aneura* var. *aneura*			
Acacia assimilis subsp. *assimilis*			
Acacia erinacea			
Acacia tetragonophylla			
Angianthus tomentosus			
Arthropodium dyeri			
Atriplex semilunaris			
Austrodanthonia caespitosa			
Austrostipa elegantissima			
Calandrinia aff. eremaea (A. Markey & S. Dillon 3472)			
Calandrinia calyptrata			
Calandrinia eremaea			
Calandrinia sp. Blackberry (D.M. Porter 171)			
Calotis hispidula			
Cheilanthes adiantoides			
**Cleretum papulosum* subsp. *papulosum*			
Crassula colorata var. *acuminata*			
Crassula tetramera			
Daucus glochidiatus			
Dodonaea inaequifolia			
Elymus scaber			
Enchylaena lanata			
Eremophila oldfieldii subsp. *oldfieldii*			
Eriachne pulchella subsp. *pulchella*			
**Erodium cicutarium*			
Erodium cygnorum			
Erymophyllum tenellum			
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus			
Goodenia berardiana			
Goodenia havilandii			

Goodenia pusilliflora			
Hakea recurva			
Hydrocotyle pilifera var. *glabrata*			
**Hypochaeris glabra*			
Isoetopsis graminifolia			
Lachnagrostis plebeia			
Lemooria burkittii			
Lepidium oxytrichum			
Levenhookia leptantha			
Maireana carnosa			
Maireana georgei			
Maireana marginata			
Maireana thesioides			
**Medicago minima*			
**Mesembryanthemum nodiflorum*			
Myriocephalus guerinae			
Nicotiana rosulata subsp. *rosulata*			
Omphalolappula concava			
Parietaria cardiostegia			
**Pentaschistis airoides*			
Plantago aff. *hispida (A. Markey & S. Dillon 3440)*			
Podolepis canescens			
Podolepis lessonii			
Ptilotus divaricatus var. *divaricatus*			
Ptilotus exaltatus			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Ranunculus sessiliflorus var. *sessiliflorus*			
Rhagodia drummondii			
Rhodanthe battii			
Rhodanthe chlorocephala subsp. *rosea*			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe manglesii			
Scaevola spinescens			
Sclerolaena diacantha			
Sclerolaena fusiformis			
Sclerolaena gardneri			
Senecio glossanthus			
Senecio pinnatifolius			

Senna charlesiana			
Senna sp. Austin (A. Strid 20210)			
**Silene nocturna*			
Stenopetalum pedicellare			
Triglochin sp. B Flora of Australia (P.G. Wilson 4294)			
Wahlenbergia gracilenta			
Waitzia acuminata var. *acuminata*			
Zygophyllum eremaeum			
Zygophyllum ovatum			

Site Name: KARA21

Site Type: QUADRAT

GPS Location: GDA94 Zone 50 479267.819519948E 6773877.72331542N

Community: G

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia andrewsii			
Acacia erinacea			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Amphipogon caricinus			
Angianthus tomentosus			
Austrodanthonia caespitosa			
Austrostipa elegantissima			
Austrostipa nitida			
Blennospora drummondii			
Calandrinia eremaea			
Calandrinia sp. Blackberry (D.M. Porter 171)			
Calocephalus multiflorus			
Calotis hispidula			
Cephalipterum drummondii			
**Cleretum papulosum* subsp. *papulosum*			
Comesperma integerrimum			
Dodonaea inaequifolia			
Enchylaena lanata			
Eremophila oppositifolia var. *angustifolia* ms			
Gnephosis tenuissima			
Goodenia berardiana			
Gunniopsis divisa (P3)			
Gunniopsis rubra			
Hakea preissii			
Maireana carnosa			
Maireana georgei			
Maireana planifolia			
Maireana thesioides			
**Mesembryanthemum nodiflorum*			
**Pentaschistis airoides*			

Podolepis lessonii			
Pogonolepis stricta			
Ptilotus exaltatus			
Ptilotus gaudichaudii var. *parviflorus*			
Rhagodia drummondii			
Scaevola spinescens			
Sclerolaena fusiformis			
Senna sp. Austin (A. Strid 20210)			
Sida atrovirens ms			
**Spergula pentandra*			
Velleia sp. cycnopotamica/rosea complex			
Waitzia acuminata var. *acuminata*			

Site Name:	KIOP 023
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 473453E 6770695N
Community:	F
Landform Type:	Plain
Slope Class:	Flat
Soil Type:	Silty clay loam
Soil Colour:	Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2		
Acacia tetragonophylla	3		
Acacia umbraculiformis	4		
Borya sphaerocephala	0.1		
Cheilanthes ?adiantoides	0.1		
Comesperma ?integerrimum			
Drosera bulbosa	0.1		
Drosera macrantha			
Grevillea pityophylla	0.5		
Hakea recurva subsp. *recurva*	2.5		
Hyalosperma glutinosum	0.1		
Monachather paradoxus	0.2		
Pheladenia deformis	0.1		
Ptilotus obovatus	0.1		
Rhodanthe chlorocephala	0.2		
Senna charlesiana	0.5		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		
Thryptomene costata	2		

Site Name:	KIOP 024
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 473224E 6770276N
Community:	S
Landform Type:	Plain
Slope Class:	Flat
Soil Type:	Silty clay loam
Soil Colour:	Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		
Acacia incognita	3.5		
Acacia ramulosa var. *ramulosa*	2.5		
Acacia tetragonophylla	4		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	0.5		
Cheilanthes ?adiantoides	0.1		
Cryptandra imbricata	0.5		
Drosera bulbosa	0.1		
Eremophila clarkei	0.5		
Eremophila forrestii subsp. *forrestii*	0.5		
Grevillea extorris	0.5		
Hakea recurva subsp. *recurva*	1		
Hibbertia arcuata	1		
Melaleuca hamata	6		
Monachather paradoxus	0.2		
Persoonia manotricha	2		
Pimelea spiculigera var. *thesioides*	0.3		
Ptilotus obovatus	0.1		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		
Solanum lasiophyllum	0.5		

PHOTOS

Site Name: KIOP 025

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 30/07/2009

GPS Location: GDA94 Zone 50 473540E 6770412N

Community: O

Landform Type: Crest

Slope Class: Very gentle

Soil Type: Clay loam

Soil Colour: Pale brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla	4		
Acacia incognita	3		
Astroloma serratifolium	0.2		
Borya sphaerocephala	0.1		
Cheilanthes ?adiantoides	0.1		
Drosera bulbosa	0.1		
Eremophila clarkei	2		
Eremophila latrobei subsp. *latrobei*	1.8		
Grevillea extorris	1.8		
Hyalosperma glutinosum	0.1		
Maireana ?planifolia	0.2		
Mirbelia bursarioides ms	2		
Pheladenia deformis	0.1		
Philotheca brucei subsp. *brucei*	1.5		
Prostanthera patens	0.5		
Thryptomene costata	2		

PHOTOS

Site Name:	KIOP 026
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 472734E 6770699N
Community:	D
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		
Acacia exocarpoides	1		
Acacia incognita	3		
Acacia ramulosa var. *ramulosa*	3		
Acacia tetragonophylla	2		
Comesperma ?*integerrimum*			
Cryptandra imbricata	1.5		
Eucalyptus kochii subsp. *plenissima*	10		
Eucalyptus loxophleba subsp. *supralaevis*	10		
Hakea recurva subsp. *recurva*	1.5		
Maireana sp.	0.1		
Maireana sp.	0.3		
Minuria cunninghamii	0.5		
Olearia pimeleoides	0.5		
Pimelea microcephala subsp. *microcephala*	1		
Ptilotus exaltatus	0.5		
Ptilotus obovatus	0.5		
Sclerolaena ?*gardneri*	0.1		
Senna artemisioides subsp. *filifolia*	2		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		

PHOTOS

Site Name:	KIOP 027
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 473234E 6770752N
Community:	S
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		
Acacia ramulosa var. *ramulosa*	2.5		
Acacia sibina	2.5		
Acacia tetragonophylla	0.2		
Amphipogon caricinus var. *caricinus*	0.3		
Austrostipa elegantissima	0.5		
Cheilanthes ?*adiantoides*	0.1		
Comesperma ?*integerrimum*			
Cryptandra imbricata	1.5		
Drosera bulbosa	0.1		
Drosera macrantha			
Hakea recurva subsp. *recurva*	2		
Hibbertia arcuata	1.5		
Melaleuca hamata	5		
Monachather paradoxus	0.2		
Pimelea spiculigera var. *thesioides*	0.5		
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		

PHOTOS

Site Name: KIOP 028

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 30/07/2009

GPS Location: GDA94 Zone 50 473865E 6770708N

Community: P

Landform Type: footslope

Slope Class: very gentle

Soil Type: silty clay loam

Soil Colour: brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia umbraculiformis	5		
Aluta aspera subsp. *hesperia*	2		
Calycopeplus paucifolius	4		
Cheilanthes ?*adiantoides*	0.1		
Drosera macrantha			
Eremophila latrobei subsp. *latrobei*	1.5		
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		
Monachather paradoxus	0.2		

PHOTOS

Site Name:	KIOP 029
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 472483E 6769265N
Community:	Q
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		
Acacia sibina	3		
Acacia umbraculiformis	1		
Amphipogon caricinus var. *caricinus*	0.2		
Cheilanthes ?adiantoides	0.1		
Cryptandra imbricata	1		
Drosera macrantha			
Grevillea pityophylla	1		
Hakea recurva subsp. *recurva*	3		
Hemigenia botryphylla	1		
Melaleuca hamata	8		
Monachather paradoxus	0.2		
Rhyncharrhena linearis			
Stachystemon intricatus	0.5		

PHOTOS

Site Name:	KIOP 030
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 472317E 6769109N
Community:	S
Landform Type:	plain
Slope Class:	flat
Soil Type:	sandy clay loam
Soil Colour:	brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		
Acacia sibina	2		
Acacia tetragonophylla	2		
Aluta aspera subsp. *hesperia*	1		
Amphipogon caricinus var. *caricinus*	0.2		
Austrostipa elegantissima	0.4		
Borya sphaerocephala	0.1		
Cheilanthes ?adiantoides	0.1		
Comesperma ?integerrimum			
Drosera bulbosa	0.1		
Drosera macrantha			
Eremophila eriocalyx	1.5		
Eremophila forrestii subsp. *forrestii*	1		
Grevillea pityophylla	1		
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.3		
Malleostemon tuberculatus	2		
Melaleuca hamata	5		
Monachather paradoxus	0.2		
Ptilotus obovatus	0.4		
Stachystemon intricatus	1		

PHOTOS

Site Name:	KIOP 031
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	30/07/2009
GPS Location:	GDA94 Zone 50 472584E 6768720N
Community:	F
Landform Type:	footslope
Slope Class:	very gentle
Soil Type:	sandy clay loam
Soil Colour:	brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		
Acacia kochii	2		
Acacia ramulosa var. *ramulosa*	2		
Acacia tetragonophylla	1.5		
Acacia umbraculiformis	4		
Borya sphaerocephala	0.1		
Calotis ?*multicaulis*	0.1		
Comesperma ?*integerrimum*			
Drosera bulbosa	0.1		
Grevillea pityophylla	0.3		
Hakea recurva subsp. *recurva*	1		
Helipterum craspedioides	0.1		
Mirbelia ?*microphylla*	0.5		
Rhodanthe chlorocephala	0.5		
Solanum lasiophyllum	1		

PHOTOS

Site Name: KIOP 032

Site Type: PLOT

Dimensions: 20m x 20m

Survey Date: 30/07/2009

GPS Location: GDA94 Zone 50 472021E 6768419N

Community: F

Landform Type: plain

Slope Class: flat

Soil Type: silty clay loam

Soil Colour: red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		
Acacia ramulosa var. *ramulosa*	4		
Acacia tetragonophylla	4		
Amphipogon caricinus var. *caricinus*	0.2		
Austrostipa elegantissima	0.2		
Borya sphaerocephala	0.2		
Calotis ?multicaulis	0.2		
Cheilanthes ?adiantoides	0.1		
Comesperma ?integerrimum			
Drosera bulbosa	0.1		
Drosera macrantha			
Eremophila forrestii subsp. *forrestii*	1		
Grevillea levis	1		
Grevillea pityophylla	1		
Hakea recurva subsp. *recurva*	4		
Helipterum craspedioides	0.2		
Monachather paradoxus	0.2		
Persoonia manotricha	3		
Pheladenia deformis	0.2		
Rhodanthe chlorocephala	0.2		
Senna charlesiana	0.3		
Solanum lasiophyllum	0.2		
Stachystemon intricatus	1		

PHOTOS

Site Name:	KIOP 213
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/10/2010
GPS Location:	GDA94 Zone 50 474412E 6767812N
Orientation:	Cardinal points
Community:	O
Landform Type:	Breakaway (other)
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Sandy Loam
Soil Colour:	Pale brown (other)
Soil Depth:	Skeletal
Soil Condition:	Dry
Rock Outcrop:	Granite, 20-50% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Open tall shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Allocasuarina acutivalvis* subsp. *prinsepiana*
Mid Stratum 2:	*Acacia aulacophylla*
Lower Stratum 1:	*Mirbelia bursarioides* ms, *Petrophile pauciflora*, *Prostanthera patens*
Lower Stratum 2:	*Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla	2.5		8

Acacia ramulosa var. *ramulosa*	4		2
Allocasuarina acutivalvis subsp. *prinsepiana*	4		3
Amphipogon caricinus var. *caricinus*	0.2		0.1
Astroloma serratifolium	0.3		0.2
Borya sphaerocephala	0.1		10
**Bromus diandrus*	0.3		0.1
Calycopeplus paucifolius	2		1
Cheilanthes sieberi	0.1		0.1
Gnephosis brevifolia	0.1		0.2
Hakea recurva subsp. *recurva*	1.2		0.5
Lawrencella rosea	0.1		1
Lobelia rhytidosperma	0.1		0.1
Micromyrtus trudgenii (P3)	4		1
Mirbelia bursarioides ms	1		1
Petrophile pauciflora (P3)	0.5		0.5
Philotheca brucei subsp. *brucei*	0.5		0.1
Podolepis lessonii	0.1		2
Prostanthera patens	0.3		1
Rhodanthe manglesii	0.1		0.5
Waitzia acuminata	0.1		0.1

PHOTOS

Site Name:	KIOP 217
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 476546E 6766982N
Orientation:	Cardinal points
Community:	D
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Open woodland over open tall shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii*
Mid Stratum 1:	*Acacia anthochaera*, *Acacia latior*, *Acacia obtecta*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*
Lower Stratum 1:	*Ptilotus obovatus*, *Senna artemisioides* subsp. *filifolia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera	5		3
Acacia burkittii	2.5		2
Acacia latior	3		8

Acacia obtecta	14		6
Acacia ramulosa var. *ramulosa*	4		3
Acacia tetragonophylla	2		3
Austrostipa elegantissima	0.5		0.5
Comesperma integerrimum			0.1
Daviesia benthamii subsp. *benthamii*	1.8		0.5
Dianella revoluta	1		0.1
Eremophila clarkei	1		0.2
Eucalyptus kochii	14		25
Gilruthia osbornei	0.1		0.1
?*Gnephosis brevifolia*	0.1		0.1
Maireana georgei	0.1		0.1
Maireana planifolia	0.2		0.1
Minuria cunninghamii	0.4		0.2
Monachather paradoxus	0.2		0.1
Pimelea microcephala	1		0.1
Ptilotus exaltatus var. *exaltatus*	0.1		0.1
Ptilotus obovatus	0.3		0.5
Rhagodia drummondii	1		0.2
Sclerolaena diacantha	0.1		0.1
Sclerolaena fusiformis	0.1		0.2
Senna artemisioides subsp. *filifolia*	1.8		1
Senna sp. Austin (A. Strid 20210)	0.2		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Zygophyllum iodocarpum	0.1		0.2

PHOTOS

Site Name:	KIOP 218
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 476304E 6767180N
Orientation:	Cardinal points
Community:	Q
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red/ brown (other)
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Tall closed shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia latior*, *Acacia sibina*, *Melaleuca leiocarpa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	5		40
Acacia sibina	4		8
Amphipogon caricinus var. *caricinus*	0.3		0.5
Bellida graminea	0.1		0.1
Comesperma integerrimum			0.1
Erodium cygnorum	0.1		0.1
Hakea recurva subsp. *recurva*	0.1		0.1
Melaleuca leiocarpa	9		8
Monachather paradoxus	0.2		0.2

Myriocephalus guerinae	0.1		1
Persoonia manotricha	1.5		0.5
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Thysanotus pyramidalis	0.1		0.1

PHOTOS

Site Name:	KIOP 219
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 475722E 6766792N
Orientation:	Cardinal points
Community:	Q
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red/ brown (other)
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Tall closed shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 2:	*Eucalyptus leptopoda* subsp. *arctata*
Mid Stratum 1:	*Acacia latior*, *Acacia longispinea*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	6		60
Acacia longispinea	9		10
Aluta aspera subsp. *hesperia*	2		4
Amphipogon caricinus var. *caricinus*	0.2		0.2
Bellida graminea	0.1		10
Brachyscome ciliocarpa	0.1		2

Brunonia australis	0.2		1
Dianella revoluta	1		0.5
Erodium cygnorum	0.1		0.1
Eucalyptus leptopoda subsp. *arctata*	7		6
Gnephosis tenuissima	0.1		3
Haloragis odontocarpa	0.1		0.1
Monachather paradoxus	0.2		0.2
Myriocephalus guerinae	0.1		0.2
Ptilotus grandiflorus var. *grandiflorus*	0.1		
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1

PHOTOS

Site Name:	KIOP 220
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 475901E 6766461N
Orientation:	Cardinal points
Community:	A
Landform Type:	Other, Granite plain (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red/ brown (other)
Soil Depth:	Shallow
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
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Open woodland over tall shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 2:	*Melaleuca hamata*
Mid Stratum 1:	*Acacia burkittii*, *Acacia karina*, *Acacia ramulosa* var. *ramulosa*, *Allocasuarina acutivalvis* subsp. *prinsepiana*
Mid Stratum 2:	*Melaleuca radula*, *Mirbelia microphylla*
Lower Stratum 1:	*Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive

Acacia burkittii	5		10
Acacia karina	3		10
Acacia ramulosa var. *ramulosa*	4		3
Allocasuarina acutivalvis subsp. *prinsepiana*	4		4
Borya sphaerocephala	0.1		30
Eremophila eriocalyx	1		0.2
Erodium cygnorum	0.1		0.1
Gilruthia osbornei	0.1		0.1
Lobelia rhytidosperma	0.1		0.1
Melaleuca hamata	12		3
Melaleuca radula	2		2
Mirbelia microphylla	1		1
Podolepis canescens	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.2		1
Schoenia cassiniana	0.1		3
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1
Waitzia acuminata var. *acuminata*	0.2		2

PHOTOS

Site Name: KIOP 221

Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 475263E 6766592N
Orientation:	Cardinal points
Community:	S
Landform Type:	Other, Undulating plain (other)
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red/ brown (other)
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Open woodland over tall shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 2:	*Melaleuca hamata*
Mid Stratum 1:	*Acacia burkittii*, *Acacia sibina*
Mid Stratum 2:	*Malleostemon tuberculatus*
Lower Stratum 1:	*Amphipogon caricinus* var. *caricinus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		15
Acacia ramulosa var. *ramulosa*	4		0.2

Acacia sibina	5		6
Amphipogon caricinus var. *caricinus*	0.2		1
Borya sphaerocephala	0.1		0.1
Brachyscome ciliocarpa	0.1		0.5
Caesia micrantha	0.3		0.1
Eremophila forrestii subsp. *forrestii*	0.3		0.1
Gilruthia osbornei	0.1		0.1
?*Gnephosis brevifolia*	0.1		0.1
Lawrencella rosea	0.1		0.2
Lobelia rhytidosperma	0.1		0.1
Malleostemon tuberculatus	3		15
Melaleuca hamata	9		10
Monachather paradoxus	0.1		0.1
Myriocephalus guerinae	0.1		1
Philotheca brucei subsp. *brucei*	1.2		1
Podolepis lessonii	0.1		2
Thysanotus pyramidalis	0.1		0.1
Velleia rosea	0.1		1
Waitzia acuminata var. *acuminata*	0.1		1

PHOTOS

Site Name: KIOP 222

Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 474906E 6766832N
Orientation:	Cardinal points
Community:	S
Landform Type:	Other, Undulating plain (other)
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia burkittii*, *Acacia karina*, *Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		3
Acacia karina	2.5		5
Aluta aspera subsp. *hesperia*	2		25
Amphipogon caricinus var. *caricinus*	0.3		0.2
Bellida graminea	0.1		1

Caesia micrantha	0.1		0.1
Comesperma integerrimum			0.1
Daviesia hakeoides subsp. *subnuda*	1.5		0.2
Eremophila forrestii subsp. *forrestii*	2		10
Gilberta tenuifolia	0.1		0.2
?*Gnephosis brevifolia*	0.1		0.2
Gnephosis tenuissima	0.1		1
Grevillea pityophylla	1		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Mirbelia microphylla	0.4		0.1
Myriocephalus guerinae	0.2		1
Pimelea spiculigera var. *thesioides*	0.2		0.1
Podolepis canescens	0.1		10
Trachymene ceratocarpa	0.1		0.1
Trachymene ornata	0.1		0.1
Tricoryne ?*tenella*	0.2		0.1
Velleia rosea	0.1		0.2

PHOTOS

Site Name: KIOP 223

Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 474413E 6766357N
Orientation:	Cardinal points
Community:	F
Landform Type:	Flat
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Pale brown (other)
Soil Depth:	Shallow
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Tall open shrubland over open low woodland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia umbraculiformis*
Mid Stratum 2:	*Thryptomene costata*
Lower Stratum 1:	*Ptilotus obovatus*, *Solanum lasiophyllum*
Lower Stratum 2:	*Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia tetragonophylla	2		0.1
Acacia umbraculiformis	5		6

Austrostipa ?scabra	0.1		0.2
Borya sphaerocephala	0.1		50
**Bromus diandrus*	0.2		0.2
Calandrinia primuliflora	0.1		0.1
Goodenia havilandii	0.1		0.1
Hakea recurva subsp. *recurva*	0.3		0.1
Mirbelia bursarioides ms	1		0.2
**Pentaschistis airoides*	0.1		0.5
Pogonolepis muelleriana	0.1		2
Ptilotus obovatus	0.3		0.1
Ptilotus schwartzii	0.2		0.1
Rhodanthe chlorocephala	0.2		2
Solanum lasiophyllum	0.5		0.2
Thryptomene costata	2		5
Trachymene ornata	0.1		0.1

PHOTOS

Site Name:	KIOP 224
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/10/2010
GPS Location:	GDA94 Zone 50 474265E 6766344N
Orientation:	Cardinal points
Community:	G
Landform Type:	Other, Low rise (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Pale brown (other)
Soil Depth:	Shallow
Soil Condition:	Dry
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	Weeds
Fire:	>5
Habitat:	Tall shrubland over closed shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia burkittii*, *Acacia tetragonophylla*, *Eremophila oldfieldii* subsp. *oldfieldii*
Mid Stratum 2:	*Dodonaea inaequifolia*, *Scaevola spinescens*, *Senna* sp. Austin (A. Strid 20210)
Lower Stratum 1:	*Ptilotus obovatus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	9		30
Acacia tetragonophylla	9		10
Actinobole uliginosum	0.1		1

Austrostipa elegantissima	1.5		1
Comesperma integerrimum			0.1
Dodonaea inaequifolia	2.5		5
Enchylaena tomentosa	0.2		0.1
Eremophila oldfieldii subsp. *oldfieldii*	9		8
Erymophyllum glossanthus	0.1		0.1
Hakea recurva subsp. *recurva*	0.3		0.1
Maireana carnosa	0.1		0.1
Maireana planifolia	0.2		0.1
**Mesembryanthemum nodiflorum*	0.2		2
Mirbelia bursarioides ms	1.8		0.2
Podolepis capillaris	0.3		5
Podolepis lessonii	0.1		5
Ptilotus obovatus	0.4		1
Rhagodia drummondii	0.1		0.1
Rhodanthe manglesii	0.1		3
Santalum spicatum	4		1
Scaevola spinescens	2		2
Sclerolaena diacantha	0.1		0.1
Sclerolaena fusiformis	0.1		0.1
Senna charlesiana	2		0.5
Senna sp. Austin (A. Strid 20210)	2		5

PHOTOS

Site Name:	KIOP 226
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	07/08/2024
GPS Location:	GDA94 Zone 50 471613E 6766752N
Orientation:	Cardinal points
Community:	E
Landform Type:	Other, Upperslope of low rise (other)
Slope Class:	Gently Inclined (3°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Pale Brown (other)
Soil Depth:	Moderate
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Laterite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 15 years

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		2
Acacia exocarpoides	0.5		0.1
Acacia incognita	3		11
Acacia ramulosa var. *ramulosa*	3		3
Acacia tetragonophylla	2		2
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.15		0.2
Calotis multicaulis	0.1		0.1
Calycopeplus paucifolius	3		4
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.05		0.1
Crassula colorata var. *acuminata*	0.1		0.1

Eremophila clarkei	1.5		0.2
Eremophila latrobei subsp. *latrobei*	1		0.5
Erodium cygnorum	0.1		1
Gilruthia osbornei	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Hakea recurva subsp. *recurva*	0.75		0.2
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Maireana planifolia	0.2		0.1
Menkea australis	0.1		0.1
Panaetia lessonii	0.1		0.1
Plantago debilis	0.1		0.1
Prostanthera patens	1.2		0.3
Pterostylis setulosa	0.1		0.1
Rhodanthe laevis	0.1		0.1
Scaevola spinescens	1		0.2
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Vincetoxicum lineare			0.1
Waitzia acuminata var. *acuminata*	0.01		0.2

PHOTOS

Site Name:	KIOP 238
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 474287E 6771951N
Orientation:	Cardinal points
Community:	F
Landform Type:	Simple Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Very open Melaleuca woodland over open Acacia shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Melaleuca hamata*
Mid Stratum 1:	*Acacia burkittii*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Acacia umbraculiformis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	1.5		2
Acacia ramulosa var. *ramulosa*	3		6
Acacia tetragonophylla	1.5		2
Acacia umbraculiformis	3.5		2.5

Allocasuarina acutivalvis	1		0.4
Austrodanthonia ?caespitosa	0.1		0.1
Borya sphaerocephala	0.1		1.5
Dodonaea inaequifolia	2		0.7
Eremophila clarkei	1.5		1
Grevillea ?extorris	0.1		1.5
Hakea recurva subsp. *arida*	1		0.3
Hyalosperma glutinosum	0.1		2
Melaleuca hamata	4.5		8
Phyllangium sulcatum	0.1		0.3
Pogonolepis muelleriana	0.1		0.1
Ptilotus obovatus	0.4		0.4
Rhodanthe chlorocephala	0.1		0.1
Rhodanthe ?laevis	0.1		0.3
Schoenia cassiniana	0.1		0.3
Solanum lasiophyllum	0.3		0.4
Velleia rosea	0.1		0.1

PHOTOS

Site Name:	KIOP 239
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 474005E 6772210N
Orientation:	Cardinal points
Community:	F
Landform Type:	Simple Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing, Weeds
Fire:	>5
Habitat:	Very open Acacia shrubland over mixed low shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.2		2
Acacia tetragonophylla	2.2		4
Acacia umbraculiformis	0.3		0.2
Borya sphaerocephala	0.1		2
**Echium plantagineum*	0.1		0.1
Eremophila clarkei	0.5		0.4

Grevillea subtiliflora (P3)	1		1
Hakea recurva subsp. *arida*	0.3		0.3
Myriocephalus guerinae	0.1		1
**Pentaschistis airoides*	0.1		1.5
Ptilotus obovatus	0.3		0.6
Rhodanthe chlorocephala	0.1		1.2
Solanum lasiophyllum	0.4		1
Velleia rosea	0.1		0.1

PHOTOS

Site Name:	KIOP 240
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 473498E 6771720N
Orientation:	Cardinal points
Community:	E
Landform Type:	Simple Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Mixed shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia ramulosa* var. *ramulosa*, *Hakea recurva* subsp. *recurva*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		20
Acacia ramulosa var. *ramulosa*	2.5		20
Acacia tetragonophylla	2		1
Amyema gibberula var. *tatei*			0.1
Austrostipa elegantissima	0.1		0.1
Gilruthia osbornei	0.1		0.5

Hakea recurva subsp. *recurva*	3		30
Maireana planifolia	0.1		0.1
Mirbelia microphylla	1		0.5
Myriocephalus guerinae	0.1		
**Pentaschistis airoides*	0.1		0.3
Ptilotus obovatus	0.3		0.5
Scaevola spinescens	0.3		0.3
Schoenia cassiniana	0.1		0.1
Solanum lasiophyllum	0.4		0.3
Waitzia acuminata	0.1		0.2

PHOTOS

Site Name:	KIOP 241
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 470808E 6770002N
Orientation:	Cardinal points
Community:	G
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Very open woodland over open Acacia shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*, *Acacia ramulosa* var. *ramulosa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		2
Acacia ramulosa var. *ramulosa*	2.5		8
**Brassica tournefortii*	0.1		0.1
Calocephalus multiflorus	0.1		0.4
Cryptandra imbricata	1.5		0.4
Eremophila oppositifolia subsp. *angustifolia*	2.4		0.8

Eucalyptus loxophleba subsp. *supralaevis*	8		4
Exocarpos aphyllus	5		2
Gilruthia osbornei	0.1		0.1
Goodenia berardiana	0.1		0.1
Hakea recurva subsp. *arida*	1		0.5
**Pentaschistis airoides*	0.1		0.4
Ptilotus obovatus	0.3		0.5
Scaevola spinescens	1		0.4
Stenopetalum anfractum	0.1		0.1

PHOTOS

Site Name:	KIOP 242
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 469886E 6770118N
Orientation:	Cardinal points
Community:	Q
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Very open Allocasuarina woodland over mixed shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 2:	*Allocasuarina acutivalvis* subsp. *prinsepiana*
Mid Stratum 1:	*Acacia latior*, *Aluta aspera*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2		2
Allocasuarina acutivalvis subsp. *prinsepiana*	4		3
Aluta aspera	1.7		8
Alyxia buxifolia	2		0.7
Amphipogon caricinus	0.1		0.1
Callitris columellaris	5		1
Drummondita microphylla	0.5		0.3
Eucalyptus leptopoda subsp. *arctata*			

Gilberta tenuifolia	0.1		2
Hibbertia stenophylla	0.3		0.2
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.3
Waitzia acuminata	0.1		0.2
Wrixonia prostantheroides	0.3		0.4

PHOTOS

Site Name:	KIOP 243
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	02/11/2010
GPS Location:	GDA94 Zone 50 469550E 6770094N
Orientation:	Cardinal points
Community:	Q
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Acacia shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia latior*, *Acacia sibina*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		4
Acacia sibina	2.5		1.5
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		0.4
Amphipogon caricinus	0.1		0.1
Baeckea sp. Wanarra (M.E. Trudgen MET 5376)	2.5		3
Brunonia australis	0.1		0.3
Dianella revoluta	0.4		0.4

Drummondita microphylla	0.7		1.5
Enekbatus stowardii	0.5		0.3
Eucalyptus leptopoda subsp. *arctata*	7		2
Gilberta tenuifolia	0.1		0.2
Hibbertia stenophylla	0.3		0.2
Monachather paradoxus	0.1		0.1
Stylidium warriedarense	0.1		0.1
Waitzia acuminata	0.1		0.1
Wrixonia prostantheroides	0.2		0.3

PHOTOS

Site Name:	KIOP 248
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	03/11/2010
GPS Location:	GDA94 Zone 50 468224E 6770431N
Orientation:	Cardinal points
Community:	D
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Open Eucalypt woodland over open Acacia shrubland
Comments:	Fence line and track running through plot

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *plenissima*
Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Callitris columellaris*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		8
Acacia tetragonophylla	1.5		0.3
Austrostipa elegantissima	0.3		0.1
Austrostipa ?scabra	0.3		0.1
**Brassica tournefortii*	0.1		0.1

Bursaria occidentalis	2		1
Callitris columellaris	8		5
Cryptandra imbricata	0.4		0.4
Dianella revoluta	0.4		0.2
Eucalyptus kochii subsp. *plenissima*	8		20
Gilruthia osbornei	0.1		0.2
Hakea recurva subsp. *arida*	2		0.5
Lawrencella rosea	0.1		0.2
Minuria cunninghamii	0.1		0.1
Myriocephalus guerinae	0.1		0.2
Pimelea microcephala	0.4		0.2
Rhyncharrhena linearis			0.1

PHOTOS

Site Name:	KIOP 265
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	05/11/2010
GPS Location:	GDA94 Zone 50 470353E 6772456N
Orientation:	Cardinal points
Community:	D
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Open Eucalypt woodland over Acacia shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *plenissima*
Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*, *Acacia ramulosa* var. *ramulosa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		4
Acacia ramulosa var. *ramulosa*	2.5		8
Acacia tetragonophylla	1.5		1
Enchylaena tomentosa	0.1		0.1
Eucalyptus kochii subsp. *plenissima*	6		10
Gilruthia osbornei	0.1		0.2

Hakea recurva subsp. *arida*	2		1.8
Hemigenia botryphylla	0.3		0.3
Maireana tomentosa	0.1		0.1
Minuria cunninghamii	0.3		0.3
Monachather paradoxus	0.1		0.1
Ptilotus obovatus	0.3		0.8
Ptilotus schwartzii	0.3		0.3
Rhagodia drummondii	0.4		0.7
Waitzia acuminata	0.1		0.1

PHOTOS

Site Name:	KIOP 266
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	05/11/2010
GPS Location:	GDA94 Zone 50 471104E 6772760N
Orientation:	Cardinal points
Community:	E
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Sandy clay (other)
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
Vegetation Condition:	Northern Vegetation Condition - VG - Very Good
Disturbance:	Grazing
Fire:	>5
Habitat:	Open (patchy) Eucalypt woodland over Acacia shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 2:	*Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.7		3
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia tetragonophylla	2		0.4
Austrostipa elegantissima	0.2		0.2
Dianella revoluta	0.3		0.2
Enchylaena tomentosa	0.1		0.1

Eucalyptus loxophleba subsp. *supralaevis*	8		20
Hakea recurva subsp. *arida*	1		0.3
Maireana marginata	0.1		0.1
Ptilotus obovatus	0.3		0.5
Rhagodia drummondii	0.4		0.2
Rytidosperma ?caespitosum	0.2		0.1
Zygophyllum eremaeum	0.1		0.1

PHOTOS

Site Name:	KIOP 269
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	06/12/2010
GPS Location:	GDA94 Zone 50 468199E 6766957N
Orientation:	Cardinal points
Community:	C
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy Loam
Soil Colour:	Red
Soil Depth:	Deep
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Northern Vegetation Condition - E - Excellent
Disturbance:	None
Fire:	>5
Habitat:	Open Eucalypt woodland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *plenissima*
Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		0.8
Eucalyptus kochii subsp. *plenissima*	10		4
Melaleuca eleuterostachya	4		0.4
Melaleuca ?hamata	4		0.4
Mirbelia ramulosa	0.3		0.3
Monachather paradoxus	0.3		1

Ptilotus obovatus	0.2		0.2

PHOTOS

Site Name:	KIOP 430
Site Type:	PLOT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 494257E 6779261N
Orientation:	Cardinal points
Community:	P
Landform Type:	Mid Slope
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Depth:	Moderate
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 years
Comments:	Dead annual daisies present; too poor condition for ID

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		10
Acacia latior	1		0.2
Acacia sibina	2		3
Aluta aspera subsp. *hesperia*	1		25
Melaleuca hamata	3		1
Melaleuca nematophylla	3		1
Philotheca deserti subsp. *deserti*	0.8		0.1
Philotheca sericea	0.8		0.5
Waitzia acuminata var. *acuminata*	0.05		0.1
Xanthosia kochii	0.4		0.1

PHOTOS

Site Name:	KK01
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/09/2020
GPS Location:	GDA94 Zone 50 477291.0088E 6773246.346N
Orientation:	90/180
Community:	G
Landform Type:	Other, Mid Slope – Drainage Line (other)
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Low open woodland of Euc. salubris over very open low shrubland of mixed species over low open chenopod shrubland of mixed species

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus salubris*
Lower Stratum 1:	*Atriplex codonocarpa*, **Mesembryanthemum nodiflorum*, *Sclerolaena drummondii*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*			
Acacia tetragonophylla			
Atriplex codonocarpa	0.2		4
Atriplex semilunaris	0.1		0.2
Atriplex stipitata subsp. *stipitata*	0.5		0.1
Enchylaena tomentosa var. *tomentosa*	0.2		0.1
Eremophila oldfieldii subsp. *oldfieldii*			

Erymophyllum tenellum	0.1		0.1
Eucalyptus salubris	10		13
Maireana carnosa	0.1		0.5
Maireana georgei	0.1		0.1
Maireana tomentosa subsp. *tomentosa*	0.1		0.2
Maireana trichoptera	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		8
Pogonolepis ?muelleriana			
Ptilotus exaltatus	0.1		0.1
Rhagodia drummondii			
Roepera similis			
**Rostraria pumila*	0.1		0.1
Scaevola spinescens			
Sclerolaena drummondii	0.1		11
Senna artemisioides subsp. *filifolia*			
Sondottia connata	0.1		0.1

PHOTOS

Site Name:	KK02
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2020
GPS Location:	GDA94 Zone 50 478315.17E 6775187.8N
Orientation:	90/180
Community:	Q
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red-brown/orange (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Tall open shrubland dominated by Acacia latior and A. longispinea

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia sibina*, *Melaleuca leiocarpa*
Mid Stratum 1:	*Acacia latior*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	1.5		19
Acacia ramulosa var. *ramulosa*			
Acacia sibina	5		4
Amphipogon caricinus var. *caricinus*	0.2		0.1
Bellida graminea	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y.			

Caruso 78) (P1)			
Cheilanthes sieberi subsp. *sieberi*			
Chthonocephalus pseudevax			
Comesperma integerrimum			
Dianella revoluta var. *divaricata*	0.6		0.1
Erodium cygnorum	0.1		0.1
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia rosea			
Hakea recurva subsp. *recurva*			
Lawrencella rosea	0.1		0.1
Lobelia winfridae			
Maireana tomentosa subsp. *tomentosa*	0.3		0.1
Melaleuca leiocarpa	5		2
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.1		0.1
Panaetia lessonii			
Persoonia pentasticha (P3)			
Pogonolepis ?*muelleriana*			
Senna glutinosa subsp. *chatelainiana*			
Sida sp. dark green fruits (S. van Leeuwen 2260)			
Trachymene ornata	0.1		0.2
Vincetoxicum lineare			0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KK03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2020
GPS Location:	GDA94 Zone 50 479101.4439E 6775007.56N
Orientation:	90/180
Community:	H
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-brown/orange (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Tall open shrubland of mixed species dominated by A. latior and A. ramulosa with tall isolated trees of E. kochii subsp. plenissima

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia latior*, *Melaleuca leiocarpa*
Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Hakea recurva* subsp. *recurva*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	2		0.5
Acacia latior	3		6
Acacia obtecta	1		0.5
Acacia ramulosa var. *ramulosa*	2.5		5
Acacia tetragonophylla	2		0.5
Austrostipa elegantissima			
Austrostipa scabra subsp. *scabra*			

Comesperma integerrimum			
Enchylaena lanata	0.1		0.1
Eucalyptus kochii subsp. *amaryssia*			
Hakea recurva subsp. *recurva*	1.4		2
Maireana tomentosa subsp. *tomentosa*	0.1		0.1
Melaleuca leiocarpa	3		1
Monachather paradoxus	0.3		0.1
Olearia humilis	0.2		0.3
Olearia pimeleoides	0.5		0.1
Persoonia pentasticha (P3)	0.3		0.2
Ptilotus obovatus			
Rhagodia drummondii	0.2		0.1
Teucrium disjunctum			
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KK04
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 478002.8939E 6774672.783N
Orientation:	90/180
Community:	A
Landform Type:	Drainage Line
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red-brown/orange (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite, Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Tall shrubland of mixed species dominated by A. burkittii and Melaleuca hamata over mid-low very open shrubland over low sparse annuals

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia burkittii*, *Melaleuca hamata*
Lower Stratum 1:	*Trachymene ornata*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	5		50
Acacia tetragonophylla	0.2		0.3
Actinobole uliginosum	0.1		0.1
Arthropodium dyeri	0.2		0.3
Cephalipterum drummondii	0.1		0.1

Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
**Cuscuta epithymum*			0.1
Duperreya sericea			0.1
Erodium cygnorum	0.1		0.3
Exocarpos aphyllus			
Gonocarpus nodulosus	0.1		0.1
Goodenia mimuloides	0.1		1
Haloragis trigonocarpa	0.2		1.5
Hemigenia yalgensis	1.8		0.5
Hydrocotyle intertexta			0.1
Hydrocotyle rugulosa	0.1		0.1
Lobelia winfridae	0.1		0.1
**Lysimachia arvensis*	0.1		0.1
Melaleuca hamata	7		5
Mirbelia microphylla	0.4		0.1
Panaetia lessonii	0.1		0.5
Phyllangium sulcatum	0.1		0.1
Ptilotus obovatus			
Rhodanthe collina (P3)	0.1	10	0.1
Rhodanthe laevis	0.1		0.1
Schoenia cassiniana	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Solanum nummularium	0.1		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		2
Wurmbea flavanthera	0.1		0.1

PHOTOS

Site Name:	KK05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 479669.6858E 6773491.581N
Orientation:	90/180
Community:	P
Landform Type:	Mid Slope
Slope Class:	Gently Inclined (3°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Orange
Rock Outcrop:	Bif (other), 10-20% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm, 600-2000mm
CF Types:	BIF (other)
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Tall shrubland of mixed species dominated by Acacias over low open shrubland of mixed species over very open annuals

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*, *Acacia latior*, *Calycopeplus paucifolius*, *Melaleuca nematophylla*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		5
Acacia latior	2		15
Allocasuarina acutivalvis subsp. *prinsepiana*	3.5		1
Aluta aspera subsp. *hesperia*	1		10
Bellida graminea	0.1		0.2

Calycopeplus paucifolius	2		2
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
**Cuscuta epithymum*			0.1
Erodium cygnorum	0.1		0.1
Goodenia capillosa	0.1		0.2
Goodenia rosea			
Melaleuca nematophylla	2		1
Panaetia lessonii	0.1		0.2
Philotheca sericea	1.2		0.2
Pogonolepis ?muelleriana			
Rhodanthe collina (P3)	0.1		0.1
Trachymene ornata	0.1		2
Waitzia acuminata var. *acuminata*	0.1		0.2

PHOTOS

Site Name:	KML21
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	14/08/2020
GPS Location:	GDA94 Zone 50 474656.25E 6766192.42N
Orientation:	90/180
Community:	Q
Landform Type:	Upper Slope
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	> 10 years
Habitat:	Tall open shrubland over mid shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia latior*, *Acacia longispinea*, *Eucalyptus arctata*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*, *Malleostemon tuberculatus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.8		9
Acacia longispinea	2.7		2
Aluta aspera subsp. *hesperia*	1.8		15
Bellida graminea	0.1		0.2
Cheilanthes sieberi subsp. *sieberi*	0.1		0.6
Comesperma integerrimum			0.1
Dianella revoluta var. *divaricata*	0.5		0.1
Drosera bulbosa subsp. *bulbosa*	0.1		0.1
Erodium cygnorum	0.1		0.4
Eucalyptus arctata	3.8		2.5

Gilberta tenuifolia	0.1		0.1
Goodenia capillosa	0.1		0.1
Goodenia occidentalis	0.2		0.1
Haloragis odontocarpa	0.2		0.6
Hibbertia cockertoniana (P3)	0.9		0.1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		1
Malleostemon tuberculatus	1.4		15
Monachather paradoxus	0.1		0.1
Myriocephalus gueriniae	0.1		0.2
Persoonia hexagona	1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.5
Roebuckiella ciliocarpa	0.1		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1
Trachymene pilosa	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KML22
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/08/2020
GPS Location:	GDA94 Zone 50 475604.04E 6767112.76N
Orientation:	90/180
Community:	R
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:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	> 5 yrs
Habitat:	Tall open shrubland over mid sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia burkittii*, *Acacia incognita*, *Melaleuca hamata*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		3
Acacia incognita	4		15
Acacia ramulosa var. *ramulosa*	4		2
Acacia tetragonophylla	2		1.5
Aluta aspera subsp. *hesperia*	1.5		4
Amphipogon caricinus var. *caricinus*	0.2		0.2

Austrostipa elegantissima	0.3		0.1
Caesia sp.	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Cyanicula amplexans	0.1		0.1
Dianella revoluta var. *divaricata*	0.6		0.1
Drosera bulbosa subsp. *bulbosa*	0.1		0.1
Drosera macrantha			0.1
Eremophila eriocalyx	1		0.5
Eremophila forrestii subsp. *forrestii*			
Eremophila georgei	0.7		0.1
Erodium cygnorum	0.1		0.1
Goodenia rosea	0.1		0.5
Lawrencella rosea	0.1		0.1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.8		1
Melaleuca hamata	6		4
Mirbelia microphylla	0.5		0.2
Panaetia lessonii	0.1		0.1
Philotheca brucei subsp. *brucei*	1		0.3
Philotheca deserti subsp. *deserti*	1		0.1
Pimelea microcephala subsp. *microcephala*	0.4		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KML23
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/08/2020
GPS Location:	GDA94 Zone 50 476128.19E 6766969.73N
Orientation:	90/180
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	> 5 yrs
Habitat:	Mid open woodland over tall open shrubland over mid sparse shrubland over low sparse grassland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *amaryssia*
Mid Stratum 1:	*Acacia incognita*, *Acacia latior*, *Acacia sibina*
Mid Stratum 2:	*Acacia assimilis* subsp. *assimilis*
Lower Stratum 1:	*Philotheca deserti* subsp. *deserti*
Lower Stratum 2:	*Amphipogon caricinus* var. *caricinus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		2
Acacia exocarpoides	2		1
Acacia incognita	4		5

Acacia karinae (P3)	1.5		1
Acacia latior	4		12
Acacia ramulosa var. *ramulosa*	6		1.5
Acacia sibina	4		2
Acacia tetragonophylla	0.5		0.2
Amphipogon caricinus var. *caricinus*	0.3		3
Austrostipa elegantissima	0.4		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Dianella revoluta var. *divaricata*	0.8		0.1
Drosera macrantha			0.1
Eucalyptus kochii subsp. *amaryssia*	12		7
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.5		0.2
Persoonia hexagona	2		0.5
Philotheca deserti subsp. *deserti*	1.2		3
Rhagodia drummondii	1.2		1
Thysanotus manglesianus			0.1

PHOTOS

Site Name:	KML25
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/08/2020
GPS Location:	GDA94 Zone 50 474952.84E 6767836.07N
Orientation:	90/180
Community:	B
Landform Type:	Upper Slope
Slope Class:	Gently Inclined (3°)
Aspect:	SE
Soil Type:	Sandy Clay
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, Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	> 5 yrs
Habitat:	Mid isolated shrubs over low forbland

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Calycopeplus paucifolius*
Lower Stratum 1:	*Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii			
Acacia kochii	1.6		0.1
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Acacia umbraculiformis			
Aristida contorta	0.1		0.1

Borya sphaerocephala	0.1		60
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Calycopeplus paucifolius	1.5		1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata	0.1		0.3
Crassula colorata var. *acuminata*	0.1		0.1
Crassula exserta	0.1		0.1
Dendrophyllanthus erwinii	0.2		0.1
Dodonaea inaequifolia			
Drosera bulbosa subsp. *bulbosa*	0.1		0.1
Eremophila forrestii subsp. *forrestii*			
Erodium cygnorum	0.1		0.1
Euphorbia porcata	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia havilandii	0.2		0.1
Goodenia rosea	0.1		0.3
Isoetopsis graminifolia	0.1		0.1
Lawrencella davenportii			
Myriocephalus gueriniae	0.1		0.1
Nicotiana rotundifolia			
Panaetia lessonii	0.1		0.1
Persoonia hexagona			
Podolepis aristata subsp. *affinis*			
Pogonolepis ?muelleriana	0.1		0.1
Ptilotus eremita	0.1		0.5
Ptilotus obovatus	0.2		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.2
Santalum spicatum			
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
Solanum lasiophyllum	0.4		0.3
Stenopetalum filifolium	0.1		0.1
Tripogonella loliiformis	0.1		0.1

PHOTOS

Site Name:	KML27
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/08/2020
GPS Location:	GDA94 Zone 50 476702.02E 6766241.98N
Orientation:	90/180
Community:	Q
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None, (other) - Old track nearby
Fire:	> 10 years
Habitat:	Low open woodland over tall sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *amaryssia*
Mid Stratum 1:	*Acacia latior*, *Acacia sibina*, *Melaleuca leiocarpa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3.4		1
Acacia latior	4		4
Acacia longispinea	3		0.2
Acacia sibina	4		1.5
Allocasuarina acutivalvis subsp. *prinsepiana*			
Amphipogon caricinus var. *caricinus*	0.2		0.1
Austrostipa elegantissima			
Austrostipa scabra subsp. *scabra*	0.1		0.1

Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Daviesia hakeoides subsp. *subnuda*			
Dianella revoluta var. *divaricata*			
Eriochiton sclerolaenoides	0.1		0.1
Eucalyptus kochii subsp. *amaryssia*	9		3
Hakea recurva subsp. *recurva*	0.4		0.1
Maireana georgei			
Melaleuca hamata			
Melaleuca leiocarpa	4		2
Monachather paradoxus	0.2		0.1
Ptilotus drummondii	0.2		0.1
Ptilotus obovatus			
Rhagodia drummondii			
Senna artemisioides subsp. *x petiolaris*			
Thysanotus manglesianus			0.1

PHOTOS

Site Name:	KML36
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/08/2020
GPS Location:	GDA94 Zone 50 476472.45E 6767948.11N
Orientation:	90/180
Community:	D
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	> 10 years
Habitat:	Mid woodland of Euc grey bark 2 (27-01) over low sparse shrubland of Daisy shrub (30-09)

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *amaryssia*
Lower Stratum 1:	*Olearia humilis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		1.5
Acacia burkittii	3		0.4
Acacia colletioides	2		0.2
Acacia latior	4.5		1.2
Acacia obtecta	2.2		0.7
Acacia sibina	1.8		1.5
Austrostipa elegantissima	0.3		0.1

Erodium cygnorum	0.1		0.1
Eucalyptus kochii subsp. *amaryssia*	12		8
Maireana georgei	0.2		0.1
Melaleuca leiocarpa	1.8		0.2
Olearia humilis	0.4		2
Ptilotus obovatus	0.3		0.2
Rhagodia drummondii	0.3		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Trachymene pilosa	0.1		0.1
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	KMLL01
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/09/2020
GPS Location:	GDA94 Zone 50 477756.21E 6773297.67N
Orientation:	90/180
Community:	R
Landform Type:	Plain
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Sandy Clay
Soil Colour:	Light Brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - rabbits
Fire:	>10 years
Habitat:	Tall open shrubland over mid sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia incognita*
Mid Stratum 1:	*Calycopeplus paucifolius*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	4		10
Acacia tetragonophylla	1.5		0.2
Aluta aspera subsp. *hesperia*	0.8		0.5
Amphipogon caricinus var. *caricinus*	0.1		0.1
Bellida graminea	0.1		0.1
Calycopeplus paucifolius	3		2

Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Dianella revoluta var. *divaricata*	1		0.1
Eremophila clarkei	1.2		0.1
Erodium cygnorum	0.1		0.1
Gilruthia osbornei	0.1		0.1
Goodenia capillosa	0.1		0.1
Goodenia occidentalis	0.1		0.1
Hakea recurva subsp. *recurva*	1		0.1
Hibbertia arcuata	0.5		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Melaleuca leiocarpa	2.5		1
Melaleuca nematophylla	4		0.2
Mirbelia sp. Bursarioides (T.R. Lally 760)	1.1		0.1
Panaetia lessonii	0.1		0.1
Philotheca deserti subsp. *deserti*	0.8		0.1
Rhodanthe laevis	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
Trachymene ornata	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1
Wurmbea flavanthera	0.1		0.1

PHOTOS

Site Name:	KMLL02
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2020
GPS Location:	GDA94 Zone 50 478901.83E 6774501.53N
Orientation:	90/180
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Laterite, Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - rabbits
Fire:	>10 years
Habitat:	Tall open shrubland over mid sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia latior*
Mid Stratum 1:	*Aluta aspera* subsp. *hesperia*, *Hakea recurva* subsp. *recurva*, *Melaleuca leiocarpa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.5		15
Aluta aspera subsp. *hesperia*	1.5		2
Bellida graminea	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Comesperma integerrimum			0.1
Eremophila clarkei	1		0.1
Erodium cygnorum	0.1		0.1
Gilruthia osbornei	0.1		0.1

Hakea recurva subsp. *recurva*	2.2		2
Melaleuca leiocarpa	2		2
Philotheca deserti subsp. *deserti*	0.7		0.1
Prostanthera althoferi subsp. *althoferi*	0.4		0.1
Ptilotus obovatus	0.2		0.1
Roebuckiella ciliocarpa	0.1		0.1
Senna artemisioides subsp. *filifolia*	1.5		0.5
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KMLL03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2020
GPS Location:	GDA94 Zone 50 478835.03E 6774705.71N
Orientation:	90/180
Community:	G
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Laterite, Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Mid open woodland over tall sparse shrubland over low sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Acacia obtecta*
Mid Stratum 2:	*Acacia acuaria*, *Senna artemisioides* subsp. *filifolia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.1		2
Acacia obtecta	3		2
Acacia tetragonophylla	1		1
Austrostipa elegantissima	0.2		0.1
Austrostipa nitida	0.1		0.1

Calandrinia eremaea			
Cephalipterum drummondii	0.1		0.1
Comesperma integerrimum			0.1
Enchylaena tomentosa var. *tomentosa*	0.2		0.1
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Gilruthia osbornei	0.1		0.1
Gunniopsis rubra		10	
Hyalosperma glutinosum subsp. *venustum*			
Maireana trichoptera	0.1		0.1
Ptilotus eremita			
Ptilotus exaltatus	0.1		0.1
Ptilotus obovatus	0.2		0.1
Rhagodia drummondii	0.2		0.1
Roepera ovata	0.1		0.1
Sclerolaena fusiformis	0.1		0.1
Sclerolaena gardneri	0.1		0.1
Senna artemisioides subsp. *filifolia*	1		3
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1

PHOTOS

Site Name: KMLL04

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 479675.13E 6774201.34N
Orientation:	90/180
Community:	D
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Tall sparse shrubland over mid sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia burkittii*, *Acacia latior*, *Acacia obtecta*

Mid Stratum 1: *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		4
Acacia latior	4		2
Acacia obtecta	4		2
Acacia tetragonophylla	2		2
Austrostipa elegantissima	0.1		0.1
Austrostipa scabra subsp. *scabra*	0.1		0.1
Cephalipterum drummondii			
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1

Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
Erodium cygnorum	0.1		0.1
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia berardiana	0.1		0.1
Hakea recurva subsp. *recurva*	2		2
Hyalosperma glutinosum subsp. *venustum*			
Maireana trichoptera	0.1		0.1
Panaetia lessonii	0.1		0.1
Ptilotus gaudichaudii	0.1		0.1
Ptilotus obovatus	0.1		0.1
Rhagodia drummondii	0.2		0.1
Senna artemisioides subsp. *x petiolaris*	1		0.5
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
Solanum lasiophyllum			
Solanum nummularium			
Stenopetalum filifolium	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.1
Vincetoxicum lineare			0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	KMLL05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 479352.94E 6774099.28N
Orientation:	90/180
Community:	G
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Light Clay
Soil Colour:	Orange-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Mid woodland over low open woodland over tall open shrubland over mid open shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Upper Stratum 2:	*Eremophila oldfieldii* subsp. *oldfieldii*, *Exocarpos aphyllus*
Mid Stratum 1:	*Acacia tetragonophylla*, *Senna artemisioides* subsp. *filifolia*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.1		1
Acacia tetragonophylla	1.1		2
Austrostipa elegantissima	0.2		0.1
Cephalipterum drummondii	0.1		0.1
Comesperma integerrimum			0.1

Enchylaena tomentosa var. *tomentosa*	0.3		0.2
Eremophila clarkei	1.3		0.1
Eremophila oldfieldii subsp. *oldfieldii*	5		4
Eremophila oppositifolia subsp. *angustifolia*	4		1
Eucalyptus loxophleba subsp. *supralaevis*	14		20
Exocarpos aphyllus	6		5
Gilruthia osbornei	0.1		0.1
Hakea recurva subsp. *recurva*	0.2		0.1
Maireana carnosa	0.1		0.1
Maireana georgei	0.1		0.1
Maireana sp.	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		0.1
Ptilotus exaltatus	0.1		0.1
Ptilotus obovatus	0.2		0.1
Rhagodia drummondii	1.1		1
Rhodanthe stricta	0.1		0.1
Sclerolaena fusiformis	0.1		0.1
Sclerolaena gardneri	0.8		0.2
Senna artemisioides subsp. *filifolia*	1.2		2
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1

PHOTOS

Site Name:	KMLL06
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 478052.76E 6769523.12N
Orientation:	90/180
Community:	G
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay
Soil Colour:	Orange-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Low open woodland over low sparse shrubland (but quadrat surrounded by tall open shrubland)

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Lower Stratum 1:	*Rhagodia drummondii*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.2		0.2
Acacia tetragonophylla			
Arthropodium dyeri			
Austrostipa elegantissima	0.2		0.1
Cephalipterum drummondii			
Comesperma integerrimum			
Eucalyptus loxophleba subsp. *supralaevis*	12		9

Exocarpos aphyllus	0.2		0.1
Feldstonia nitens			
Gnephosis brevifolia			
Maireana trichoptera	0.1		0.1
**Medicago minima*			
**Mesembryanthemum nodiflorum*			
Pogonolepis muelleriana			
Ptilotus gaudichaudii			
Ptilotus obovatus			
Rhagodia drummondii	0.3		2
Santalum acuminatum			
Sclerolaena fusiformis	0.1		0.1
Sclerolaena gardneri	0.1		0.1
Senna artemisioides subsp. *filifolia*	0.3		0.2
Solanum lasiophyllum			
Solanum nummularium			
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	KMLL07
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2020
GPS Location:	GDA94 Zone 50 478921.68E 6768384.89N
Orientation:	90/180
Community:	G
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Sandy Clay
Soil Colour:	Orange-brown (other)
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone, Quartz
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	None
Fire:	>10 years
Habitat:	Low open woodland over tall sparse shrubland

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Exocarpos aphyllus*
Mid Stratum 2:	*Acacia colletioides*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii			
Acacia colletioides	1.2		2
Acacia obtecta	1.5		1
Austrostipa elegantissima	0.3		0.2
Austrostipa nitida			
Cephalipterum drummondii	0.1		0.1

Eremophila pantonii	1		0.1
Erodium cygnorum			
Eucalyptus loxophleba subsp. *supralaevis*	9		6
Exocarpos aphyllus	3		4
Maireana carnosa	0.1		0.1
Maireana georgei	0.2		0.1
**Mesembryanthemum nodiflorum*	0.1		0.1
Ptilotus eremita			
Ptilotus obovatus	0.1		0.1
Rhagodia drummondii	0.8		0.2
Sclerolaena fusiformis	0.1		0.1
Sclerolaena gardneri	0.1		0.1
Senna artemisioides subsp. *filifolia*	0.3		0.1
Senna artemisioides subsp. *x petiolaris*			
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEC01
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/08/2024
GPS Location:	GDA2020 Zone 50 471710.26E 6766579.8N
Community:	P
Landform Type:	Upper Slope
Slope Class:	Gently Inclined (3°)
Aspect:	SSW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Laterite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years
Comments:	Lots of macropod poo. Calandrinias prresent which are not in flower or identifiable yet (could not be collected)

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	471710	6766580	
Corner 2	471728	6766580	
Corner 3	471728	6766561	
Corner 4	471708	6766558	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		10
Acacia ramulosa var. *ramulosa*	2		1
Aluta aspera subsp. *hesperia*	1.5		20
Bellida graminea	0.1		0.1

Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.3		0.1
Caladenia hirta subsp. *rosea*	0.1		0.1
Calotis multicaulis	0.1		0.2
Calycopeplus paucifolius	2		1.5
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Chthonocephalus pseudevax	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)	0.3		0.1
Erodium cygnorum	0.1		2
Gilruthia osbornei	0.1		0.1
Goodenia cycnopotamica	0.1		1
Lawrencella davenportii	0.2		0.1
Lawrencella rosea			
Melaleuca nematophylla	3		0.5
Myriocephalus gueriniae	0.1		2
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe laevis	0.1		0.3
Solanum cleistogamum	0.2		0.1
Trachymene cyanopetala	0.1		0.1
Wurmbea tenella	0.1		0.1

PHOTOS

Site Name: MLEC02

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/08/2024
GPS Location:	GDA2020 Zone 50 472376.83E 6767599.2N
Community:	F
Landform Type:	Upper Slope
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Grazing, Weeds
Fire:	> 20 Years
Comments:	Dead branches and leaf litter. Weedy(?) grasses (juvenile), evidence of surface water flow

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472377	6767599	
Corner 2	472396	6767600	
Corner 3	472397	6767583	
Corner 4	472378	6767580	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Abutilon cryptopetalum	0.2		0.2
Acacia kochii	1.3		0.1
Acacia ramulosa var. *ramulosa*	1.7		1

Acacia tetragonophylla	2.5		4
Acacia umbraculiformis	2		0.1
Austrostipa elegantissima	0.3		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.01		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta ?planiflora*			0.1
Erodium cygnorum	0.1		0.5
Euphorbia porcata	0.1		0.1
**Gazania linearis*	0.1		0.1
Goodenia cycnopotamica	0.1		0.5
Hakea recurva subsp. *recurva*	1.5		0.2
Lemooria burkittii	0.1		0.1
Myriocephalus gueriniae	0.1		3
Paspalidium clementii	0.2		0.1
Ptilotus obovatus	0.4		5
Rhodanthe chlorocephala subsp. *splendida*	0.4		7
Rhodanthe pygmaea	0.05		0.1
**Rumex vesicarius*	0.4		0.2
Senna sp. Austin (A. Strid 20210)			
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.4		0.1
**Sisymbrium erysimoides*	0.1		0.1
Solanum lasiophyllum	0.5		0.2
**Sonchus oleraceus*	0.1		0.1
Vincetoxicum lineare			

PHOTOS

Site Name:	MLEC03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 475272.56353978E 6773514.82505694N
Community:	D
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	475273	6773515	
Corner 2	475295	6773518	
Corner 3	475294	6773498	
Corner 4	475273	6773497	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		1
Acacia acuminata	2		2
Acacia exocarpoides	2.2		0.4
Acacia ramulosa var. *ramulosa*	1.7		0.5
Acacia tetragonophylla	1.5		0.3
Alyxia buxifolia	1.7		0.8

Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.3		0.1
Calandrinia eremaea s. lat. (non-papillate variant)	0.1		0.1
Callitris columellaris	5		4
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
Dianella revoluta var. *divaricata*	0.3		0.1
Dodonaea inaequifolia	1.2		0.2
Enchylaena lanata	0.1		0.1
Eremophila clarkei	1.5		0.5
Eremophila oppositifolia subsp. *angustifolia*	3		1.2
Erodium cygnorum	0.1		0.1
Eucalyptus kochii subsp. *borealis*	10		7
Eucalyptus loxophleba subsp. *supralaevis*	8		2
Gilruthia osbornei	0.1		5
Goodenia cycnopotamica	0.1		0.1
Gunniopsis rubra	0.1		0.5
Hakea recurva subsp. *recurva*	1		0.1
Hydrocotyle intertexta	0.1		0.1
Maireana georgei	0.1		0.1
Melaleuca leiocarpa	2.2		0.8
Menkea australis	0.1		3
Olearia humilis	0.5		0.5
Olearia pimeleoides	0.3		0.1
Pimelea microcephala subsp. *microcephala*	1		0.1
Ptilotus obovatus	0.5		0.5
Rhagodia drummondii	0.3		0.2
Scaevola spinescens	1.2		0.5
Senna artemisioides subsp. *filifolia*	1		0.1
Senna charlesiana	0.4		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
**Sonchus oleraceus*	0.1		0.1

PHOTOS

Site Name: MLEC04

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 475122.16E 6773549.47N
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	WNW
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years
Comments:	Old plant deaths, likely successive droughts, logs etc.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	475122	6773549	
Corner 2	475142	6773555	
Corner 3	475143	6773535	
Corner 4	475124	6773532	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		2
Acacia exocarpoides	2		0.1
Acacia latior	2		6
Allocasuarina acutivalvis subsp. *prinsepiana*	4.5		8
Aluta aspera subsp. *hesperia*	1.3		8
Amphipogon caricinus var. *caricinus*	0.2		0.1

Austrostipa elegantissima	0.1		0.1
Bellida graminea	0.1		0.5
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Cheiranthera simplicifolia	0.8		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Eremophila clarkei	1.6		1
Erodium cygnorum	0.1		0.2
Eucalyptus kochii subsp. *borealis*			
Gilruthia osbornei	0.1		0.1
Goodenia cycnopotamica	0.1		0.2
Hibbertia arcuata	0.7		3
Hydrocotyle intertexta	0.1		0.1
Melaleuca leiocarpa	7.5		5
Olearia humilis	0.3		0.1
Philotheca deserti subsp. *deserti*	1.1		12
Ptilotus exaltatus	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Thysanotus ?*manglesianus*			0.1

PHOTOS

Site Name:	MLEC05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 474591.35182073E 6772415.33761625N
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	474591	6772415	
Corner 2	474612	6772418	
Corner 3	474613	6772399	
Corner 4	474594	6772395	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia latior*
Mid Stratum 1:	*Acacia latior*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia latior	4.2		5

Acacia sibina	2.5		3
Aluta aspera subsp. *hesperia*	1.2		0.2
Amphipogon caricinus var. *caricinus*	0.2		0.1
Bellida graminea	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.2		0.1
Callitris columellaris			
Calotis multicaulis			
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Cryptandra imbricata			
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Enchylaena lanata	0.2		0.1
Eremophila forrestii subsp. *forrestii*			
Erodium cygnorum	0.1		5
Gilruthia osbornei	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Hakea minyma	5.5		5
Hibbertia arcuata			
Lawrencella rosea	0.1		0.1
Melaleuca hamata	6		6
Myriocephalus gueriniae	0.1		5
Olearia humilis			
Philotheca deserti subsp. *deserti*	1.4		0.5
Pimelea microcephala subsp. *microcephala*	0.2		0.1
Ptilotus obovatus	0.4		0.2
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Solanum lasiophyllum	0.4		0.1

PHOTOS

Site Name:	MLEC06
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA94 Zone 50 483747.08E 6772415.64N
Orientation:	NW
Community:	H
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	>20 years
Habitat:	Open woodland (~15%) over sparse shrubland (> 2m, >3%), over open herb field

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA2020	483747	6772416	
Corner 2	GDA2020	483766	6772411	
Corner 3	GDA2020	483764	6772391	
Corner 4	GDA2020	483744	6772391	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	2		0.8
Acacia latior	1.6		0.8
Acacia obtecta			
Acacia tetragonophylla	1.6		0.5

Austrostipa elegantissima	0.5		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.3		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		2
Crassula colorata var. *acuminata*	0.05		0.1
Daviesia benthamii	1.6		0.4
Erodium cygnorum	0.1		0.5
Eucalyptus clelandiorum	8		1
Eucalyptus salubris	9		9
Gilruthia osbornei	0.1		3
Goodenia berardiana	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Lawrencella davenportii	0.1		0.1
Maireana georgei	0.5		0.4
Menkea australis	0.1		0.4
Olearia pimeleoides	1		0.2
Phlegmatospermum drummondii	0.1		0.1
Plantago debilis	0.1		0.1
Poaceae sp.	0.1		0.4
Ptilotus exaltatus	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.4		0.4
Rhagodia drummondii	1		0.8
?*Roebuckiella cheilocarpa*	0.1		0.1
Roepera lobulata	0.1		0.1
Sclerolaena fusiformis	0.1		0.2
Senna charlesiana	0.2		0.1
Solanum nummularium	0.4		0.1
**Sonchus oleraceus*	0.1		0.1

PHOTOS

Site Name:	MLEC07
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA94 Zone 50 483737.84E 6772140.86N
Orientation:	NW
Community:	D
Landform Type:	Flat
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
CF Types:	Ironstone, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	>20 years
Habitat:	Tall shrubland (3m+) over tall shrubland (3m+) over sparse low shrubland (1m+) over herbs

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA2020	483738	6772141	
Corner 2	GDA2020	483755	6772141	
Corner 3	GDA2020	483753	6772119	
Corner 4	GDA2020	483734	6772120	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Abutilon cryptopetalum	0.4		0.1
Acacia acuminata	3.2		1
Acacia erinacea			

Acacia exocarpoides	3		2
Acacia latior	4		20
Acacia tetragonophylla	3.5		15
?*Arthropodium dyeri*	0.2		0.1
Austrostipa elegantissima	1		0.2
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.15		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		0.2
Cheilanthes sieberi subsp. *sieberi*	0.1		2
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
Daucus glochidiatus			0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila oldfieldii subsp. *oldfieldii*			
Erodium cygnorum	0.1		0.5
Goodenia cycnopotamica	0.1		0.5
Grevillea hakeoides subsp. *stenophylla*	1.7		0.2
Hakea recurva subsp. *recurva*			
Lawrencella davenportii	0.1		1
Lawrencella rosea	0.1		1
Maireana sp.	0.1		0.1
Melaleuca hamata	2.5		0.4
Millotia myosotidifolia			0.1
Parietaria cardiostegia	0.15		1
Poaceae sp.	0.4		0.2
Ptilotus obovatus	0.4		0.1
Rhodanthe manglesii	0.1		0.2
Sida sp. dark green fruits (S. van Leeuwen 2260)	1		0.2
Solanum cleistogamum	0.4		0.1
**Sonchus oleraceus*	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	MLEC08
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 473164.037302326E 6771733.31840071N
Community:	E
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SSE
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	473164	6771733	
Corner 2	473182	6771731	
Corner 3	473180	6771712	
Corner 4	473164	6771715	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		25
Acacia exocarpoides	1.5		1
Acacia karinae (P3)			
Acacia ramulosa var. *ramulosa*	3.5		9
Acacia tetragonophylla	3		1
Allocasuarina acutivalvis subsp. *prinsepiana*	1		
Austrostipa elegantissima	0.3		1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.1		0.1

Caladenia hirta subsp. *rosea*	0.1		0.1
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		0.1
Calotis multicaulis	0.1		3
Cephalipterum drummondii	0.1		1
Cheilanthes sieberi subsp. *sieberi*	0.1		5
Comesperma integerrimum			0.3
Cryptandra imbricata	1.3		0.2
Eremophila clarkei	2.5		3
Erodium cygnorum	0.1		5
Grevillea pityophylla	0.7		0.4
Hakea recurva subsp. *recurva*	2.5		5
Maireana planifolia	0.2		0.1
Myriocephalus gueriniae	0.1		2.5
Parietaria cardiostegia	0.1		0.3
Poaceae sp.	0.1		0.1
Pterostylis setulosa	0.1		0.1
Ptilotus obovatus	0.4		1
Rhodanthe laevis	0.1		0.2
Rhodanthe manglesii	0.1		0.1
Senna charlesiana	2.2		0.3
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.2
Solanum lasiophyllum	0.3		0.5
**Sonchus oleraceus*	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	MLEC09
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 471803.03E 6773381.57N
Community:	A
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SSW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	471803	6773382	
Corner 2	471822	6773382	
Corner 3	471822	6773363	
Corner 4	471802	6773362	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.1		1.5
Acacia tetragonophylla	2.4		1
Actinobole ?*uliginosum*	0.1		0.2
Amphipogon caricinus var. *caricinus*			
Austrostipa elegantissima	0.1		0.2
Borya sphaerocephala	0.1		0.5

Caladenia hirta subsp. *rosea*	0.1		0.1
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		0.1
Calotis hispidula	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.5
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta* ?*planiflora*			0.1
Cyanicula amplexans	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila eriocalyx	0.8		0.1
Erodium cygnorum	0.1		0.5
Eucalyptus kochii subsp. *borealis*			
Goodenia capillosa	0.1		5
Grevillea pityophylla	1		4
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.6		6
Lawrencella davenportii	0.1		0.1
Lomandra marginata			
Malleostemon tuberculatus	2.1		4
Melaleuca hamata	2.4		0.4
Myriocephalus gueriniae	0.1		1
?*Nicotiana* sp.	0.1		0.1
Olearia humilis	0.3		0.1
Pheladenia deformis	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.2
Rhodanthe laevis	0.1		0.1
Salsola australis	0.1		0.1
Scaevola spinescens	1		0.2
Schoenia cassiniana	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
Solanum lasiophyllum	0.7		0.4
Styphelia serratifolia s. lat.			
Trachymene cyanopetala	0.1		0.2

PHOTOS

Site Name:	MLEC11
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 468223.09E 6771550.16N
Community:	D
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years
Comments:	Lots of other small unidentifiable herbs present; too young to ID

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	468223	6771550	
Corner 2	468241	6771551	
Corner 3	468243	6771533	
Corner 4	468225	6771531	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.2		1
Acacia ramulosa var. *ramulosa*	4		10
Austrostipa elegantissima	0.1		0.1
Bellida graminea	0.1		0.2
Callitris columellaris	4.5		1
Calotis hispidula	0.1		0.5
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			

Erodium cygnorum	0.1		5
Eucalyptus kochii subsp. *borealis*	5.5		3
Gilruthia osbornei	0.1		3
Hakea recurva subsp. *recurva*	3		0.5
Lawrencella rosea	0.1		0.2
Maireana planifolia	0.1		0.1
Melaleuca leiocarpa			
Myriocephalus gueriniae	0.1		0.2
Olearia humilis	0.5		2
Philotheca deserti subsp. *deserti*	0.8		0.2
Pterostylis setulosa	0.1		0.1
Ptilotus obovatus	0.4		0.5
Scaevola spinescens			
Senna artemisioides subsp. *filifolia*	1.6		0.2
Trachymene cyanopetala	0.1		0.3

PHOTOS

Site Name:	MLEC13
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 465229.99E 6771644.35N
Community:	T
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Sandy Loam
Soil Colour:	Orange
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years
Comments:	Near road and power line, pit nearby. Rabbit poo. Lots of unidentifiable small seedlings

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	465230	6771644	
Corner 2	465249	6771644	
Corner 3	465249	6771626	
Corner 4	465230	6771624	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.5		25
Allocasuarina acutivalvis subsp. *prinsepiana*			
Amphipogon caricinus var. *caricinus*	0.15		1.5
Bellida graminea	0.1		4
Callitris columellaris			

Cheilanthes sieberi subsp. *sieberi*	0.1		8
Cyanicula amplexans	0.1		0.1
Dianella revoluta var. *divaricata*			
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	0.4		2.5
Ericksonella saccharata	0.1		0.1
Erodium cygnorum	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Hakea invaginata	2.7		1
Hibbertia stenophylla	0.3		1
Hyalosperma glutinosum subsp. *venustum*			
Lawrencella rosea			
Melaleuca nematophylla			
Myriocephalus gueriniae	0.1		0.1
Philotheca glabra	1.7		4
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe laevis	0.1		1
Thysanotus ?manglesianus			0.1
Trachymene cyanopetala	0.1		1
Tricoryne soullierae (P3)	0.1		0.1

PHOTOS

Site Name:	MLEC14
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 464604.75E 6771648.56N
Community:	T
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SSW
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10 Years
Comments:	Next to power line. Evidence of burn on old dead trunks

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	464605	6771649	
Corner 2	464606	6771630	
Corner 3	464588	6771629	
Corner 4	464586	6771647	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1		0.3
Acacia latior	0.3		0.2
Acacia sibina	1.4		3
Allocasuarina acutivalvis subsp. *prinsepiana*	1.7		0.2
Borya sphaerocephala	0.1		1
Cassytha nodiflora			0.1
Cryptandra apetala var. *apetala*			
Drosera sp. Branched styles (S.C. Coffey 193)			0.1

Ecdeiocolea monostachya	0.6		8
Eucalyptus ?kochii			
Grevillea granulosa (P3)	1		0.5
Hakea invaginata	1		1
Hibbertia stenophylla	0.4		1
Lawrencella davenportii	0.1		0.1
Melaleuca hamata	1.7		10
Phebalium lepidotum x tuberculosum			
Rhodanthe laevis	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Tricoryne tuberosa	0.01		0.1

PHOTOS

Site Name:	MLEC15
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 463922.57E 6771765.86N
Community:	T
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10 Years
Comments:	Evidence of previous burns - scorch marks

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	463923	6771766	
Corner 2	463940	6771767	
Corner 3	463941	6771746	
Corner 4	463920	6771746	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	1.6		6
Acacia longispinea	1.6		1
Acacia sibina	2.5		9
Anthotroche pannosa			
Chthonocephalus pseudevax	0.05		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	0.8		6
Grevillea juncifolia subsp. *temulenta*	1.5		1

Hibbertia stenophylla	0.4		0.2
Jacksonia acicularis			
Malleostemon roseus	0.3		4
Melaleuca cordata	0.8		5
Philotheca glabra	0.4		2
Scaevola spinescens	0.4		1
Trachymene cyanopetala	0.05		0.2
Tricoryne tuberosa	0.05		0.1

PHOTOS

Site Name:	MLEC16
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 463027.92E 6771868.8N
Community:	R
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years
Comments:	Lots of dead wood

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	463028	6771869	
Corner 2	463043	6771871	
Corner 3	463048	6771852	
Corner 4	463028	6771849	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.4		0.1
Acacia duriuscula	2		0.5
Acacia sibina			
Allocasuarina acutivalvis subsp. *prinsepiana*	4		5
Amphipogon caricinus var. *caricinus*	0.2		2

Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.4
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.15		0.1
Caladenia petrensis	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Cheiranthera simplicifolia	0.4		0.1
Chthonocephalus pseudevax	0.01		0.1
Comesperma integerrimum			0.1
Dianella revoluta var. *divaricata*	0.3		0.1
Erodium cygnorum	0.1		0.1
Goodenia cycnopotamica	0.1		0.2
Hyalosperma glutinosum subsp. *venustum*	0.1		0.2
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.7		0.2
Melaleuca nematophylla	3.5		2
Myriocephalus gueriniae	0.1		1
Parietaria cardiostegia	0.1		0.1
Pheladenia deformis	0.1		0.1
Philotheca glabra	2		20
Rhodanthe laevis	0.1		0.1
Ricinocarpos velutinus			
Trachymene cyanopetala	0.1		0.2
Tricoryne tuberosa	0.1		0.1

PHOTOS

Site Name: MLEC17

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 462359.817243489E 6771945.21097936N
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SE
Soil Type:	Clay Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	462360	6771945	
Corner 2	462378	6771944	
Corner 3	462378	6771927	
Corner 4	462360	6771926	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		25
Acacia sibina	3		1
Amphipogon caricinus var. *caricinus*	0.3		1
Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.5
Comesperma integerrimum			0.1
Cryptandra apetala var. *apetala*	0.5		5
Erodium cygnorum	0.1		0.2

Hibbertia stenophylla	0.5		1.5
Melaleuca hamata	3		25
Myriocephalus gueriniae	0.1		5
Rhodanthe laevis	0.1		0.5
Stylidium warriedarense	0.1		0.1

PHOTOS

Site Name:	MLEC18
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	12/08/2024
GPS Location:	GDA2020 Zone 50 463621.887649952E 6770395.88203596N
Community:	T
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	463622	6770396	
Corner 2	463638	6770393	
Corner 3	463638	6770374	
Corner 4	463620	6770374	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		3
Acacia ramulosa var. *ramulosa*	3		6
Acacia sibina	3		8
Amphipogon caricinus var. *caricinus*	0.2		1
Austrostipa elegantissima	0.1		0.1
Bellida graminea	0.1		1.5
Borya sphaerocephala	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.3		0.1

Callitris columellaris			
Cheilanthes sieberi subsp. *sieberi*	0.1		1.5
Chthonocephalus pseudevax	0.01		0.1
Comesperma integerrimum			0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	0.8		3.5
Erodium cygnorum	0.1		0.5
Goodenia capillosa	0.1		0.1
Grevillea granulosa (P3)			
Lawrencella davenportii			
Melaleuca hamata	2		0.5
Myriocephalus gueriniae	0.1		3
Philotheca deserti subsp. *deserti*	0.8		1.5
Rhodanthe laevis	0.1		0.1
Trachymene cyanopetala	0.1		0.1

PHOTOS

Site Name:	MLEC19
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	12/08/2024
GPS Location:	GDA2020 Zone 50 462913.305660509E 6770366.19153103N
Community:	T
Landform Type:	Simple Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Sandy Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	462913	6770366	
Corner 2	462931	6770367	
Corner 3	462932	6770350	
Corner 4	462914	6770349	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		0.5
Acacia sibina	2		0.2
Actinobole ?*uliginosum*	0.01		0.1
Amphipogon caricinus var. *caricinus*	0.2		0.2
Austrostipa elegantissima	0.1		0.1
Bellida graminea	0.1		0.5
Borya sphaerocephala	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chrysitrix distigmatosa	0.4		0.2

Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	1		17
Erodium cygnorum	0.1		0.1
Grevillea granulosa (P3)	0.4		0.2
Hibbertia stenophylla	0.4		0.1
Hysterobaeckea setifera subsp. *setifera*	2.5		0.5
Malleostemon roseus	0.6		3
Melaleuca hamata	3		5
Myriocephalus gueriniae	0.1		0.2
Rhodanthe laevis	0.1		0.1
Stylidium warriedarense	0.1		0.1
Tricoryne tuberosa	0.1		0.1

PHOTOS

Site Name:	MLED01
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/09/2024
GPS Location:	GDA94 Zone 50 394479.17E 6758243.33N
Community:	N
Landform Type:	Closed Depression
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Clayey Sand
Soil Colour:	Grey-Brown (other)
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Low sparse chenopod shrubland
Comments:	Potentially historic clearing

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA2020	394479	6758243	
Corner 2	GDA2020	394467	6758231	
Corner 3	GDA2020	394479	6758216	
Corner 4	GDA2020	394495	6758230	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex holocarpa	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cotula cotuloides	0.1		0.1
Crassula exserta	0.1		0.1

Didymanthus roei	0.3		0.2
Frankenia pauciflora	0.3		0.1
Gunniopsis septifraga	0.1		1
**Hordeum leporinum*	0.3		0.1
**Juncus bufonius*	0.1		0.1
**Limonium lobatum*	0.3		0.1
**Lolium perenne*	0.4		0.1
Maireana eriosphaera	0.4		0.1
**Mesembryanthemum nodiflorum*	0.1		0.5
**Parapholis incurva*	0.2		2
Pogonolepis stricta	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Senecio lacustrinus	0.4		0.5
Siemssenia capillaris	0.1		0.1
**Sonchus oleraceus*	0.3		0.1
Tecticornia indica subsp. *bidens*	0.4		1
Tecticornia sp. 'Karara 2' (Potentially undescribed)	0.3		5
Tecticornia syncarpa	0.4		0.2
Triglochin mucronata	0.1		0.1

PHOTOS

Site Name:	MLED02
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	16/09/2024
GPS Location:	GDA94 Zone 50 394898.37E 6758645.49N
Community:	N
Landform Type:	Closed Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Grey-Brown (other)
Soil Condition:	Moist - Parts water logged
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Low sparse chenopod shrubland
Comments:	Historical disturbance

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA2020	394898	6758645	
Corner 2	GDA2020	394910	6758633	
Corner 3	GDA2020	394895	6758619	
Corner 4	GDA2020	394882	6758631	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Arctotheca calendula*	0.1		0.1
Brachyscome iberidifolia	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia sp. Needilup (K.R. Newbey 4892)	0.1		0.1

Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Centrolepis polygyna	0.1		0.1
Cotula cotuloides	0.1		0.3
Crassula exserta	0.1		0.1
Didymanthus roei	0.3		0.1
Eragrostis dielsii	0.1		0.1
Frankenia pauciflora	0.2		0.5
Glossostigma diandrum	0.1		0.1
Gnephosis angianthoides	0.1		0.1
**Hypochaeris glabra*	0.1		
Isolepis congrua	0.1		0.1
**Juncus bufonius*	0.1		0.2
**Lolium perenne*	0.4		0.1
Schoenus humilis	0.1		0.1
Schoenus sculptus	0.1		0.1
Senecio lacustrinus	0.4		0.1
Siemssenia capillaris	0.1		0.1
**Spergularia rubra*	0.1		0.1
Tecticornia indica subsp. *bidens*	0.5		2
Tecticornia sp. 'Karara 1' (Potentially undescribed)	0.4		3
Triglochin mucronata	0.1		1
Triglochin sp.	0.1		0.1
**Vulpia myuros* forma *myuros*	0.2		0.1

PHOTOS

Site Name:	MLED03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 394988.9E 6758772.54N
Community:	I
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Fire:	>10 years
Comments:	Historical disturbance

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	GDA2020	394989	6758773	
Corner 2	GDA2020	394997	6758756	
Corner 3	GDA2020	394980	6758748	
Corner 4	GDA2020	394970	6758765	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1		0.5
Acanthocarpus canaliculatus	0.2		0.1
Actinobole uliginosum	0.1		0.1
**Arctotheca calendula*	0.2		0.2
Aristida contorta	0.2		0.2
Arthropodium dyeri	0.5		0.1
Austrostipa elegantissima	0.8		0.5
Austrostipa scabra	0.4		0.1

Blennospora phlegmatocarpa	0.1		0.1
Brachyscome iberidifolia	0.1		0.1
**Bromus rubens*	0.1		0.1
Calandrinia baccata	0.1		0.1
Calandrinia disperma	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia sp.	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis multicaulis	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*	0.1		0.1
Daucus glochidiatus	0.3		0.1
Dianella revoluta var. *divaricata*	0.5		0.1
Drosera glanduligera	0.1		0.1
Eragrostis dielsii	0.1		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus horistes	8		3
Eucalyptus loxophleba subsp. *supralaevis*	3		0.5
Gnephosis angianthoides	0.1		0.1
Gnephosis macrocephala	0.2		0.1
Gnephosis tenuissima	0.1		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia berardiana	0.1		0.2
Goodenia occidentalis	0.1		0.1
Goodenia rosea	0.1		3
Gunniopsis quadrifida	0.5		0.2
Hyalosperma glutinosum subsp. *glutinosum*	0.1		0.1
**Hypochaeris glabra*	0.3		0.2
Lawrencella davenportii	0.3		1
**Leontodon rhagadioloides*	0.1		0.1
Lepidosperma costale	0.5		0.1
Levenhookia leptantha	0.1		0.1
**Lolium perenne*	0.3		0.1
Lomandra effusa	0.3		0.3
Maireana carnosa	0.2		0.1

**Medicago minima*	0.1		0.1
Melaleuca stereophloia	2.5		1
**Mesembryanthemum nodiflorum*	0.3		0.2
Monachather paradoxus	0.3		0.2
**Monoculus monstrosus*	0.3		0.1
Nicotiana karara	0.3		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
**Petrorhagia dubia*	0.2		0.1
Plantago debilis	0.2		0.2
Podolepis aristata subsp. *aristata*	0.3		1
Podotheca gnaphalioides	0.1		0.1
Ptilotus gaudichaudii	0.6		0.1
Ptilotus humilis	0.1		0.1
Ptilotus polystachyus	0.4		0.1
Rhagodia drummondii	0.4		0.2
Rhodanthe chlorocephala subsp. *splendida*	0.1		2
Rhodanthe citrina	0.1		0.1
Schoenia cassiniana	0.3		0.2
Schoenus nanus	0.1		0.1
Scholtzia uniovulata	1.3		0.5
Sclerolaena diacantha	0.1		0.1
Siemssenia capillaris	0.1		0.1
Solanum nummularium	0.3		0.2
**Sonchus oleraceus*	0.4		0.1
Stenopetalum filifolium	0.2		0.1
Tetragonia diptera	0.3		0.1
Trachymene ceratocarpa	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Tricoryne soullierae (P3)	0.2		0.1
Triglochin isingiana	0.1		0.1
Triodia danthonioides	0.3		0.1
**Vulpia myuros* forma *myuros*	0.2		0.1
Wahlenbergia preissii	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.5

PHOTOS

Site Name:	MLED04
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 395078.63E 6758828.23N
Community:	N
Landform Type:	Closed Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, (other) - historical disturbance, unnatural inundation
Fire:	>10 years
Habitat:	Low open chenopod shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Amphibromus nervosus	0.3		0.2
Cotula cotuloides	0.1		0.1
Glossostigma diandrum			
**Lolium perenne*	0.4		0.1
**Parapholis incurva*	0.2		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Senecio lacustrinus	0.4		0.1
Tecticornia indica subsp. *bidens*	0.4		5
Tecticornia sp. 'Karara 1' (Potentially undescribed)	0.3		0.5
Tecticornia sp. 'Karara 2' (Potentially undescribed)	0.3		5
Triglochin mucronata	0.2		0.3

PHOTOS

Site Name:	MLED05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 395476.56E 6758832.89N
Community:	L
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Fire:	>10 years
Habitat:	Tall sparse shrubland, low sparse chenopod shrubland
Comments:	Salinisation

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Arctotheca calendula*	0.1		0.1
Atriplex vesicaria	1.1		1.5
Austrostipa elegantissima	0.4		0.5
Brachyscome iberidifolia	0.1		0.1
Brachyscome perpusilla	0.1		0.1
**Brassica tournefortii*	0.3		0.1
**Bromus rubens*	0.3		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Centrolepis polygyna	0.1		0.1
Cotula cotuloides	0.1		0.2
Crassula exserta	0.1		0.1

**Cuscuta planiflora*			0.1
Didymanthus roei	0.2		0.1
Enchylaena tomentosa var. *tomentosa*	0.5		0.2
Eragrostis falcata	0.1		0.1
**Ficinia marginata*	0.2		0.1
Gnephosis angianthoides	0.1		0.5
Gunniopsis divisa (P3)	0.1		0.1
Gunniopsis quadrifida	0.3		1
**Hordeum leporinum*	0.1		0.1
Hyalochlamys globifera	0.1		0.1
**Hypochaeris glabra*	0.1		0.1
**Juncus bufonius*	0.1		0.1
**Lamarckia aurea*	0.1		0.1
Lawrencella davenportii	0.1		0.1
**Lolium perenne*	0.5		0.1
Maireana amoena	0.1		0.1
Maireana carnosa	0.2		0.1
Maireana eriosphaera	0.4		0.1
Maireana tomentosa subsp. *tomentosa*	0.2		0.1
Melaleuca eleuterostachya	3		4
**Mesembryanthemum nodiflorum*	0.2		0.5
**Monoculus monstrosus*	0.3		0.1
**Parapholis incurva*	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Pogonolepis muelleriana	0.1		0.1
Ptilotus halophilus	0.1		0.1
Rhagodia drummondii	0.5		1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Roebuckiella halophila (P3)	0.1		0.1
Sclerolaena diacantha	0.1		0.2
Senecio lacustrinus	0.4		0.2
Siemssenia capillaris	0.1		0.5
**Sonchus oleraceus*	0.5		0.2
**Spergula pentandra*	0.1		0.1
Tecticornia fimbriata (P3)	0.5		0.2
Tetragonia sp.	0.1		0.1
Triglochin longicarpa	0.1		0.1
Triglochin mucronata	0.1		0.1

PHOTOS

Site Name:	MLED06
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	18/09/2024
GPS Location:	GDA94 Zone 50 405096.506428729E 6771327.13859237N
Community:	G
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Grazing - Historical grazing, Weeds
Fire:	>10 years
Habitat:	Low woodland, mid-sparse shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.2		0.2
Acacia colletioides	1.2		0.5
Actinobole uliginosum	0.1		0.1
Angianthus tomentosus	0.2		0.1
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Arthropodium dyeri	0.4		0.1
Austrostipa elegantissima	0.4		0.1
Austrostipa variabilis	0.4		0.1
**Brassica tournefortii*	0.5		0.1
Bulbine semibarbata	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calotis hispidula	0.1		0.1
**Carrichtera annua*	0.5		0.3
Chthonocephalus pseudevax	0.1		0.1

**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Crassula exserta	0.1		0.1
Daucus glochidiatus	0.1		0.1
Enchylaena lanata	0.3		0.1
Eremophila clarkei	2		0.4
Erodium cygnorum	0.1		0.1
Erymophyllum ramosum subsp. *ramosum*	0.1		0.3
Eucalyptus kochii subsp. ?*plenissima*	7		8
Eucalyptus loxophleba subsp. *supralaevis*	6		0.5
Gilruthia osbornei	0.1		5
Gnephosis brevifolia	0.1		0.3
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Hyalosperma glutinosum subsp. *glutinosum*	0.1		0.1
Levenhookia leptantha	0.1		0.1
**Lolium perenne*			
Maireana carnosa	0.1		0.2
Maireana georgei	0.4		0.2
Maireana marginata	0.1		0.1
Maireana planifolia	0.5		0.1
Maireana tomentosa subsp. *tomentosa*	0.5		1
Menkea australis	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		0.1
**Monoculus monstrosus*	0.4		0.3
Panaetia lessonii	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Plantago debilis	0.1		0.2
Podolepis aristata subsp. *aristata*	0.3		0.1
Podotheca gnaphalioides	0.1		0.1
Ptilotus gaudichaudii	0.3		0.1
Ptilotus polystachyus	0.6		0.2
Rhodanthe pygmaea	0.1		0.1
Schoenia cassiniana	0.3		0.1
Sclerolaena eurotioides	0.3		0.5
Senna artemisioides subsp. *filifolia*	1.2		0.2
**Sonchus oleraceus*	0.4		0.1
Thysanotus speckii	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Waitzia acuminata var. *acuminata*	0.3		0.1

PHOTOS

Site Name:	MLED07
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/08/2024
GPS Location:	GDA94 Zone 50 425511.551125893E 6770456.54228198N
Community:	G
Landform Type:	Lower Slope
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:	<2%
CF Sizes:	20-60mm
CF Types:	Laterite, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Tall open shrubland, mid-sparse shrubland, low sparse shurbland
Comments:	Dust related death

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.6		0.1
Acacia kochii	2		0.4
Acacia ramulosa var. *ramulosa*	4		3
Acacia tetragonophylla	4		6
Arthropodium dyeri	0.4		0.1
Austrostipa elegantissima	0.5		0.2
Austrostipa variabilis	0.3		0.1
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.1		0.1
Calandrinia eremaea	0.1		0.1

Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		10
Cephalipterum drummondii	0.2		0.2
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Crassula closiana	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Crassula exserta	0.1		0.1
**Cuscuta planiflora*			0.1
Dodonaea inaequifolia	1.5		0.3
Drosera major	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Enchylaena lanata	0.4		0.2
Enchylaena tomentosa var. *tomentosa*	0.4		0.1
Eremophila clarkei	1.5		0.2
Erodium cygnorum	0.2		0.3
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia rosea	0.1		2
Hakea recurva subsp. *recurva*	2.5		2
Hyalosperma glutinosum subsp. *venustum*	0.2		2
**Limonium lobatum*	0.3		0.1
Maireana georgei	0.4		0.2
Maireana planifolia	0.3		0.1
Maireana tomentosa subsp. *tomentosa*	0.3		0.2
Menkea australis	0.1		0.1
Millotia myosotidifolia	0.1		0.1
**Monoculus monstrosus*	0.4		0.2
Nicotiana karara	0.3		0.1
Panaetia lessonii	0.1		0.4
**Parentucellia latifolia*	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Phyllangium sulcatum	0.1		0.1
Pimelea microcephala subsp. *microcephala*	1.5		0.3
Plantago debilis	0.1		0.1
Podolepis aristata subsp. *aristata*	0.3		0.1
Podotheca gnaphalioides	0.1		0.1
Pogonolepis muelleriana	0.1		10

Ptilotus divaricatus	1.2		0.1
Ptilotus gaudichaudii	0.3		0.5
Ptilotus obovatus	0.5		0.5
Ptilotus polystachyus	0.4		0.1
Rhagodia drummondii	0.6		0.3
Rhodanthe battii	0.3		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe spicata	0.2		0.1
Roebuckiella halophila (P3)	0.1		0.1
Schoenia cassiniana	0.1		0.1
Sclerolaena eurotioides	0.3		0.2
Senna artemisioides subsp. *filifolia*	1.2		2
Senna charlesiana	1.5		0.4
Senna sp. Austin (A. Strid 20210)	1		0.2
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Siemssenia capillaris	0.2		0.2
Solanum lasiophyllum	0.4		0.2
**Sonchus oleraceus*	0.3		0.1
Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.2
**Vulpia myuros* forma *myuros*	0.2		0.1
Waitzia acuminata var. *acuminata*	0.3		0.1
Waitzia nitida	0.3		0.1

PHOTOS

Site Name:	MLED08
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 426757.628931971E 6770743.16382895N
Community:	A
Landform Type:	Upper Slope
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	10-20%
CF Sizes:	20-60mm, 60-200mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, (other) - Dust related decline
Fire:	>10 years
Habitat:	Tall sparse shrubland over mid sparse shrubland over low sparse shrubland.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia duriuscula	3		4
Acacia jibberdingensis	3.5		0.3
Acacia umbraculiformis	3		0.2
Actinobole uliginosum	0.1		0.1
Anthosachne scabra	0.3		0.1
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Arthropodium dyeri	0.4		0.1
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.1		0.2
Brunonia australis	0.3		0.5
Caesia sp. Wongan (K.F. Kenneally 8820)	0.3		0.1

Calandrinia eremaea	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis multicaulis	0.1		0.1
Calycopeplus paucifolius	3		2
Ceratogyne obionoides	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Dioscorea hastifolia			0.1
Drosera glanduligera	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Erodium cygnorum	0.1		0.1
Euphorbia tannensis subsp. *eremophila*	0.2		0.1
Gilberta tenuifolia	0.1		0.1
Gnephosis tenuissima	0.1		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia occidentalis	0.1		0.2
Goodenia rosea	0.1		0.1
Grevillea levis	0.1		0.3
Haloragis odontocarpa forma *pterocarpa*	0.3		0.2
Hibbertia glomerosa	0.4		0.1
**Hypochaeris glabra*	0.1		0.1
Lawrencella davenportii	0.2		0.1
Malleostemon tuberculatus	1.3		3
Melaleuca fulgens subsp. *steedmanii*	1.2		2
Melaleuca radula	0.1		0.3
Monachather paradoxus	0.1		0.1
Myriocephalus gueriniae	0.2		2
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Podolepis aristata subsp. *aristata*	0.2		0.2
Pogonolepis muelleriana	0.1		0.1
Ptilotus polystachyus	0.4		0.1
Rhodanthe laevis	0.1		0.1
Schoenia cassiniana	0.2		0.3
Schoenus nanus	0.1		0.1
**Sonchus oleraceus*	0.3		0.1

Thysanotus manglesianus			0.1
Trachymene ceratocarpa	0.1		0.2
Trachymene cyanopetala	0.1		0.2
Trachymene ornata	0.1		0.1
Wahlenbergia preissii	0.1		0.1
Waitzia acuminata var. *acuminata*	0.2		0.3
Waitzia nitida	0.1		0.1

PHOTOS

Site Name:	MLED09
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 428267.549694991E 6770241.16569199N
Community:	A
Landform Type:	Lower Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, (other) - Dust
Fire:	>10 years
Habitat:	Tall open shrubland, mid-sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4.5		2
Acacia duriuscula	4.5		15
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Arthropodium dyeri	0.5		0.1
Austrostipa elegantissima	0.6		0.3
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.1		0.2
Brachyscome perpusilla	0.1		0.1
**Bromus rubens*	0.2		0.1
Caesia sp. Wongan (K.F. Kenneally 8820)	0.4		0.1
Calandrinia eremaea	0.1		0.1

Calycopeplus paucifolius	2.5		2
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Centrolepis sp. Kalannie (B.J. Lepschi et al. BJL 3517)	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Ceratogyne obionoides	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.5
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.2
Crassula closiana	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Cyanicula amplexans	0.1		0.1
Daviesia hakeoides subsp. *subnuda*	2		1
Dianella revoluta var. *divaricata*	0.2		0.1
Drosera glanduligera	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
**Echium plantagineum*	0.4		0.1
Eriachne pulchella subsp. *pulchella*	0.1		0.1
Erodium cygnorum	0.1		0.1
Gilberta tenuifolia	0.1		0.5
Gnephosis brevifolia	0.1		0.1
Gonocarpus nodulosus	0.2		0.2
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia krauseana	0.1		0.1
Goodenia occidentalis	0.1		0.1
Goodenia rosea	0.2		2
Hyalosperma demissum	0.1		0.1
**Hypochaeris glabra*	0.3		0.2
Lawrencella rosea	0.1		0.1
**Leontodon rhagadioloides*	0.1		0.1
**Limonium lobatum*	0.2		0.1
Lobelia cleistogamoides	0.2		0.1
Lobelia rhytidosperma	0.1		0.1
**Lolium perenne*	0.3		0.1
Malleostemon tuberculatus	2		1.5
**Medicago minima*	0.1		0.1
Monachather paradoxus	0.4		0.1

**Monoculus monstrosus*	2		1.5
Myriocephalus gueriniae	0.1		0.1
Myriocephalus pygmaeus	0.1		0.1
Nicotiana karara	0.3		0.1
Panaetia lessonii	0.2		2
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Phyllangium sulcatum	0.1		0.1
Pogonolepis muelleriana	0.1		0.1
Pterostylis setulosa	0.1		0.1
Ptilotus polystachyus	0.4		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe spicata	0.1		0.2
Roebuckiella halophila (P3)	0.1		0.1
Schoenia cassiniana	0.1		0.1
Schoenus nanus	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Solanum lasiophyllum	0.1		0.1
**Sonchus oleraceus*	0.4		0.1
**Spergularia rubra*	0.1		0.1
Styphelia serratifolia s. lat.	0.3		0.1
Thysanotus manglesianus			0.1
Thysanotus pyramidalis	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Trachymene ornata	0.1		0.1
Triglochin isingiana	0.1		0.1
**Vulpia myuros* forma *myuros*	0.3		0.1
Wahlenbergia preissii	0.2		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1
Waitzia nitida	0.3		0.1

PHOTOS

Site Name:	MLED10
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 432144.505478026E 6770367.46548624N
Community:	G
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Low open woodland, tall sparse shrubland, low sparse shrubland.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera	5		0.5
Acacia erinacea	1		3
Acacia tetragonophylla	2.5		0.5
**Arctotheca calendula*	0.1		0.1
Atriplex codonocarpa	0.2		0.1
Atriplex semilunaris	0.2		0.1
Austrostipa elegantissima	0.8		0.3
Austrostipa variabilis	0.2		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia flava	0.1		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.2		0.1

**Carrichtera annua*	0.4		0.1
Cephalipterum drummondii	0.3		0.5
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Enchylaena lanata	0.2		0.1
Enchylaena tomentosa var. *tomentosa*	0.4		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus loxophleba subsp. *supralaevis*	9		9
Exocarpos aphyllus	2		0.5
**Ficinia marginata*	0.2		0.1
Gilruthia osbornei	0.1		0.5
Gnephosis brevifolia	0.1		0.1
Goodenia pusilliflora	0.1		0.1
**Hypochaeris glabra*	0.1		0.1
Lawrencella davenportii	0.3		0.1
Lepidium oxytrichum	0.1		0.1
**Limonium lobatum*	0.3		4
Maireana carnosa	0.2		0.1
Maireana georgei	0.4		0.1
Maireana marginata	0.1		0.1
Maireana tomentosa subsp. *tomentosa*	0.3		0.1
Maireana trichoptera	0.2		0.1
**Mesembryanthemum nodiflorum*	0.2		4
**Monoculus monstrosus*	0.3		0.1
Myriocephalus gueriniae	0.2		0.1
Panaetia lessonii	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Podolepis aristata subsp. *aristata*	0.2		0.1
Podotheca gnaphalioides	0.1		0.1
Pogonolepis muelleriana	0.1		0.1
Ptilotus exaltatus	0.4		0.1
Ptilotus gaudichaudii	0.3		0.1
Ptilotus obovatus	0.4		0.3
Ptilotus polystachyus	0.4		0.1
Rhagodia drummondii	0.4		0.5
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe maryonii	0.2		0.1
Rhodanthe spicata	0.2		0.1
Roebuckiella halophila (P3)	0.1		0.1
Roepera lobulata	0.1		0.1

Roepera ovata	0.1		0.2
**Rostraria pumila*	0.1		0.1
Sclerolaena diacantha	0.2		0.1
Sclerolaena drummondii	0.2		0.1
Sclerolaena eurotioides	0.2		0.1
Sclerolaena fusiformis	0.2		0.1
Senecio glossanthus	0.2		0.1
Senna artemisioides subsp. *filifolia*	1		0.5
Senna charlesiana	0.4		0.1
**Sisymbrium erysimoides*	0.4		0.1
**Sisymbrium orientale*	0.4		0.1
**Sisymbrium runcinatum*	0.3		0.1
Tetragonia diptera	0.1		0.1
Thysanotus manglesianus			0.1
Waitzia acuminata var. *acuminata*	0.2		0.1
Waitzia nitida	0.2		0.1

PHOTOS

Site Name:	MLED11
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2024
GPS Location:	GDA94 Zone 50 432541.315348495E 6770345.21825498N
Community:	R
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:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other) - little decline (possible dust/drought)
Fire:	>10 years
Habitat:	Tall open shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis	4		13
Acacia ramulosa var. *ramulosa*	4		7
Acacia tetragonophylla	0.4		0.1
Amphipogon caricinus var. *caricinus*	0.1		0.2
Arthropodium curvipes	0.1		0.1
Blennospora drummondii	0.1		0.1
Cephalipterum drummondii	0.2		0.1
Ceratogyne obionoides	0.2		0.1
Chamaexeros macranthera	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Chthonocephalus pseudevax	0.1		0.1

Comesperma integerrimum			0.1
Crassula closiana	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Dianella revoluta var. *divaricata*	0.5		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Dysphania glandulosa	0.1		0.1
Eremophila eriocalyx	0.6		0.1
Erodium cygnorum	0.3		1
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.1		5
Gnephosis brevifolia	0.2		1
Gonocarpus nodulosus	0.2		0.1
Goodenia capillosa	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia occidentalis	0.1		0.1
Goodenia rosea	0.2		3
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.2		2
Grevillea granulosa (P3)	0.6		0.1
Gunniopsis rubra	0.1		0.1
Haloragis odontocarpa forma *pterocarpa*	0.4		0.1
Hemigenia botryphylla	0.3		0.2
Lawrencella davenportii	0.2		0.1
Melaleuca hamata	4		1
Menkea australis	0.1		0.1
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.3		5
Panaetia lessonii	0.2		0.5
Plantago debilis	0.1		0.1
Podolepis aristata subsp. *aristata*	0.2		0.1
Ptilotus polystachyus	0.4		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.3		0.1
Roebuckiella halophila (P3)	0.2		0.3
Schoenus nanus	0.1		0.1
Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.1

Wahlenbergia preissii	0.1		0.1
Waitzia acuminata var. *acuminata*	0.2		0.2

PHOTOS

Site Name:	MLED12
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2024
GPS Location:	GDA94 Zone 50 433425.9140567E 6770370.35413124N
Community:	R
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:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Tall open shrubland, mid-sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		0.1
Acacia coolgardiensis	5		10
Acacia ramulosa var. *ramulosa*	5		3
Acacia stereophylla var. *stereophylla*	5		2
Allocasuarina acutivalvis subsp. *prinsepiana*	4		3
Amphipogon caricinus var. *caricinus*	0.2		0.1
Bellida graminea	0.2		3
Chamaexeros macranthera	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.5
Cheiranthera simplicifolia			0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1

Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila clarkei	0.4		0.1
Eremophila eriocalyx	0.6		0.2
Erodium cygnorum	0.2		3
Gilberta tenuifolia	0.1		0.2
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia capillosa	0.1		0.2
Goodenia occidentalis	0.1		0.2
Goodenia rosea	0.2		3
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.3		0.1
Grevillea obliquistigma subsp. *obliquistigma*	2.5		1
Grevillea paradoxa	1.5		0.3
Hakea recurva subsp. *recurva*	2.5		1
Haloragis odontocarpa forma *pterocarpa*	0.3		0.5
Lawrencella davenportii	0.3		0.2
Monachather paradoxus	0.3		0.1
Myriocephalus gueriniae	0.3		2
Podolepis aristata subsp. *aristata*	0.1		0.2
Poranthera leiosperma	0.1		0.1
Roebuckiella halophila (P3)	0.2		3
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.2
Waitzia acuminata var. *acuminata*	0.3		0.1

PHOTOS

Site Name:	MLED13
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2024
GPS Location:	GDA94 Zone 50 433820.87E 6770381.74N
Community:	G
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	20-60mm
CF Types:	Basalt (other)
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds - Aggressive weeds
Fire:	>10 years
Habitat:	Tall open shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	0.1		0.1
Acacia acuminata	4.5		3
Acacia ramulosa var. *ramulosa*	4.5		0.2
Acacia tetragonophylla	4.5		3
Acacia umbraculiformis	4.5		0.2
**Arctotheca calendula*	0.1		0.1
Austrostipa elegantissima	0.6		0.1
Austrostipa variabilis	0.4		0.1
**Bromus rubens*	0.2		0.1
Calandrinia eremaea	0.2		0.1
Calotis hispidula	0.1		0.1

Calotis multicaulis	0.1		0.1
**Centaurea melitensis*	0.4		0.1
Cephalipterum drummondii	0.3		2.5
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Dodonaea inaequifolia	1.5		1.5
Enchylaena lanata	0.3		0.2
Eremophila clarkei	1.5		0.2
Erodium cygnorum	0.2		0.2
Euphorbia porcata	0.1		0.1
**Ficinia marginata*	0.2		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia pusilliflora	0.1		0.1
Goodenia rosea	0.1		0.1
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.3		0.1
Haloragis trigonocarpa	0.3		0.1
Hyalosperma glutinosum subsp. *glutinosum*	0.1		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Lachnagrostis plebeia	0.1		0.1
Lepidium oxytrichum	0.3		0.1
**Limonium lobatum*	0.3		0.3
Maireana tomentosa subsp. *tomentosa*	0.3		0.2
Maireana trichoptera	0.3		0.1
**Medicago minima*	0.1		0.1
**Mesembryanthemum nodiflorum*	0.2		0.2
Millotia myosotidifolia	0.1		0.1
**Monoculus monstrosus*	0.3		0.1
Myriocephalus pygmaeus	0.1		0.1
Nicotiana karara	0.1		0.1
Panaetia lessonii	0.1		0.1
Parietaria cardiostegia	0.4		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Plantago debilis	0.1		0.1
Ptilotus exaltatus	0.3		0.1
Ptilotus gaudichaudii	0.3		0.1
Ptilotus obovatus	0.4		0.5
Ptilotus polystachyus	0.4		0.1

Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.2		0.1
Roebuckiella halophila (P3)	0.1		0.1
Roepera similis	0.3		0.1
**Rostraria pumila*	0.2		0.1
**Rumex vesicarius*	0.3		0.1
Salsola australis	0.4		0.1
Schoenia cassiniana			0.1
Schoenus nanus	0.1		0.1
Sclerolaena eurotioides	0.2		0.1
Senecio glossanthus	0.4		0.1
Senna artemisioides subsp. *filifolia*	1.2		0.5
Senna sp. Austin (A. Strid 20210)	1.5		0.5
**Silene nocturna*	0.3		0.1
**Sisymbrium erysimoides*	0.4		0.1
**Sisymbrium runcinatum*	0.3		0.1
**Sonchus oleraceus*	0.4		0.2
Tetragonia diptera	0.1		0.1
Thysanotus pyramidalis	0.2		0.1
Wahlenbergia gracilenta	0.1		0.1
Waitzia nitida	0.3		0.2

PHOTOS

Site Name:	MLED14
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2024
GPS Location:	GDA94 Zone 50 434389.57E 6770377.15N
Community:	P
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:	2-10%
CF Sizes:	6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	>10 years
Habitat:	Tall sparse shrubland, low open shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		0.2
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia incognita	3		2
Allocasuarina acutivalvis subsp. *prinsepiana*	3		0.5
Aluta aspera subsp. *hesperia*	1		13
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.4		0.1
Caladenia roei	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.5
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1

Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Erodium cygnorum	0.1		0.2
Gilberta tenuifolia	0.1		2
Gilruthia osbornei	0.1		0.2
Gnephosis brevifolia	0.1		0.2
Gonocarpus nodulosus	0.1		0.1
Goodenia occidentalis	0.1		0.1
Goodenia rosea	0.1		3
Hakea recurva subsp. *recurva*	0.3		0.1
Melaleuca hamata	4		3
Monachather paradoxus	0.3		0.1
Myriocephalus gueriniae	0.3		2
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Ptilotus gaudichaudii	0.1		0.1
Rhodanthe laevis	0.1		0.1
Roebuckiella halophila (P3)	0.2		3
Schoenus nanus	0.1		0.1
Thysanotus pyramidalis	0.3		0.1
Trachymene cyanopetala	0.1		0.2
Trachymene ornata	0.1		0.1
Waitzia acuminata var. *acuminata*	0.2		0.5

PHOTOS

Site Name:	MLED15
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	20/09/2024
GPS Location:	GDA94 Zone 50 431737.56E 6770360.16N
Community:	E
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%
CF Sizes:	20-60mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Tall open shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		1
Acacia ramulosa var. *ramulosa*	4		7
Acacia tetragonophylla	4		1
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.2		0.1
Austrostipa elegantissima	0.6		0.1
Calandrinia eremaea	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.3		15
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1

Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Daucus glochidiatus	0.2		0.1
Drosera glanduligera	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Erodium cygnorum	0.3		10
Feldstonia nitens	0.2		0.2
Gilruthia osbornei	0.2		0.2
Goodenia cycnopotamica	0.1		0.2
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.3		3
Haloragis odontocarpa forma *pterocarpa*	0.3		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.2
**Limonium lobatum*	0.2		0.1
**Lolium perenne*	0.4		0.1
Maireana planifolia	0.4		0.1
**Medicago minima*	0.2		0.1
**Mesembryanthemum nodiflorum*	0.3		0.2
Panaetia lessonii	0.2		5
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Ptilotus gaudichaudii	0.2		0.1
Ptilotus polystachyus	0.4		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe spicata	0.2		0.3
Roebuckiella halophila (P3)	0.2		0.1
Schoenia cassiniana	0.3		0.2
Tetragonia eremaea	0.3		0.1
Thysanotus manglesianus			0.1
**Vulpia myuros* forma *myuros*	0.2		0.1
Wurmbea flavanthera	0.2		0.1

PHOTOS

Site Name:	MLED16
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 400543.53E 6757916.36N
Community:	L
Landform Type:	Lower Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, (other) - Salinisation
Fire:	>10 years
Habitat:	Tall sparse shrubland, low sparse chenopod shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia eremaea	2.5		1.5
Acanthocarpus canaliculatus	0.3		0.2
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Atriplex vesicaria	1		1
Austrostipa elegantissima	0.6		0.3
Austrostipa macalpinei	0.2		0.1
Bromus arenarius	0.3		0.1
**Bromus rubens*	0.3		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Centrolepis pilosa	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1

Crassula exserta	0.1		0.1
**Cuscuta planiflora*			0.1
Didymanthus roei	0.2		0.1
Enchylaena lanata	0.2		0.1
Erodium cygnorum	0.1		0.1
Gnephosis angianthoides	0.1		1
Gnephosis macrocephala	0.2		0.1
Gnephosis trifida			
Gunniopsis divisa (P3)	0.1		0.1
Gunniopsis quadrifida	0.4		0.2
Gunniopsis septifraga	0.1		0.1
Hyalochlamys globifera	0.1		0.1
**Hypochaeris glabra*	0.1		0.1
**Lamarckia aurea*	0.2		0.1
Lawrencella davenportii	0.3		0.1
Lawrencia squamata	0.4		0.1
**Limonium lobatum*	0.1		0.1
**Lolium perenne*	0.3		0.1
Maireana amoena	0.1		0.1
Maireana eriosphaera	0.3		0.1
Melaleuca acutifolia	2		0.2
Melaleuca stereophloia	2		0.5
**Mesembryanthemum nodiflorum*	0.2		0.2
**Monoculus monstrosus*			0.1
Nicotiana salina (P1)	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Podotheca uniseta (P3)	0.1		10
Pogonolepis stricta	0.1		0.1
Ptilotus gaudichaudii	0.3		0.1
Ptilotus halophilus	0.2		0.1
Ptilotus humilis	0.1		0.1
Rhagodia drummondii	0.6		2
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Roebuckiella halophila (P3)	0.1		0.1
**Rostraria pumila*	0.1		0.1
Scaevola spinescens	0.6		0.2
Senecio glossanthus	0.3		0.1
Senecio lacustrinus	0.3		0.1
Siemssenia capillaris	0.2		0.1
Solanum nummularium	0.3		0.2

**Sonchus oleraceus*	0.4		0.1
**Spergula pentandra*	0.1		0.1
Stenopetalum salicola	0.3		0.1
Stylobasium australe	1		0.4
Triglochin longicarpa	0.1		0.1
Triglochin mucronata	0.1		0.1
**Vulpia myuros* forma *myuros*	0.1		0.1

PHOTOS

Site Name:	MLED17
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 398827.02E 6757724.68N
Community:	N
Landform Type:	Closed Depression
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, (other) - Death (possibly through salinisation)
Fire:	>10 years
Habitat:	Low sparse samphire shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex holocarpa	0.4		0.2
**Bromus rubens*	0.3		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cotula cotuloides	0.1		0.1
Crassula exserta	0.1		0.1
Dithyrostegia amplexicaulis	0.1		1
Epitriche demissus (P2)	0.1		0.1
Fitzwillia axilliflora (P2)	0.2		1
Gunniopsis divisa (P3)	0.1		0.1
Gunniopsis septifraga	0.1		0.3
Hydrocotyle glochidiata	0.1		0.2
**Limonium lobatum*	0.2		0.1
**Lolium perenne*	0.3		0.1

**Mesembryanthemum nodiflorum*	0.2		0.1
**Parapholis incurva*	0.2		0.3
Pogonolepis muelleriana	0.1		0.1
Pogonolepis stricta	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Senecio lacustrinus	0.4		0.2
Siemssenia capillaris	0.2		0.1
Spergularia marina	0.1		0.2
Tecticornia fimbriata (P3)	0.3		0.5
Tecticornia peltata	0.4		3
Tecticornia sp. 'Karara 1' (Potentially undescribed)	0.4		0.1
Triglochin longicarpa	0.1		0.1
Triglochin mucronata	0.1		0.1

PHOTOS

Site Name:	MLED18
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 439772.94E 6770177.12N
Community:	E
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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	>10 years
Habitat:	Tall open shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis	2.5		0.6
Acacia incognita	5		5
Acacia ramulosa var. *ramulosa*	5		6
Acacia tetragonophylla	3.5		3
**Arctotheca calendula*	0.1		0.1
Arthropodium dyeri	0.5		0.1
Austrostipa elegantissima	0.6		0.1
Austrostipa variabilis	0.3		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Comesperma integerrimum			0.1
Crassula closiana	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1

**Cuscuta planiflora*			0.1
Dysphania glandulosa	0.1		0.1
Erodium cygnorum	0.3		5
Gilberta tenuifolia	0.1		3
Gilruthia osbornei	0.1		5
Gnephosis brevifolia	0.1		0.3
Goodenia berardiana	0.2		0.2
Goodenia cycnopotamica	0.1		0.2
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.3		0.1
Gunniopsis rubra	0.1		0.1
Isolepis congrua	0.1		0.1
Lawrencella rosea	0.1		0.1
Maireana planifolia	0.5		0.1
Melaleuca hamata	5		2
Melaleuca stereophloia	3		1
**Mesembryanthemum nodiflorum*	0.2		0.1
Myriocephalus gueriniae	0.3		0.2
Panaetia lessonii	0.2		5
Pauridia glabella var. *glabella*	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Podolepis aristata subsp. *aristata*	0.3		0.1
Ptilotus polystachyus	0.4		0.1
Rhodanthe citrina	0.2		0.1
Rhodanthe laevis	0.1		0.1
Roebuckiella halophila (P3)	0.2		2
Schoenia cassiniana	0.3		0.5
Schoenus nanus	0.1		0.1
Thysanotus pyramidalis	0.3		0.1
Trachymene ornata	0.1		0.1
Wahlenbergia preissii	0.1		0.1
Waitzia acuminata var. *acuminata*	0.3		0.1
Waitzia nitida	0.2		0.1
Wurmbea flavanthera	0.2		0.1

PHOTOS

Site Name:	MLED19
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 440706.8E 6770393.86N
Community:	A
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:	20-50%
CF Sizes:	6-20mm, 20-60mm
CF Types:	Granite, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	>10 years
Habitat:	Tall sparse shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.3
Acacia tetragonophylla	2.5		2
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Arthropodium dyeri	0.5		0.1
Austrostipa elegantissima	0.6		0.1
Borya sphaerocephala	0.1		0.2
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia translucens	0.1		0.3
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1

**Cuscuta planiflora*			0.1
Dysphania glandulosa	0.1		0.1
Eremophila eriocalyx	0.5		0.2
**Ficinia marginata*	0.2		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia havilandii	0.1		0.1
Goodenia krauseana	0.1		0.1
Goodenia rosea	0.1		0.3
Grevillea pityophylla	0.4		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.2
Isolepis congrua	0.1		0.1
Levenhookia leptantha	0.1		0.1
**Limonium lobatum*	0.2		0.1
Maireana planifolia	0.4		0.1
Melaleuca stereophloia	2		0.5
**Mesembryanthemum nodiflorum*	0.2		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Pogonolepis muelleriana	0.1		15
Ptilotus gaudichaudii	0.3		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.3		0.3
Rhodanthe maryonii	0.3		0.9
Rhodanthe spicata	0.2		0.2
Roebuckiella halophila (P3)	0.1		0.1
Schoenia cassiniana	0.3		0.2
Schoenus nanus	0.1		0.3
Sclerolaena eurotioides	0.1		0.1
Solanum lasiophyllum	0.4		0.2
Stenopetalum filifolium	0.3		0.1
Thryptomene costata	1		2
Trachymene cyanopetala	0.1		0.1
Wahlenbergia preissii	0.2		0.1
Waitzia acuminata var. *acuminata*	0.3		0.1

PHOTOS

Site Name:	MLED20
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 440655.47E 6770167.67N
Community:	E
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Pale Brown (other)
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	10-20%
CF Sizes:	60-200mm
CF Types:	Granite, Quartz
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	>10 years
Habitat:	Tall open shrubland, mid sparse shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		10
Acacia ramulosa var. *ramulosa*	3		2
Allocasuarina acutivalvis subsp. *prinsepiana*	0.6		0.1
Aristida contorta	0.1		0.1
Atriplex semilunaris	0.2		0.1
Austrostipa elegantissima	0.6		0.2
Austrostipa variabilis	0.3		0.1
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.3		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1

Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta planiflora*			0.1
Dodonaea inaequifolia	1.8		1
Enchylaena tomentosa var. *tomentosa*	0.1		0.1
Eremophila clarkei	2		1
Erodium cygnorum	0.1		0.1
Erymophyllum glossanthus	0.1		1.5
**Ficinia marginata*	0.2		0.1
Gilruthia osbornei	0.1		0.2
Gnephosis brevifolia	0.1		0.5
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.2
Grevillea hakeoides subsp. *stenophylla*	0.8		0.2
Gunniopsis rubra	0.1		0.1
Hakea recurva subsp. *recurva*	0.6		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		1
Hydrocotyle intertexta	0.1		0.1
Lawrencella rosea	0.2		0.1
**Limonium lobatum*	0.1		0.1
Maireana carnosa	0.1		0.1
Maireana planifolia	0.4		0.2
Maireana thesioides	0.4		0.1
Melaleuca stereophloia	2.5		3
**Mesembryanthemum nodiflorum*	0.2		0.2
Myriocephalus pygmaeus	0.1		0.1
Nicotiana karara	0.4		0.1
Panaetia lessonii	0.1		10
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Plantago debilis	0.1		0.1
Pogonolepis muelleriana	0.1		5
Ptilotus exaltatus	0.3		0.1
Ptilotus polystachyus	0.4		0.4
Rhodanthe chlorocephala subsp. *splendida*	0.3		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.1		0.1
Roebuckiella halophila (P3)	0.2		3
Rytidosperma setaceum	0.1		0.1
Schoenia cassiniana	0.3		0.2
Sclerolaena diacantha	0.1		0.1

Sclerolaena eurotioides	0.2		0.1
Senna charlesiana	0.6		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Thysanotus pyramidalis	0.2		0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.1
Wahlenbergia gracilenta	0.1		0.1
Wahlenbergia preissii	0.2		0.1
Waitzia acuminata var. *acuminata*	0.3		0.1
Wurmbea flavanthera	0.1		0.1

PHOTOS

Site Name:	MLED21
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 443390.88E 6769933.03N
Community:	O
Landform Type:	Lower Slope
Slope Class:	Gently Inclined (3°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Isolated low mallee, tall open shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	4		1
Acacia coolgardiensis	4		1
Acacia ramulosa var. *ramulosa*	4		7
Aluta aspera subsp. *hesperia*	1		2
Bellida graminea	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1

Eremophila clarkei	2.5		1.5
Eremophila latrobei subsp. *latrobei*	1		0.3
Erodium cygnorum	0.1		0.1
Eucalyptus arctata	4		0.2
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.1		5
Gnephosis brevifolia	0.1		2
Goodenia occidentalis	0.1		0.1
Goodenia rosea	0.1		5
Grevillea obliquistigma subsp. *obliquistigma*	4		1
Haloragis odontocarpa forma *pterocarpa*	0.2		0.1
Helipterum craspedioides	0.2		0.3
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Lawrencella davenportii	0.2		0.2
Melaleuca nematophylla	2		0.2
Monachather paradoxus	0.3		0.1
Panaetia lessonii	0.1		0.3
Philotheca brucei subsp. *brucei*	1		1
Phyllangium sulcatum	0.1		0.1
Pogonolepis muelleriana	0.2		0.1
Ptilotus polystachyus	0.4		0.1
Roebuckiella halophila (P3)	0.1		0.2
Thryptomene costata	1.2		0.5
Thysanotus manglesianus			0.1
Thysanotus pyramidalis	0.2		0.1
Trachymene cyanopetala	0.1		0.1
Trachymene ornata	0.1		0.1
Wahlenbergia preissii	0.1		0.1
Waitzia acuminata var. *acuminata*	0.3		1

PHOTOS

Site Name:	MLED22
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 438024.3E 6770142.17N
Community:	G
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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds
Fire:	>10 years
Habitat:	Mid open woodland, tall sparse shrubland, low sparse shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.2
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia tetragonophylla	0.3		0.1
**Arctotheca calendula*	0.1		0.1
Arthropodium dyeri	0.6		0.1
Atriplex semilunaris	0.2		0.1
Austrostipa elegantissima	0.6		0.2
Austrostipa variabilis	0.2		0.1
**Brassica tournefortii*	0.3		0.2
Calandrinia eremaea	0.1		0.1
Calotis hispidula	0.1		0.1

**Carrichtera annua*	0.3		0.1
Cephalipterum drummondii	0.3		0.1
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Enchylaena lanata	0.3		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus loxophleba subsp. *supralaevis*	13		8
**Ficinia marginata*	0.2		0.1
Gilruthia osbornei	0.1		7
Gnephosis brevifolia	0.1		0.1
Goodenia berardiana	0.1		0.1
Gunniopsis rubra	0.1		0.1
Levenhookia leptantha	0.1		0.1
**Limonium lobatum*	0.2		1.5
**Lolium perenne*	0.3		0.1
Maireana georgei			0.1
Maireana planifolia	0.3		0.1
Maireana tomentosa subsp. *tomentosa*	0.3		0.1
Maireana trichoptera	0.2		0.2
Menkea australis	0.1		0.3
**Mesembryanthemum nodiflorum*	0.2		0.2
Panaetia lessonii	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Ptilotus exaltatus	0.4		0.1
Ptilotus gaudichaudii	0.2		0.1
Ptilotus obovatus	0.3		0.3
Ptilotus polystachyus	0.4		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe pygmaea	0.1		0.1
Roebuckiella halophila (P3)	0.1		0.1
Roepera lobulata	0.1		0.1
Roepera ovata	0.1		0.1
**Rumex vesicarius*	0.2		0.1
Sclerolaena diacantha	0.3		0.7
Sclerolaena eurotioides	0.2		0.2
Sclerolaena fusiformis	0.1		0.1
Senna artemisioides subsp. *filifolia*	0.5		0.3
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
**Sonchus oleraceus*	0.2		0.1

Stenopetalum filifolium	0.2		0.1
Tetragonia diptera	0.1		0.1
Waitzia acuminata var. *acuminata*	0.2		0.1

PHOTOS

Site Name:	MLEK01
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/08/2024
GPS Location:	GDA2020 Zone 50 472054.7E 6766646.51N
Community:	E
Landform Type:	Undulating Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472055	6766647	
Corner 2	472075	6766653	
Corner 3	472077	6766632	
Corner 4	472059	6766628	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*
Mid Stratum 2:	*Acacia tetragonophylla*
Lower Stratum 1:	*Calotis multicaulis*, *Erodium cygnorum*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	3		3

Acacia ramulosa var. *ramulosa*	8		12
Acacia tetragonophylla	3		1.5
Actinobole uliginosum			
Caladenia hirta subsp. *rosea*			
Calandrinia sp.	0.2		0.7
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		0.1
Calotis multicaulis	0.1		2
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula ?colorata	0.2		0.7
**Cuscuta ?planiflora*			0.1
Drosera major			0.1
Erodium cygnorum	0.1		2
Gilruthia osbornei	0.1		0.2
Hakea recurva subsp. *recurva*	2		1
Isoetopsis graminifolia	0.1		0.1
Lawrencella davenportii	0.3		0.1
Lemooria burkittii	0.1		0.1
Maireana planifolia	0.3		0.1
Menkea australis	0.1		0.1
Myriocephalus gueriniae	0.2		0.3
Pauridia glabella var. *glabella*	0.1		0.1
Ptilotus obovatus	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.3		0.1
Solanum cleistogamum	0.2		0.1
Trachymene cyanopetala	0.1		0.1

PHOTOS

Site Name: MLEK02

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/08/2024
GPS Location:	GDA2020 Zone 50 472260.56E 6767731.2N
Community:	F
Landform Type:	Mid Slope
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472261	6767731	
Corner 2	472260	6767751	
Corner 3	472279	6767752	
Corner 4	472280	6767731	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*
Mid Stratum 2:	*Acacia acuminata*
Lower Stratum 1:	*Rhodanthe chlorocephala* subsp. *splendida*
Lower Stratum 2:	*Actinobole uliginosum*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		1.5
Acacia kochii	2		0.5
Acacia ramulosa var. *ramulosa*	2.5		3
Acacia tetragonophylla	1.2		0.2
Acacia umbraculiformis			
Actinobole uliginosum	0.1		1.5
Borya sphaerocephala	0.2		0.5
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.3		0.1
Calotis hispidula	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chenopodium gaudichaudianum	0.4		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula ?colorata	0.1		0.1
**Cuscuta ?planiflora*			0.1
Dendrophyllanthus erwinii	0.1		0.1
Drosera major	0.1		0.1
**Echium plantagineum*	0.2		0.2
Eriachne pulchella subsp. *pulchella*	0.1		0.1
Erodium cygnorum	0.1		0.2
**Gazania linearis*	0.1		0.1
Gilruthia osbornei	0.1		0.1
Glycine canescens			0.1
Gonocarpus nodulosus	0.2		0.1
Goodenia cycnopotamica	0.1		0.3
Hakea recurva subsp. *recurva*	2		0.2
Hydrocotyle intertexta	0.1		0.1
**?Hypochaeris* sp.	0.1		0.1
Isoetopsis graminifolia	0.1		0.1
Myriocephalus gueriniae	2		0.8
Ophioglossum lusitanicum	0.1		0.1
Parietaria cardiostegia	0.2		0.4

Ptilotus obovatus	0.6		1
Rhodanthe chlorocephala subsp. *splendida*	0.3		10
Rhodanthe maryonii	0.2		0.2
Schoenus variicellae	0.1		0.1
Sclerolaena alata	0.2		0.1
Senna glutinosa subsp. *chatelainiana*	2		0.2
Siemssenia capillaris	0.3		0.1
Solanum lasiophyllum	0.7		0.5
**Sonchus oleraceus*	0.2		0.2
Tripogonella loliiformis	0.1		0.1
Walshia kendallii	0.2		0.1
Wurmbea ?densiflora	0.3		0.1

PHOTOS

Site Name:	MLEK03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472425.72E 6767682.74N
Community:	F
Landform Type:	Upper Slope
Slope Class:	Moderately Inclined (10°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Disturbance:	Weeds
Fire:	10-20 Years
Comments:	Weed cover very high

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472426	6767683	
Corner 2	472427	6767701	
Corner 3	472447	6767699	
Corner 4	472448	6767679	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia umbraculiformis*
Mid Stratum 1:	*Acacia jibberdingensis*, *Acacia ramulosa*, *Acacia tetragonophylla*
Lower Stratum 1:	**Ehrharta longiflora*, *Grevillea* sp., *Parietaria cardiostegia*, *Rhodanthe battii*, *Rhodanthe maryonii*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		0.3
Acacia jibberdingensis	5		2
Acacia kochii			
Acacia ramulosa	2		1
Acacia tetragonophylla	2.5		1
Acacia umbraculiformis	6		16
**Arctotheca calendula*	0.1		0.1
Austrostipa elegantissima	1.5		0.2
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.2		0.2
Calotis multicaulis	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chenopodium gaudichaudianum	0.4		0.1
Crassula ?colorata	0.1		0.1
**Cuscuta ?planiflora*			0.2
Dendrophyllanthus erwinii	0.1		0.1
Dianella revoluta var. *divaricata*	1.5		0.1
Duperreya sericea			0.5
**Echium plantagineum*	0.2		0.1
**Ehrharta longiflora*	0.3		15
Enchylaena lanata	0.3		0.1
Erodium cygnorum	0.2		0.3
Euphorbia porcata	0.1		0.1
**Galium aparine*	0.2		0.1
**Gazania linearis*	0.1		0.1
Glycine canescens			0.1
Gonocarpus nodulosus	0.1		0.1
Grevillea sp.	2		0.2
**?Hypochaeris* sp.	0.1		0.3
**Medicago minima*	0.2		0.1
Myriocephalus gueriniae	0.2		0.1
Parietaria cardiostegia	0.2		2
Pimelea microcephala subsp. *microcephala*	1.8		0.1
Ptilotus obovatus	0.7		0.5
Rhodanthe battii	0.3		20
Rhodanthe chlorocephala subsp. *splendida*	0.3		0.1
Rhodanthe maryonii	0.2		3

Rhodanthe oppositifolia subsp. *oppositifolia*	0.2		0.1
Senna charlesiana	0.2		0.1
**Sisymbrium erysimoides*	0.4		0.2
Solanum lasiophyllum	0.8		0.7
**Sonchus oleraceus*	0.2		0.2
Trachymene cyanopetala	0.1		0.1
**Ursinia anthemoides* subsp. *anthemoides*	0.2		0.1

PHOTOS

Site Name:	MLEK04
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472570.12E 6768035.02N
Community:	B
Landform Type:	Other, Granite sheet (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Clayey Sand
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm, 20-60mm, 60-200mm, 200-600mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472570	6768035	
Corner 2	472570	6768018	
Corner 3	472549	6768014	
Corner 4	472548	6768033	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Borya sphaerocephala	0.2		0.3
Calandrinia granulifera	0.1		0.1
Calandrinia sp.	0.1		0.1

Calotis hispidula	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula extrorsa	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Triglochin isingiana	0.1		0.1
Tripogonella loliiformis	0.1		0.1

PHOTOS

Site Name:	MLEK05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472764.5E 6768288.56N
Community:	B
Landform Type:	Other, Granite sheet (other)
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clayey Sand
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, >50% bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 60-200mm, 200-600mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472764	6768289	
Corner 2	472745	6768288	
Corner 3	472745	6768308	
Corner 4	472766	6768307	

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: *Borya sphaerocephala*

Lower Stratum 2: *Crassula extrorsa*, *Rhodanthe chlorocephala* subsp. *splendida*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.2		4

Bulbine semibarbata	0.1		0.1
Calandrinia ?eremaea	0.1		0.1
Calandrinia granulifera	0.2		0.1
Calotis hispidula	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula ?colorata	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Crassula extrorsa	0.1		8
**Cuscuta ?planiflora*			0.1
Drosera major			0.1
Dysphania melanocarpa	0.1		0.1
**Echium plantagineum*	0.1		0.1
Eriachne pulchella subsp. *pulchella*	0.1		0.1
Erodium cygnorum	0.2		0.1
Euphorbia porcata	0.1		0.1
**Gazania linearis*	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Gunniopsis rubra	0.1		0.1
Hyalochlamys globifera	0.1		0.2
Hyalosperma demissum	0.1		0.1
Isoetopsis graminifolia	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		0.1
Myriocephalus gueriniae	0.2		0.1
Ophioglossum lusitanicum	0.1		0.1
Pogonolepis muelleriana	0.1		0.1
Ptilotus obovatus	0.3		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.3		5
Siemssenia capillaris	0.2		0.1
Solanum lasiophyllum	0.5		0.1
**Spergula pentandra*	0.1		0.1
Spergularia marina	0.2		0.1
Triglochin isingiana	0.1		0.3
Tripogonella loliiformis	0.1		0.1
Wurmbea ?densiflora	0.1		0.1

PHOTOS

Site Name:	MLEK06
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472756.61E 6768160.88N
Community:	F
Landform Type:	Mid Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Weeds
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472757	6768161	
Corner 2	472753	6768179	
Corner 3	472774	6768182	
Corner 4	472778	6768162	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Acacia umbraculiformis*
Lower Stratum 1:	*Myriocephalus gueriniae*, *Rhodanthe chlorocephala* subsp. *splendida*
Lower Stratum 2:	*Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii	1.6		0.4
Acacia ramulosa var. *ramulosa*	1.5		1
Acacia tetragonophylla	2.5		2.5
Acacia umbraculiformis	2		6
Actinobole uliginosum	0.1		0.1
Actinobole ?uliginosum	0.1		0.1
Austrostipa elegantissima	0.4		0.1
Borya sphaerocephala	0.2		0.4
Bulbine semibarbata	0.1		0.1
Calandrinia granulifera	0.1		0.3
Calotis hispidula	0.1		0.3
Calotis multicaulis	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula ?colorata	0.1		0.2
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta ?planiflora*			0.1
Drosera glanduligera	0.1		0.1
Drosera major			0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
**Echium plantagineum*	0.1		0.1
Erodium cygnorum	0.2		0.4
**Gazania linearis*	0.1		0.1
Goodenia cycnopotamica	0.1		6
Grevillea levis	1.5		0.2
Isoetopsis graminifolia	0.1		0.1
Menkea australis	0.1		0.1
Millotia myosotidifolia	0.2		0.1
Myriocephalus gueriniae	0.2		0.5
Nicotiana karara	0.2		0.1
Ophioglossum lusitanicum	0.1		0.1
Parietaria cardiostegia			
Plantago debilis	0.2		0.1
Ptilotus ?gaudichaudii	0.1		0.1

Ptilotus obovatus	0.4		0.5
Rhodanthe chlorocephala subsp. *splendida*	0.3		25
Rhodanthe maryonii	0.2		0.1
Schoenus variicellae	0.1		0.3
Sclerolaena alata	0.2		0.1
Siemssenia capillaris	0.3		0.1
Solanum lasiophyllum	0.4		0.2
**Sonchus oleraceus*	0.2		0.1
Stenopetalum sphaerocarpum	0.2		0.2
Thysanotus pyramidalis	0.2		0.1
Trachymene cyanopetala	0.1		0.1
Triglochin isingiana	0.1		0.1
Tripogonella loliiformis	0.1		0.1
Walshia kendallii	0.1		0.1

PHOTOS

Site Name:	MLEK07
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA2020 Zone 50 483500.8E 6772590.62N
Community:	S
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Weeds, Animal
Fire:	10-20 Years
Comments:	Previously pastoral station

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	483501	6772591	
Corner 2	483501	6772610	
Corner 3	483520	6772608	
Corner 4	483521	6772588	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*, *Malleostemon tuberculatus*
Lower Stratum 1:	*Bellida graminea*, *Gilruthia osbornei*, *Myriocephalus gueriniae*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2		0.4
Acacia sibina	1.4		0.5
Aluta aspera subsp. *hesperia*	1.3		20
Amphipogon caricinus var. *caricinus*	0.2		0.1
Bellida graminea	0.1		1
Cephalipterum drummondii	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Chthonocephalus pseudevax	0.1		0.4
**Cuscuta* ?*planiflora*			0.1
Erodium cygnorum	0.1		0.1
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.2		3
Goodenia cycnopotamica	0.1		0.2
Grevillea obliquistigma subsp. *obliquistigma*	1.8		0.5
Haloragis odontocarpa	0.1		0.2
Malleostemon tuberculatus	1.7		1.5
Melaleuca nematophylla			
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.7		1.5
Philotheca deserti subsp. *deserti*			
Rhodanthe laevis	0.1		0.1
Roebuckiella ?*ciliocarpa*	0.2		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.25		0.1
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1
Wurmbea tenella	0.2		0.1

PHOTOS

Site Name:	MLEK08
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA2020 Zone 50 483462.82E 6772390.24N
Community:	K
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Fire:	10-20 Years
Comments:	Historically cleared? Very open, not many shrubs

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	483463	6772390	
Corner 2	483462	6772372	
Corner 3	483482	6772374	
Corner 4	483478	6772393	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus clelandiorum*
Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Eremophila oppositifolia* subsp. *angustifolia*
Mid Stratum 2:	*Ptilotus obovatus*
Lower Stratum 1:	*Menkea australis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia erinacea	0.75		1
Acacia ramulosa var. *ramulosa*	3		2
Austrostipa sp.			
Calandrinia eremaea	0.1		0.1
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Daucus glochidiatus	0.1		0.1
Daviesia benthamii			
Eremophila oppositifolia subsp. *angustifolia*	4.75		1.25
Eucalyptus clelandiorum	6		8
Gilruthia osbornei	0.1		0.1
Goodenia berardiana	0.1		0.3
Goodenia cycnopotamica	0.1		0.1
Gunniopsis rubra	0.1		1.5
Hydrocotyle intertexta	0.1		0.1
Maireana marginata	0.1		0.1
Maireana thesioides	0.2		0.1
Menkea australis			0.3
Olearia pimeleoides	0.25		0.3
Phlegmatospermum drummondii	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	1		0.7
Roepera lobulata	0.1		0.2
Scaevola spinescens	0.25		0.2
Sclerolaena fusiformis	0.1		0.1
Thysanotus speckii	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Waitzia sp.	0.1		0.1

PHOTOS

Site Name:	MLEK09
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA2020 Zone 50 483269.97E 6772351.1N
Community:	E
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:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	483270	6772351	
Corner 2	483269	6772369	
Corner 3	483251	6772367	
Corner 4	483254	6772347	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus clelandiorum*, *Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Acacia acanthoclada* subsp. *glaucescens*, *Acacia tetragonophylla*, *Rhagodia drummondii*, *Scaevola spinescens*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.75		2

Acacia colletioides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla	0.75		4
Atriplex semilunaris	0.1		0.1
Austrostipa elegantissima	0.13		0.1
Bulbine semibarbata	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.1		0.5
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Comesperma integerrimum	0.1		0.1
Eremophila oldfieldii subsp. *oldfieldii*	3		0.5
Erodium cygnorum	0.1		0.1
Eucalyptus clelandiorum	5		4
Eucalyptus loxophleba subsp. *supralaevis*	6		7
Goodenia cycnopotamica	0.1		0.1
Goodenia pusilliflora	0.1		0.1
Hyalosperma glutinosum subsp. *glutinosum*	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Lawrencella rosea	0.1		0.1
Maireana marginata	0.1		0.1
Maireana tomentosa subsp. *tomentosa*	0.1		0.1
Menkea australis	0.1		0.1
Phlegmatospermum drummondii	0.1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.1
Ptilotus exaltatus	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.15		0.1
Rhagodia drummondii	0.25		2.5
Roepera lobulata	0.2		0.3
Roepera sp.	0.1		0.2
Scaevola spinescens	0.75		6
Schoenia cassiniana	0.1		0.1
Sclerolaena diacantha	0.2		0.1
Sclerolaena drummondii	0.1		0.1
Senna artemisioides subsp. *filifolia*			
Senna stowardii			
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.13		0.1
Solanum nummularium	0.1		0.1

PHOTOS

Site Name: MLEK10

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	09/08/2024
GPS Location:	GDA2020 Zone 50 472860.38E 6772725.08N
Community:	F
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 20-60mm, 6-20mm, 60-200mm, 200-600mm
CF Types:	Granite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472860	6772725	
Corner 2	472856	6772745	
Corner 3	472876	6772746	
Corner 4	472876	6772725	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia umbraculiformis*
Mid Stratum 2:	*Eremophila forrestii* subsp. *forrestii*, *Ptilotus obovatus*, *Solanum lasiophyllum*
Lower Stratum 1:	*Myriocephalus gueriniae*, *Rhodanthe chlorocephala* subsp. *splendida*
Lower Stratum 2:	*Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii			
Acacia tetragonophylla	0.6		0.2
Acacia umbraculiformis	3.5		2
Actinobole uliginosum	0.1		0.75
Aristida contorta	0.1		0.1
Bulbine semibarbata	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia sp. Truncate capsules (A. Markey & S. Dillon 3474)	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		0.25
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chenopodium gaudichaudianum	0.4		0.1
Chthonocephalus pseudevax	0.1		0.7
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Crassula ?colorata	0.1		0.1
**Cuscuta ?planiflora*			0.1
Drosera major	0.1		0.1
**Echium plantagineum*	0.1		0.1
Eremophila clarkei	0.3		0.1
Eremophila forrestii subsp. *forrestii*	1.4		1
Erodium cygnorum	0.1		0.1
Goodenia cycnopotamica	0.1		2
Grevillea levis	0.5		0.1
Hakea recurva subsp. *recurva*	1.25		0.25
Hydrocotyle intertexta	0.1		0.1
Isoetopsis graminifolia	0.1		0.1
Menkea australis	0.1		0.1
Myriocephalus gueriniae	0.15		1
Pimelea microcephala subsp. *microcephala*	1.5		0.1
Ptilotus obovatus	0.17		2
Rhodanthe chlorocephala subsp. *splendida*	0.15		1
Santalum spicatum			
Sclerolaena eurotioides	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Siemssenia capillaris	0.1		0.1

Solanum lasiophyllum	0.2		3
**Sonchus oleraceus*	0.1		0.1
Stenopetalum sphaerocarpum	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Walshia kendallii	0.1		0.1

PHOTOS

Site Name:	MLEK11
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 469640.38E 6763999.78N
Community:	E
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	469640	6764000	
Corner 2	469641	6764019	
Corner 3	469659	6764022	
Corner 4	469661	6764003	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Acacia sibina*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*
Mid Stratum 2:	*Cryptandra imbricata*, *Ptilotus obovatus*
Lower Stratum 2:	*Bellida graminea*, *Gilruthia osbornei*, *Myriocephalus gueriniae*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	1.2		0.2
Acacia ramulosa var. *ramulosa*	2.5		5
Acacia sibina	2.5		3.5
Acacia tetragonophylla	3		3.5
Actinobole uliginosum	0.1		0.1
Amphipogon caricinus var. *caricinus*	0.3		0.1
Austrostipa elegantissima	0.4		0.1
Bellida graminea	0.1		5
Bulbine semibarbata	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis multicaulis	0.1		0.2
Calycopeplus paucifolius	1.5		0.2
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Crassula ?colorata	0.1		0.1
Cryptandra imbricata	1.3		1.5
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Erodium cygnorum	0.2		0.5
**Gazania linearis*	0.1		0.1
Gilruthia osbornei	0.1		2
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.5
Hakea recurva subsp. *recurva*	1.5		0.5
Lawrencella rosea	0.3		0.2
Maireana planifolia	0.4		0.1
Menkea australis	0.1		0.1
Monachather paradoxus	0.3		0.1
Myriocephalus gueriniae	0.2		2
Panaetia lessonii	0.2		0.1
Podolepis aristata subsp. *affinis*	0.2		0.4
Pterostylis setulosa	2.5		3.5
Ptilotus obovatus	0.4		0.2
Rhodanthe chlorocephala subsp. *splendida*	0.3		0.1
Rhodanthe laevis	0.1		0.2
Roebuckiella ?ciliocarpa	0.1		0.1

Senna glutinosa subsp. *chatelainiana*	2		0.2
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Solanum lasiophyllum	0.3		0.1
Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1
Wurmbea dilatata	0.1		0.1

PHOTOS

Site Name:	MLEK12
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 469685.57E 6764315.75N
Community:	E
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other)
Fire:	10-20 Years
Comments:	Adjacent to road

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	469686	6764316	
Corner 2	469668	6764315	
Corner 3	469670	6764335	
Corner 4	469689	6764331	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acuminata*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*, *Grevillea pityophylla*

Lower Stratum 1: *Calotis multicaulis*, *Goodenia cycnopotamica*, *Podolepis aristata* subsp. *affinis*, *Rhodanthe laevis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.5		1
Acacia ramulosa var. *ramulosa*	2.5		3
Acacia tetragonophylla	3		2
Actinobole uliginosum	0.1		0.1
Aluta aspera subsp. *hesperia*	1.3		3
Austrostipa elegantissima	0.5		0.2
Bellida graminea	0.1		0.1
Bulbine semibarbata	0.1		0.1
Caladenia hirta subsp. *rosea*	0.1		0.1
Caladenia petrensis	0.2		0.1
Calotis multicaulis	0.1		3
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cephalipterum drummondii	0.3		0.4
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chthonocephalus pseudevax	0.1		0.3
Comesperma integerrimum			0.1
Cryptandra imbricata	0.5		0.1
Drosera major	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila eriocalyx	0.8		0.1
Eremophila forrestii subsp. *forrestii*	0.6		0.5
Erodium cygnorum	0.2		0.5
Gilruthia osbornei	0.1		1
Goodenia cycnopotamica	0.1		3
Grevillea pityophylla	1.1		1.5
Gunniopsis rubra	0.1		0.1
Maireana planifolia	0.6		0.2
Menkea australis	0.1		0.2
Menkea draboides (P3)	0.1		0.1
Ophioglossum lusitanicum	0.1		0.1
Panaetia lessonii	0.1		0.3
Parietaria cardiostegia	0.2		0.1
Pauridia glabella var. *glabella*	0.1		0.1
Pheladenia deformis	0.1		0.1

Podolepis aristata subsp. *affinis*	0.1		1.5
Pogonolepis muelleriana	0.3		0.1
Pterostylis setulosa	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.3		0.1
Rhodanthe laevis	0.1		0.6
Roebuckiella ?ciliocarpa	0.1		0.4
Schoenia cassiniana	0.2		0.1
Schoenus variicellae	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Solanum lasiophyllum	0.4		0.1
Stenopetalum sphaerocarpum	0.3		0.1
Thysanotus pyramidalis	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1
Wurmbea dilatata	0.1		0.1

PHOTOS

Site Name:	MLEK13
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 467450.91E 6770548.67N
Community:	T
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Orange
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm
CF Types:	Ironstone, Laterite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	467451	6770549	
Corner 2	467431	6770552	
Corner 3	467430	6770571	
Corner 4	467449	6770571	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia latior*, *Hysterobaeckea setifera* subsp. *setifera*
Lower Stratum 1:	*Ecdeiocolea monostachya*
Lower Stratum 2:	*Bellida graminea*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		4

Acacia sibina	2.5		2
Amphipogon caricinus var. *caricinus*	0.3		0.1
Bellida graminea	0.1		2
Caladenia hirta subsp. *rosea*	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Darwinia capitellata			
Dianella revoluta var. *divaricata*	1.2		0.2
Drosera sp. Branched styles (S.C. Coffey 193)			0.2
Ecdeiocolea monostachya	0.8		6
Erodium cygnorum	0.1		0.1
Hakea invaginata	2		0.5
Hibbertia stenophylla	0.3		0.2
Hysterobaeckea setifera subsp. *setifera*	2.2		22
Podolepis aristata subsp. *affinis*	0.1		0.1
Rhodanthe laevis	0.1		0.1
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.3

PHOTOS

Site Name:	MLEK14
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 467232.81E 6770540.76N
Community:	T
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clayey Sand
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	10-20%
CF Sizes:	2-6mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	467233	6770541	
Corner 2	467214	6770540	
Corner 3	467212	6770559	
Corner 4	467232	6770558	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Melaleuca hamata*
Mid Stratum 2:	*Acacia latior*, *Darwinia capitellata*, *Enekbatus stowardii*, *Hemigenia* sp. Yalgoo (A.M. Ashby 2624), *Malleostemon tuberculatus*
Lower Stratum 1:	*Bellida graminea*, *Ecdeiocolea monostachya*, *Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive

Acacia latior	1.5		2
Actinobole uliginosum	0.1		0.2
Amphipogon caricinus var. *caricinus*	0.3		0.1
Bellida graminea	0.1		0.4
Borya sphaerocephala	0.2		0.1
Bulbine semibarbata	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.2
Chthonocephalus pseudevax	0.1		0.2
Crassula ?colorata	0.1		0.2
Crassula sp.	0.1		0.1
Darwinia capitellata	0.5		5
Drosera glanduligera	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	0.6		7
Enekbatus stowardii	0.4		1.5
Erodium cygnorum	0.2		0.1
Gilberta tenuifolia	0.1		0.1
Goodenia cycnopotamica	0.2		0.4
Grevillea granulosa (P3)	0.5		0.4
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.3		1
Hyalochlamys globifera	0.1		0.2
Hyalosperma demissum	0.1		0.1
Lawrencella rosea	0.2		0.1
Malleostemon tuberculatus	1.2		2.5
Melaleuca hamata	2.5		1.5
Podolepis aristata subsp. *affinis*	0.1		0.1
Pogonolepis muelleriana	0.1		0.2
Rhodanthe laevis	0.1		0.1
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.1
Tricoryne tuberosa	0.1		0.1

PHOTOS

Site Name:	MLEK15
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 466735.44E 6771616.14N
Community:	R
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	466735	6771616	
Corner 2	466719	6771619	
Corner 3	466716	6771637	
Corner 4	466737	6771640	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus kochii* subsp. *borealis*
Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*, *Acacia ramulosa* var. *ramulosa*, *Acacia sibina*, *Allocasuarina acutivalvis* subsp. *prinsepiana*
Mid Stratum 2:	*Olearia humilis*, *Philotheca deserti* subsp. *deserti*
Lower Stratum 2:	*Bellida graminea*, *Gilruthia osbornei*, *Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		1
Acacia ramulosa var. *ramulosa*	3		3
Acacia sibina	3		2
Acacia tetragonophylla	1.8		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3.5		2
Amphipogon caricinus var. *caricinus*	0.3		0.1
Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.6
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis hispidula	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.3
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Crassula ?*colorata*	0.1		0.2
Dianella revoluta var. *divaricata*	1.2		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila clarkei	1.2		0.1
Erodium cygnorum	0.2		0.2
Eucalyptus kochii subsp. *borealis*	5.5		2
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.1		0.5
Goodenia cycnopotamica	0.1		0.4
Grevillea granulosa (P3)			
Grevillea paradoxa	1.6		0.5
Hakea recurva subsp. *recurva*	1.7		0.6
Olearia humilis	0.6		6
Philotheca deserti subsp. *deserti*	1.2		1.5
Podolepis aristata subsp. *affinis*	0.1		0.2
Ptilotus obovatus	0.6		0.1
Rhodanthe laevis	0.1		0.1
Roebuckiella ?*ciliocarpa*	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.6		0.4
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.3

PHOTOS

Site Name:	MLEK16
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 466516.48E 6770495.91N
Community:	P
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
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 - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	466516	6770496	
Corner 2	466497	6770497	
Corner 3	466494	6770516	
Corner 4	466512	6770516	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia latior*, *Acacia sibina*, *Melaleuca nematophylla*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*, *Hibbertia arcuata*, *Philotheca deserti* subsp. *deserti*, *Xanthosia kochii*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		5

Acacia sibina	2.5		3
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		0.5
Aluta aspera subsp. *hesperia*	1.6		4
Amphipogon caricinus var. *caricinus*	0.2		0.3
Bellida graminea	0.1		0.5
Calycopeplus paucifolius			
Cheilanthes sieberi subsp. *sieberi*	0.2		1
Chthonocephalus pseudevax	0.1		0.1
Cyanicula amplexans	0.1		0.1
Drosera glanduligera	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.2
Erodium cygnorum	0.2		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia cycnopotamica	0.1		0.3
Grevillea paradoxa	1.6		0.5
Hibbertia arcuata	0.8		0.6
Lawrencella rosea	0.3		0.3
Melaleuca nematophylla	2.5		1.5
Melaleuca nematophylla x			
Pheladenia deformis	0.1		0.1
Philotheca deserti subsp. *deserti*	0.9		4
Podolepis aristata subsp. *affinis*	0.1		0.2
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.1
Xanthosia kochii	0.7		7

PHOTOS

Site Name: MLEK17

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 466094.87E 6770469.16N
Community:	S
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	466095	6770469	
Corner 2	466076	6770465	
Corner 3	466074	6770487	
Corner 4	466095	6770485	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acuminata*, *Acacia latior*, *Acacia tetragonophylla*
Mid Stratum 2:	*Acacia duriuscula*, *Malleostemon tuberculatus*, *Pimelea spiculigera* var. *thesioides*, *Senna artemisioides* subsp. *filifolia*
Lower Stratum 1:	*Ecdeiocolea monostachya*
Lower Stratum 2:	*Amphipogon caricinus* var. *caricinus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		5
Acacia duriuscula	1.6		2.5
Acacia latior	2.5		0.5
Acacia tetragonophylla	1.6		1
Actinobole uliginosum	0.1		0.3
Amphipogon caricinus var. *caricinus*	0.3		0.5
Borya sphaerocephala	0.2		0.1
Bulbine semibarbata	0.2		0.1
Caladenia hirta subsp. *rosea*	0.1		0.1
Caladenia roei			
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chthonocephalus pseudevax	0.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	1.3		0.5
Eremophila clarkei			
Erodium cygnorum	0.1		0.1
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.1		0.1
Goodenia cycnopotamica	0.1		0.2
Grevillea granulosa (P3)	1.5		0.3
Hakea recurva subsp. *recurva*	2		0.5
Hibbertia arcuata	0.5		0.2
Lawrencella rosea	0.3		0.1
Malleostemon tuberculatus	1.2		1
Mirbelia microphylla	0.5		0.2
Myriocephalus gueriniae	0.2		0.4
Philotheca deserti subsp. *deserti*	0.8		0.4
Pimelea spiculigera var. *thesioides*	1.2		7
Podolepis aristata subsp. *affinis*	0.1		0.3
Rhodanthe laevis	0.1		0.1
Schoenia cassiniana	0.3		0.1
Senna artemisioides subsp. *filifolia*			4
Styphelia serratifolia s. lat.	0.3		0.1
Trachymene cyanopetala	0.1		0.1
Tricoryne tuberosa	0.1		0.1
Vincetoxicum lineare			0.1

PHOTOS

Site Name: MLEK18

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 465384.74E 6770442.11N
Community:	D
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	465385	6770442	
Corner 2	465382	6770462	
Corner 3	465401	6770462	
Corner 4	465403	6770441	

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus horistes*, *Eucalyptus kochii* subsp. *borealis*
Upper Stratum 2:	*Callitris columellaris*
Mid Stratum 1:	*Acacia colletioides*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*
Mid Stratum 2:	*Calytrix* sp. Paynes Find (F. & J. Hort 1188), *Philotheca deserti* subsp. *deserti*
Lower Stratum 1:	*Chamaexeros fimbriata*, *Ecdeiocolea monostachya*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	3		1.5
Acacia ramulosa var. *ramulosa*	2		1.5
Acacia tetragonophylla	2.5		0.9
Actinobole uliginosum	0.1		0.2
Alyxia buxifolia	1.7		0.3
Austrostipa elegantissima	0.3		0.1
Austrostipa sp.	0.2		0.1
Bellida graminea	0.1		0.3
Blennospora drummondii	0.1		0.1
Calandrinia ?*eremaea*	0.1		0.2
Calandrinia granulifera	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Callitris columellaris	5		6
Calotis hispidula	0.1		0.2
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.4		5
Cephalipterum drummondii	0.2		0.1
Chamaexeros fimbriata	0.5		2
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.2
Ecdeiocolea monostachya	0.8		2.5
Erodium cygnorum	0.2		0.1
Eucalyptus horistes	8		1.5
Eucalyptus kochii subsp. *borealis*	8		0.7
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.2		0.2
Hakea recurva subsp. *recurva*	2.2		0.5
Halgania cyanea var. Allambi Stn (B.W. Strong 676)			
Lawrencella davenportii	0.2		0.2
Lawrencella rosea	0.3		0.2
Mirbelia ramulosa	0.4		0.5
Nicotiana karara	0.1		0.1
Olearia sp. Eremicola (Diels & Pritzel s.n.			

PERTH 00449628)			
Philotheca deserti subsp. *deserti*	0.7		2.2
Pimelea microcephala subsp. *microcephala*	1.5		0.2
Plantago debilis	0.1		0.1
Podolepis aristata subsp. *affinis*	0.2		0.1
Ptilotus drummondii	0.3		0.1
Rhodanthe laevis	0.1		0.1
Schoenia cassiniana	0.2		0.1
Stenopetalum filifolium	0.2		0.1
Thysanotus sp.			0.1
Thysanotus speckii	0.1		0.1
Trachymene cyanopetala	0.1		0.1

PHOTOS

Site Name:	MLEK19
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	11/08/2024
GPS Location:	GDA2020 Zone 50 464765.23E 6770401.51N
Community:	T
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Orange
Soil Condition:	Moist
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:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	464765	6770402	
Corner 2	464746	6770402	
Corner 3	464749	6770418	
Corner 4	464770	6770417	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia acuminata*, *Acacia sibina*, *Melaleuca hamata*
Mid Stratum 2:	*Darwinia capitellata*, *Platysace trachymenioides*
Lower Stratum 1:	*Ecdeiocolea monostachya*
Lower Stratum 2:	*Borya sphaerocephala*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		1.5
Acacia duriuscula	1.8		0.5
Acacia sibina	2.5		5
Actinobole uliginosum	0.1		0.2
Amphipogon caricinus var. *caricinus*	0.4		0.1
Bellida graminea	0.1		0.1
Borya sphaerocephala	0.2		3
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Darwinia capitellata	0.4		8
Dianella revoluta var. *divaricata*	0.9		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Ecdeiocolea monostachya	0.8		6
Gilberta tenuifolia	0.1		0.4
Grevillea granulosa (P3)	1.2		0.3
Hakea invaginata	2.5		0.5
Hysterobaeckea setifera subsp. *setifera*	1.2		0.5
Lawrencella davenportii	0.2		0.1
Melaleuca hamata	1.8		2
Platysace trachymenioides	0.5		3
Rhodanthe laevis	0.1		0.1
Thysanotus sp.			0.1
Trachymene cyanopetala	0.1		0.1
Tricoryne tuberosa	0.1		0.1

PHOTOS

Site Name:	MLEK20
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	12/08/2024
GPS Location:	GDA2020 Zone 50 463813.33E 6770371.89N
Community:	E
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Clearing, Grazing
Fire:	10-20 Years
Comments:	Previously disturbed? Very open vegetation

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	463813	6770372	
Corner 2	463812	6770391	
Corner 3	463793	6770389	
Corner 4	463794	6770370	

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia assimilis* subsp. *assimilis*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*
Mid Stratum 2:	*Ptilotus obovatus*
Lower Stratum 1:	*Austrostipa elegantissima*, *Sclerolaena diacantha*

Lower Stratum 2: *Chthonocephalus pseudevax*, *Sclerolaena eurotioides*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	12		1.5
Acacia ramulosa var. *ramulosa*	1.8		0.9
Acacia tetragonophylla	3		2
**Arctotheca calendula*	0.1		0.1
Aristida contorta	0.1		0.1
Austrostipa elegantissima	1.3		0.5
Bellida graminea	0.1		0.1
Brachyscome iberidifolia	0.1		0.1
Bulbine semibarbata	0.1		0.1
Calandrinia ?eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.2		0.1
Chenopodium gaudichaudianum	0.1		0.1
Chthonocephalus pseudevax	0.1		0.2
Comesperma integerrimum			0.2
Crassula ?colorata	0.1		0.2
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Eremophila serrulata			
Erodium cygnorum	0.1		0.1
Exocarpos aphyllus			
**Gazania linearis*	0.2		0.1
Goodenia cycnopotamica	0.1		0.2
Hakea recurva subsp. *recurva*	3		2
Hyalosperma demissum	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Isoetopsis graminifolia	0.1		0.4
Maireana marginata	0.2		0.1
Maireana planifolia	0.4		0.1
Maireana thesioides	1.6		0.1
Nicotiana karara	0.3		0.1
Parietaria cardiostegia	0.3		0.2
Pimelea microcephala subsp. *microcephala*	1.6		0.4
Podolepis aristata subsp. *affinis*	0.2		0.1

?*Podotheca* sp.	0.1		0.2
Pogonolepis muelleriana	0.1		0.4
Ptilotus obovatus	0.5		2
Rhagodia drummondii	1.4		0.3
Rhodanthe chlorocephala subsp. *splendida*	0.2		0.1
Roebuckiella ?ciliocarpa	0.1		0.1
Sclerolaena diacantha	0.2		0.2
Sclerolaena eurotioides	0.2		0.6
Senecio glossanthus	0.3		0.1
Siemssenia capillaris	0.1		0.1
**Sisymbrium erysimoides*	0.4		0.2
Solanum lasiophyllum	0.4		0.3
Solanum nummularium	0.4		0.1
**Sonchus oleraceus*	0.2		0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	MLEM02
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/08/2024
GPS Location:	GDA94 Zone 50 457536.7E 6772079.9N
Community:	D
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Eucalyptus over Acacia over mixed shrubland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	457537	6772080	
Corner 2	WGS84	457525	6772068	
Corner 3	WGS84	457513	6772084	
Corner 4	WGS84	457533	6772096	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		0.6
Acacia colletioides	1.8		0.6
Acacia ramulosa var. *ramulosa*	2		0.8
Acacia tetragonophylla	2.3		0.5
Austrostipa elegantissima	0.4		0.1

Austrostipa sp.	0.2		0.1
Bellida graminea	0.1		0.1
Brachyscome perpusilla	0.1		0.1
Calandrinia ?*eremaea*	0.1		0.1
Calandrinia pumila	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Callitris columellaris	3		0.5
Calotis hispidula	0.1		0.1
Comesperma integerrimum	0.3		0.1
Crassula colorata var. *acuminata*	0.1		0.1
?*Enchylaena lanata*	0.1		0.1
Eremophila eriocalyx	0.5		0.3
Erodium cygnorum	0.1		0.3
Eucalyptus kochii subsp. *borealis*	9		4
Gilberta tenuifolia	0.1		0.1
Gnephosis brevifolia	0.1		0.2
Goodenia berardiana	0.1		0.1
Goodenia capillosa	0.1		0.3
Goodenia rosea	0.1		0.1
Hakea recurva subsp. *recurva*	0.4		0.5
Hemigenia botryphylla	0.3		1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Maireana planifolia	0.3		0.2
Menkea australis	0.1		0.1
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.1		0.1
Olearia humilis	0.4		1
Panaetia lessonii	0.1		0.1
Pimelea ?*microcephala* subsp. *microcephala*	0.6		0.1
Podolepis aristata subsp. *affinis*	0.1		0.1
Ptilotus exaltatus	0.1		0.1
Ptilotus obovatus	0.3		0.4
Rhagodia drummondii	0.3		0.4
?*Sclerolaena* sp.	0.1		0.1
Senna artemisioides subsp. *filifolia*	1.4		0.5
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.3		0.1
Stenopetalum filifolium	0.2		0.1

Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	MLEM03
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/08/2024
GPS Location:	GDA94 Zone 50 456320.5E 6771934.5N
Community:	T
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall open shrubland over mid isolated clumps of shrubs over low sparse forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	456320	6771934	
Corner 2	WGS84	456304	6771926	
Corner 3	WGS84	456293	6771941	
Corner 4	WGS84	456310	6771957	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		6
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia ramulosa var. *ramulosa*	1		0.1
Acacia sibina	2.2		1
Austrostipa elegantissima	0.5		0.1

Bellida graminea	0.1		0.5
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.3		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Comesperma integerrimum	0.3		0.1
Cyanicula amplexans	0.1		0.1
Drosera eremaea			0.1
Ecdeiocolea monostachya	0.7		0.4
Eremophila clarkei	1.8		0.4
Eremophila eriocalyx	0.6		0.1
Erodium cygnorum	0.1		0.2
Gilberta tenuifolia	0.1		0.4
Gnephosis brevifolia	0.1		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia capillosa	0.1		0.2
Grevillea granulosa (P3)	1.1		0.1
Hemigenia botryphylla	0.4		0.6
Hibbertia stenophylla	0.4		0.1
Lawrencella davenportii	0.1		0.1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.3		0.8
Malleostemon tuberculatus	2		0.8
Melaleuca hamata	3		1
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.1		0.2
Philotheca deserti subsp. *deserti*	1.5		0.3
Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.3

PHOTOS

Site Name:	MLEM04
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	22/08/2024
GPS Location:	GDA94 Zone 50 455785.6E 6771893.3N
Community:	T
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall shrubland over mid shrubland over low forbland
Comments:	Nearby rail and other ground disturbance

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	455786	6771893	
Corner 2	WGS84	455792	6771888	
Corner 3	WGS84	455793	6771872	
Corner 4	WGS84	455771	6771879	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		1
Amphipogon caricinus var. *caricinus*	0.2		0.1
Bellida graminea	0.1		0.1
Borya sphaerocephala	0.1		0.3
Cassytha nodiflora			0.1

Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
Darwinia capitellata	0.6		0.5
Drosera eremaea			0.1
Drosera glanduligera	0.1		0.1
Erodium cygnorum	0.1		0.2
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Gnephosis tenuissima	0.1		0.1
Goodenia berardiana	0.1		0.6
Goodenia capillosa	0.1		0.5
Goodenia rosea	0.1		0.1
Grevillea granulosa (P3)	0.1		0.1
Hyalosperma demissum	0.1		0.1
Lawrencella davenportii	0.1		0.6
Malleostemon tuberculatus	1.2		0.7
Melaleuca hamata	2.3		1.5
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe laevis	0.1		0.1
Roebuckiella cheilocarpa	0.1		0.1
**Rumex vesicarius*	0.1		0.1
Thysanotus sp.			0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	MLEM05
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	23/08/2024
GPS Location:	GDA94 Zone 50 454779.2E 6771987.8N
Community:	G
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other), Weeds
Fire:	10-20 Years
Habitat:	Mid woodland over tall sparse shrubland over low sparse shrubland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	454779	6771988	
Corner 2	WGS84	454769	6772000	
Corner 3	WGS84	454773	6772021	
Corner 4	WGS84	454795	6772002	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia ramulosa var. *ramulosa*	2.3		1
Acacia tetragonophylla	1.9		0.4
Acacia umbraculiformis	1.4		0.5
Austrostipa elegantissima	0.4		0.1

Austrostipa sp.	0.1		0.1
Bellida graminea	0.1		0.1
**Brassica tournefortii*	0.1		0.1
Bursaria occidentalis	2.2		0.2
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia ?eremaea	0.1		0.1
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Comesperma integerrimum			0.2
Crassula colorata var. *acuminata*	0.1		0.1
Enchylaena lanata	0.3		0.3
Erodium cygnorum	0.1		0.1
Eucalyptus kochii subsp. *borealis*	10		5
Eucalyptus loxophleba subsp. *supralaevis*			
Gilruthia osbornei	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia rosea	0.1		0.1
Hakea recurva subsp. *recurva*	0.4		0.5
Hydrocotyle intertexta	0.1		0.1
Isoetopsis graminifolia	0.1		0.1
Lawrencella davenportii	0.1		0.1
Maireana carnosa	0.1		0.3
Maireana georgei	0.3		0.3
Maireana tomentosa subsp. *tomentosa*			
Menkea australis	0.1		0.1
Myriocephalus gueriniae	0.1		0.1
Nicotiana karara	0.1		0.1
Olearia sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)	0.7		0.5
Pimelea microcephala subsp. *microcephala*	0.3		0.3
Plantago debilis	0.1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.1
Ptilotus exaltatus	0.2		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.3		0.3
Ptilotus polystachyus	0.1		0.1
Rhagodia drummondii	0.6		0.3
Roepera similis	0.1		0.1

Roepera sp.	0.1		0.1
Scaevola spinescens	0.4		0.4
Sclerolaena eurotioides	0.1		0.3
Senecio glossanthus	0.2		0.1
Senna artemisioides subsp. *filifolia*	1.9		1
Senna sp. Austin (A. Strid 20210)	1.5		0.5
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
**Sonchus oleraceus*	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	MLEM06
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	23/08/2024
GPS Location:	GDA94 Zone 50 454314.8E 6772117.5N
Community:	S
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other), Weeds
Fire:	10-20 Years
Habitat:	Tall isolated clumps of shrubs over low isolated clumps of shrubs over sparse low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	454315	6772118	
Corner 2	WGS84	454302	6772130	
Corner 3	WGS84	454319	6772144	
Corner 4	WGS84	454339	6772139	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		3
Acacia sibina	2		0.6
Acacia tetragonophylla	2		0.5
Acacia umbraculiformis	4		0.2

Amphipogon caricinus var. *caricinus*	0.2		0.1
Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.1
Blennospora drummondii	0.1		0.1
Borya sphaerocephala	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Cyanicula amplexans	0.1		0.1
Drosera eremaea			0.1
Drosera glanduligera	0.1		0.1
Drosera major	0.1		0.1
Eremophila eriocalyx	1		0.1
Eremophila forrestii	1		0.3
Erodium cygnorum	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia rosea	0.1		0.1
Grevillea pityophylla	1		2.5
Hakea recurva subsp. *recurva*	1.8		0.6
Hyalosperma demissum	0.1		0.1
Lepidosperma sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	0.5		0.1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Lomandra marginata	0.2		0.1
Malleostemon tuberculatus	2		0.2
Melaleuca hamata	4		1
Menkea australis	0.1		0.1
Mirbelia microphylla	0.3		0.4
Myriocephalus gueriniae	0.1		0.2
Panaetia lessonii	0.1		0.2
Pauridia glabella var. *glabella*	0.1		0.1
Pheladenia deformis	0.1		0.1
Philotheca brucei subsp. *brucei*	1.5		0.4
Pterostylis setulosa	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1

Ptilotus obovatus	0.4		0.4
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.2
Rhodanthe laevis	0.1		0.1
Schoenus variicellae	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.4		0.1
Solanum lasiophyllum	0.5		0.1
**Sonchus oleraceus*	0.3		0.1
Stachystemon intricatus	0.6		1
Styphelia serratifolia s. lat.	0.3		0.1
Thysanotus pyramidalis	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	MLEM07
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	23/08/2024
GPS Location:	GDA94 Zone 50 453846.5E 6772143.7N
Community:	E
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall sparse shrubland over low open forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	453846	6772144	
Corner 2	WGS84	453828	6772159	
Corner 3	WGS84	453844	6772166	
Corner 4	WGS84	453860	6772152	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		2.5
Acacia ramulosa var. *ramulosa*	2		0.7
Acacia sibina	2.3		1
Acacia tetragonophylla	1.3		2.5
Amphipogon caricinus var. *caricinus*	0.2		0.2

Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.2
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.1		0.1
Calandrinia ?eremaea	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia pumila	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis hispidula	0.1		0.1
Cephalipterum drummondii	0.1		0.5
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.2
Crassula colorata var. *acuminata*	0.1		0.1
Drosera eremaea			0.1
Dysphania glandulosa	0.1		0.1
Eremophila clarkei			
Eremophila forrestii	0.5		0.4
Erodium cygnorum	0.1		0.3
Gilberta tenuifolia	0.1		0.1
Gilruthia osbornei	0.1		0.3
Gnephosis brevifolia	0.1		0.2
Gnephosis tenuissima	0.1		0.1
Goodenia cycnopotamica	0.1		0.2
Goodenia rosea	0.1		0.2
Grevillea sp.	0.1		0.1
Gunniopsis rubra	0.1		0.1
Hakea recurva subsp. *recurva*	2		0.3
Lomandra marginata	0.2		0.1
Maireana planifolia	0.3		0.3
Melaleuca stereophloia			
Menkea australis	0.1		0.1
Myriocephalus gueriniae	0.1		0.8
Panaetia lessonii	0.1		0.3
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.4		0.6
Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.1		0.1
Santalum acuminatum	3.5		0.5

Solanum lasiophyllum	0.2		0.3
Trachymene cyanopetala	0.1		0.2
Waitzia acuminata var. *acuminata*	0.1		0.3

PHOTOS

Site Name:	MLEM08
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	23/08/2024
GPS Location:	GDA94 Zone 50 453147.4E 6772182.3N
Community:	Q
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Mid isolated clumps of mallee trees over tall sparse shrubland over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	453147	6772182	
Corner 2	WGS84	453149	6772200	
Corner 3	WGS84	453168	6772201	
Corner 4	WGS84	453167	6772186	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.2		3.5
Acacia sibina	3		3
Amphipogon caricinus var. *caricinus*	0.1		0.1
Austrostipa elegantissima	0.3		0.1
Bellida graminea	0.1		0.3

Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.2		0.1
Calandrinia ?*eremaea*	0.1		0.1
Calandrinia pumila	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis multicaulis	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Cyanicula amplexans	0.1		0.1
Eremophila forrestii	1.7		0.2
Erodium cygnorum	0.1		0.1
Eucalyptus arctata	3.5		3.5
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia capillosa	0.1		0.1
Hakea minyma	2.5		0.6
Myriocephalus gueriniae	0.1		0.6
Panaetia lessonii	0.1		0.1
Philotheca tomentella	0.6		0.4
Roebuckiella cheilocarpa	0.1		0.1
Solanum lasiophyllum	0.2		0.1
Vincetoxicum lineare			0.1
Waitzia acuminata var. *acuminata*	0.1		0.1
Wurmbea tenella	0.1		0.1

PHOTOS

Site Name:	MLEM09
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	24/08/2024
GPS Location:	GDA94 Zone 50 453516.2E 6771968N
Community:	F
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, <2% bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall isolated clumps of shrubs over mid isolated clumps of shrubs over low forbland
Comments:	Nearby transmission line

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	453516	6771968	
Corner 2	WGS84	453534	6771975	
Corner 3	WGS84	453533	6771958	
Corner 4	WGS84	453518	6771960	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii	1.8		0.3
Acacia tetragonophylla	2.2		0.4
Acacia umbraculiformis	3.5		0.9
Actinobole uliginosum	0.1		0.1
Aristida contorta	0.1		0.1

Austrostipa elegantissima	0.3		0.1
Austrostipa sp.	0.3		0.2
Bellida graminea	0.1		0.1
Borya sphaerocephala	0.1		3.5
Brachyscome perpusilla	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	0.1		0.1
Calandrinia disperma	0.1		0.1
Calandrinia ?*eremaea*	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calandrinia pumila	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
Drosera eremaea			0.1
Drosera major	0.1		0.1
Enchylaena lanata	0.3		0.1
Eremophila forrestii subsp. *forrestii*	1.5		2
Eremophila serrulata	0.3		0.1
Erodium cygnorum	0.1		0.3
Euphorbia porcata	0.1		0.1
Gilberta tenuifolia	0.1		0.1
Gonocarpus nodulosus	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia rosea	0.1		0.1
Hakea recurva subsp. *recurva*	0.8		0.6
Hydrocotyle intertexta	0.1		0.2
Isoetopsis graminifolia	0.1		0.1
Isolepis congrua	0.1		0.1
Lawrencella davenportii	0.1		0.1
Lepidosperma sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	0.2		0.1
Maireana planifolia	0.2		0.1
Menkea australis	0.1		0.1
Myriocephalus gueriniae	0.1		1.5

Nicotiana karara	0.1		0.1
Ophioglossum lusitanicum	0.1		0.1
Panaetia lessonii	0.1		0.3
Parietaria cardiostegia	0.2		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Phyllangium sulcatum	0.1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.4		0.3
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.2
Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.1		0.1
Sclerolaena alata	0.1		0.1
Siemssenia capillaris	0.1		0.2
Solanum lasiophyllum	0.3		0.5
Thysanotus pyramidalis	0.1		0.1
Trachymene cyanopetala	0.1		0.2
Triglochin isingiana	0.1		0.1
Vincetoxicum lineare			0.1

PHOTOS

Site Name:	MLEM11
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	24/08/2024
GPS Location:	GDA94 Zone 50 455559E 6769263.3N
Community:	D
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other), Weeds
Fire:	10-20 Years
Habitat:	Mid isolated clumps of mallee trees over tall open shrubland over low forbland
Comments:	Between two tracks, rubbish

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	455559	6769263	
Corner 2	WGS84	455550	6769245	
Corner 3	WGS84	455536	6769251	
Corner 4	WGS84	455532	6769265	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		0.5
Acacia exocarpoides	1.7		0.1
Acacia ramulosa var. *ramulosa*	3		20
Acacia tetragonophylla	4		0.5
Actinobole uliginosum	0.1		0.1
Caesia sp. Koolanooka Hills (R. Meissner & Y.	0.2		0.1

Caruso 78) (P1)			
Calandrinia disperma	0.1		0.1
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		0.3
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Daucus glochidiatus	0.2		0.1
Eremophila clarkei	2		0.1
Eremophila forrestii	0.6		0.1
Erodium cygnorum	0.1		0.2
Eucalyptus kochii subsp. ?*borealis*	6		2
Gilruthia osbornei	0.1		0.1
Gnephosis brevifolia	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia cycnopotamica	0.1		0.1
Goodenia rosea	0.1		0.1
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)	0.2		0.1
Hakea recurva subsp. *recurva*	0.3		0.1
Hemigenia botryphylla	0.4		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Hydrocotyle intertexta	0.1		0.1
Lawrencella davenportii	0.1		0.1
Lemooria burkittii	0.1		0.1
**Medicago minima*	0.1		0.1
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.1		0.3
Nicotiana karara	0.1		0.1
Parietaria cardiostegia	0.1		0.1
Plantago debilis	0.1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.3
Ptilotus obovatus	0.3		0.1
Rhodanthe laevis	0.1		0.1
Rhodanthe maryonii	0.1		0.1
Senna artemisioides subsp. *filifolia*	1		0.1
**Sonchus oleraceus*	0.2		0.1
Stenopetalum filifolium	0.2		0.2

Thysanotus manglesianus			0.1
Trachymene cyanopetala	0.1		0.1
Vincetoxicum lineare			0.1
Waitzia acuminata var. *acuminata*	0.1		0.2

PHOTOS

Site Name: MLEM13

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	24/08/2024
GPS Location:	GDA94 Zone 50 451606.2E 6772045N
Community:	Q
Landform Type:	Other, Low lying flat (other)
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Mid isolated clumps of mallee trees over tall open shrubland over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	451606	6772045	
Corner 2	WGS84	451606	6772068	
Corner 3	WGS84	451623	6772063	
Corner 4	WGS84	451624	6772043	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3.5		7
Acacia sibina	3		3
Amphipogon caricinus var. *caricinus*	0.2		0.3
Bellida graminea	0.1		1
Calotis multicaulis	0.1		0.1

Cephalipterum drummondii	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Dianella revoluta var. *divaricata*	0.6		0.1
Drosera eremaea			0.1
Erodium cygnorum	0.1		0.2
Eucalyptus arctata	3		2
Gnephosis brevifolia	0.1		0.1
Goodenia pusilliflora	0.1		0.1
Goodenia rosea	0.1		0.1
Hakea minyma	2.2		0.5
Melaleuca hamata	3.5		12
Monachather paradoxus	0.2		0.1
Myriocephalus gueriniae	0.1		0.5
Podolepis aristata subsp. *affinis*	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Rhodanthe laevis	0.1		0.1
Solanum lasiophyllum	0.5		0.1
Thysanotus pyramidalis	0.1		0.1
Trachymene cyanopetala	0.1		0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	MLEM15
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 445566.1E 6770767.4N
Community:	Q
Landform Type:	Low Rise
Slope Class:	Very Gently Inclined (1°)
Aspect:	N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - PR - Pristine
Fire:	10-20 Years
Habitat:	Tall closed shrubland over low forbland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	445566	6770767	
Corner 2	WGS84	445592	6770762	
Corner 3	WGS84	445588	6770735	
Corner 4	WGS84	445559	6770743	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis	2.5		70
Acacia latior	4		2.5
Bellida graminea	0.1		0.3
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.2
Chthonocephalus pseudevax	0.1		0.1
**Cuscuta* ?*planiflora*			0.1

Drosera eremaea			0.1
Dysphania glandulosa	0.1		0.1
Erodium cygnorum	0.1		0.4
Eucalyptus arctata			
Gilberta tenuifolia	0.1		0.2
Gilruthia osbornei	0.1		0.3
Goodenia capillosa	0.1		0.2
Goodenia rosea	0.1		0.5
Hakea recurva subsp. *recurva*			
Haloragis odontocarpa	0.1		0.1
Hyalosperma demissum	0.1		0.1
Melaleuca nematophylla	2.5		1
Monachather paradoxus	0.1		0.1
Myriocephalus gueriniae	0.1		2
Persoonia hexagona	2		0.8
Podolepis aristata subsp. *affinis*	0.1		0.2
Rhodanthe laevis	0.1		0.1
Roebuckiella cheilocarpa	0.1		0.5
Solanum lasiophyllum	0.1		0.1

PHOTOS

Site Name:	MLEM16
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 445827.7E 6770828.1N
Community:	A
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm, 20-60mm
CF Types:	Quartz, Laterite, Ironstone
Vegetation Condition:	Combined Vegetation Condition - PR - Pristine
Fire:	10-20 Years
Habitat:	Tall open shrubland over low isolated clumps of shrubs over low forbland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	445828	6770828	
Corner 2	WGS84	445842	6770811	
Corner 3	WGS84	445834	6770788	
Corner 4	WGS84	445818	6770792	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		5
Acacia incognita			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla	2		3
Blennospora drummondii	0.1		0.1

Caesia sp. Wongan (K.F. Kenneally 8820)	0.1		0.1
Calandrinia eremaea	0.1		0.2
Calandrinia granulifera	0.1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta ?planiflora*			0.1
Drosera eremaea			0.2
Drosera glanduligera	0.1		0.1
Drosera major	0.1		0.2
Eremophila eriocalyx	0.9		0.3
Erodium cygnorum	0.1		0.2
Gonocarpus nodulosus	0.1		0.2
Goodenia cycnopotamica	0.1		0.4
Goodenia havilandii	0.1		0.1
Goodenia pusilliflora	0.1		0.3
Goodenia rosea	0.1		0.4
Grevillea obliquistigma subsp. *obliquistigma*	1.8		0.5
Grevillea pityophylla	0.5		0.2
Hemigenia sp. aff. botryphylla (Potentially undescribed)	1		1
Hyalosperma demissum	0.1		0.2
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Hydrocotyle intertexta			0.1
Isoetopsis graminifolia	0.1		0.1
Isolepis congrua	0.1		0.1
Lawrencella rosea	0.1		0.1
Melaleuca hamata	3		3
Mirbelia microphylla	0.7		1.5
Monachather paradoxus	0.3		0.1
Panaetia lessonii	0.1		0.2
Ptilotus obovatus	0.3		0.7
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.4
Rhodanthe maryonii	0.1		0.1
Rhodanthe spicata	0.1		0.3
Roebuckiella cheilocarpa	0.1		0.2
Schoenia cassiniana	0.2		0.5
Schoenus variicellae	0.1		0.4
Solanum lasiophyllum	0.2		0.1
Triglochin isingiana	0.1		0.1

PHOTOS

Site Name:	MLEM18
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 446377E 6771066.2N
Community:	M
Landform Type:	Open Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Orange
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Quartz, Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Low open chenopod shrubland over low forbland
Comments:	Nearby rail and road

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	446377	6771066	
Corner 2	WGS84	446366	6771076	
Corner 3	WGS84	446348	6771088	
Corner 4	WGS84	446366	6771094	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex codonocarpa	0.1		0.1
Atriplex vesicaria	0.3		0.8

Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.1
Calotis multicaulis	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Erodium cygnorum	0.1		0.1
Gnephosis brevifolia	0.1		0.2
Hyalochlamys globifera	0.1		0.1
Isotoma scapigera	0.1		0.1
Maireana atkinsiana	0.4		4
Maireana carnosa	0.1		0.1
Maireana eriosphaera	0.3		0.5
Maireana glomerifolia	0.2		0.1
Maireana tomentosa subsp. *tomentosa*	0.2		0.2
**Mesembryanthemum nodiflorum*	0.1		0.2
**Monoculus monstrosus*	0.1		0.1
Pogonolepis muelleriana	0.1		0.1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Roebuckiella cheilocarpa	0.1		0.1
Roepera sp.	0.1		0.1
**Rostraria pumila*	0.1		0.1
Sarcozona praecox	0.3		0.5
Senecio glossanthus	0.1		0.1
Senecio lacustrinus	0.2		0.1
Sondottia connata	0.1		0.1
**Spergula pentandra*	0.1		0.1
Stenopetalum salicola	0.1		0.1
Tecticornia disarticulata	0.4		1.8
Triglochin isingiana	0.1		0.1
Triglochin longicarpa	0.1		0.2

PHOTOS

Site Name:	MLEM19
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 446546.7E 6771032.1N
Community:	G
Landform Type:	Lower Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	S
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm, 20-60mm, 60-200mm
CF Types:	Granite, Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall open shrubland over low forbland
Comments:	Nearby rail and road

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	446547	6771032	
Corner 2	WGS84	446546	6771045	
Corner 3	WGS84	446560	6771051	
Corner 4	WGS84	446574	6771020	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		10
Acacia andrewsii	0.5		1

Acacia tetragonophylla	2		4
Acacia umbraculiformis	1.5		0.5
Actinobole uliginosum	0.1		0.1
Austrostipa variabilis	0.1		0.1
Caesia sp. Wongan (K.F. Kenneally 8820)	0.2		0.2
Calandrinia granulifera	0.1		0.1
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)	0.1		0.1
Calotis multicaulis	0.1		0.8
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
**Cleretum papulosum* subsp. *papulosum*	0.1		0.1
Comesperma integerrimum			0.1
Crassula colorata var. *acuminata*	0.1		0.1
**Cuscuta ?planiflora*			0.1
Enchylaena lanata	0.5		0.5
Eremophila oldfieldii subsp. *oldfieldii*	2		0.5
Eremophila oppositifolia subsp. *angustifolia*			
Erodium cygnorum	0.1		0.2
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus			
Goodenia cycnopotamica	0.1		0.2
Grevillea sarissa subsp. *sarissa*	1.8		0.8
Hyalosperma demissum	0.1		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Isoetopsis graminifolia	0.1		0.1
Isolepis congrua	0.1		0.1
Maireana carnosa	0.5		0.5
Maireana georgei	0.4		0.7
Maireana thesioides	0.3		0.5
Ophioglossum lusitanicum	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.1
Podolepis aristata subsp. *affinis*	0.1		0.1
Rhagodia drummondii	0.7		0.8
Rhodanthe chlorocephala subsp. *splendida*	0.1		1.5
Rhodanthe maryonii	0.1		0.2
Roebuckiella cheilocarpa	0.1		2
Santalum spicatum			
Scaevola spinescens	0.8		0.5
Sclerolaena eurotioides	0.5		0.5

Senecio glossanthus	0.2		0.1
Senna artemisioides subsp. *filifolia*			
Senna sp. Austin (A. Strid 20210)	1.5		0.5
Siemssenia capillaris	0.1		0.2
Waitzia acuminata var. *acuminata*	0.2		0.2

PHOTOS

Site Name: MLEM23

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 446875.3E 6771101.4N
Community:	M
Landform Type:	Open Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Waterlogged
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	2-6mm
CF Types:	Quartz
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Low sparse chenopod shrubland over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	446875	6771101	
Corner 2	WGS84	446890	6771098	
Corner 3	WGS84	446887	6771069	
Corner 4	WGS84	446868	6771069	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria	0.2		1.5
Calandrinia granulifera	0.1		0.1

Calandrinia sp.	0.1		0.1
Centrolepis cephaloformis subsp. *cephaloformis*	0.1		0.1
Cotula cotuloides	0.1		0.3
Dithyrostegia amplexicaulis	0.1		0.1
Eragrostis dielsii	0.1		0.1
Gnephosis setifera (P1)	0.1		0.1
Gnephosis trifida	0.1		0.1
Hyalochlamys globifera	0.1		0.1
**Juncus bufonius*	0.1		0.1
Lawrencia squamata	0.3		0.5
Maireana amoena	0.1		0.1
Maireana eriosphaera	0.4		0.1
Maireana glomerifolia	0.3		0.5
**Mesembryanthemum nodiflorum*	0.1		0.1
Pogonolepis muelleriana	0.1		0.2
Senecio lacustrinus	0.2		1.5
Siemssenia capillaris	0.1		0.1
Stenopetalum salicola	0.3		0.1
Tecticornia disarticulata	0.4		0.7
Tecticornia loriae	0.3		5
Tecticornia peltata	0.3		1.5
Tecticornia sp. 'Karara 3'	0.4		0.2
Tecticornia sp. 'Karara 4'	0.3		3
Triglochin mucronata	0.1		0.1
Triglochin nana	0.1		0.1

PHOTOS

Site Name:	MLEM25
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 447788.2E 6771195.4N
Community:	M
Landform Type:	Open Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Waterlogged
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other), Weeds
Fire:	10-20 Years
Habitat:	Low open chenopod shrubland over low forbland
Comments:	20m south of quadrat is inundated. Nearby rail and road

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	447788	6771195	
Corner 2	WGS84	447776	6771193	
Corner 3	WGS84	447781	6771210	
Corner 4	WGS84	447800	6771204	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria	0.5		0.4
Bromus arenarius	0.3		0.1
Calandrinia ptychosperma	0.1		0.1
Calotis multicaulis	0.1		0.1
Cotula cotuloides	0.1		0.1

Dithyrostegia amplexicaulis	0.1		0.1
Eragrostis dielsii	0.1		0.3
Frankenia pauciflora	0.5		2
Gomphrena verecunda	0.1		0.1
Lawrencia squamata	0.4		0.5
Maireana eriosphaera	0.5		0.4
**Monoculus monstrosus*	0.3		0.1
Pogonolepis muelleriana	0.1		0.1
Senecio lacustrinus	0.5		0.3
Siemssenia capillaris	0.1		0.5
**Sonchus oleraceus*	0.3		0.1
Stenopetalum salicola	0.2		0.1
Tecticornia indica subsp. *bidens*	0.6		15
Triglochin isingiana	0.1		0.1
Triglochin mucronata	0.1		0.1
Triglochin nana	0.1		0.1

PHOTOS

Site Name:	MLEM26
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 447982.8E 6771327.1N
Community:	L
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	S
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall sparse shrubland over low isolated clumps of shrubs over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	447983	6771327	
Corner 2	WGS84	447963	6771331	
Corner 3	WGS84	447967	6771348	
Corner 4	WGS84	447986	6771340	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria	1		2
Calandrinia eremaea	0.1		0.1
Calandrinia granulifera	0.1		0.2
Calotis multicaulis	0.1		0.1
Centrolepis pilosa	0.1		0.1

Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.2
Drosera glanduligera	0.1		0.1
Enchylaena tomentosa var. *tomentosa*	0.2		0.5
Erodium cygnorum	0.2		0.1
Frankenia setosa	0.3		0.3
Gnephosis brevifolia	0.1		0.1
Gunniopsis quadrifida	0.3		1
Hyalochlamys globifera	0.1		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.2
Isolepis congrua	0.1		0.1
**Juncus bufonius*	0.1		0.1
**Limonium lobatum*	0.1		0.1
Maireana eriosphaera	0.5		0.5
Maireana tomentosa subsp. *tomentosa*	0.5		0.5
Melaleuca acutifolia	6		8
**Monoculus monstrosus*	0.1		0.1
**Parapholis incurva*	0.1		0.1
**Pentameris airoides* subsp. *airoides*	0.1		0.2
Pogonolepis muelleriana	0.1		0.1
Ptilotus polystachyus	0.4		0.1
Rhagodia drummondii	0.5		1
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.4
Roebuckiella cheilocarpa	0.1		0.2
**Rostraria pumila*	0.1		0.1
Sarcozona praecox	0.3		0.5
Sclerolaena diacantha	0.1		0.5
Senecio glossanthus	0.3		0.3
**Sonchus oleraceus*	0.2		0.1
**Spergula pentandra*	0.2		0.1
Triglochin isingiana	0.1		0.1

PHOTOS

Site Name: MLEM30

Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	27/08/2024
GPS Location:	GDA94 Zone 50 441015.5E 6770113.1N
Community:	G
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
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:	Quartz, Granite, Calcrete
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, Grazing
Fire:	10-20 Years
Habitat:	Low isolated clumps of trees over tall isolated clumps of shrubs over low isolated clumps of shrubs over low forbland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	441016	6770113	
Corner 2	WGS84	441040	6770112	
Corner 3	WGS84	441039	6770090	
Corner 4	WGS84	441016	6770089	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia tetragonophylla	2.2		3
**Arctotheca calendula*	0.1		0.2
Arthropodium dyeri	0.1		0.1

Atriplex codonocarpa	0.3		0.5
Atriplex semilunaris			0.1
Calotis hispidula	0.1		0.1
Calotis multicaulis	0.1		0.1
Cephalipterum drummondii	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Dodonaea inaequifolia	2		1
Enchylaena lanata	0.4		1
**Erodium cicutarium*	0.2		0.1
Erodium cygnorum	0.1		0.1
Erymophyllum glossanthus	0.1		0.8
Eucalyptus loxophleba subsp. *supralaevis*	6		3
Exocarpos aphyllus	0.5		0.3
Gnephosis brevifolia	0.1		0.1
Goodenia pusilliflora	0.1		0.1
Hyalosperma glutinosum subsp. *venustum*	0.1		0.1
Lawrencella davenportii	0.1		0.1
Lepidium oxytrichum	0.1		0.1
**Limonium lobatum*	0.1		1
Maireana carnosa	0.2		0.2
Maireana tomentosa subsp. *tomentosa*	0.3		0.1
**Medicago minima*	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		0.5
Plantago debilis	0.1		0.1
Ptilotus exaltatus	0.2		0.5
Ptilotus obovatus	0.4		0.5
Roebuckiella cheilocarpa	0.1		0.1
Roepera aurantiaca subsp. *aurantiaca*	1		0.5
Roepera similis	0.1		0.1
**Rostraria pumila*	0.1		0.1
Sclerolaena eurotioides	0.3		0.3
Sclerolaena fusiformis	0.1		0.1
Senecio glossanthus	0.1		0.1
Senna artemisioides subsp. *filifolia*	1.5		0.5
Solanum lasiophyllum	0.5		0.2
**Sonchus oleraceus*	0.2		0.1
Sondottia connata	0.1		0.1
**Spergula pentandra*	0.1		0.1

PHOTOS

Site Name:	MLEQ-001
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	03/10/2023
GPS Location:	GDA94 Zone 50 490152.17E 6778631.97N
Orientation:	90/180
Community:	G
Landform Type:	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:	2-10%
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Fire:	> 20 years
Habitat:	Open woodland, less than 10% and less than 10 m over tall open shrubland of Acacia species, less than 10% 2-3 m over very open shrubland to 1.5 m < 10% over very open herbs to 40 cm < 5%

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	490152	6778632	NW
Corner 2	490171	6778633	NE
Corner 3	490172	6778613	SE
Corner 4	490151	6778612	SW

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Eucalyptus loxophleba* subsp. *supralaevis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		1
Acacia obtecta	2		1

Acacia ramulosa var. *ramulosa*	1		0.25
Acacia tetragonophylla	1		0.5
Austrostipa elegantissima	0.1		0.1
Bursaria occidentalis			
Enchylaena tomentosa var. *tomentosa*	0.5		0.5
Eremophila forrestii subsp. *forrestii*	0.3		0.1
Eucalyptus loxophleba subsp. *supralaevis*	10		20
Maireana georgei	0.4		0.2
Maireana trichoptera	0.1		0.1
Pimelea microcephala subsp. *microcephala*	0.8		0.1
Ptilotus exaltatus	0.01		0.1
Ptilotus gaudichaudii	0.1		0.1
Roepera eremaea	0.1		0.1
Rytidosperma caespitosum	0.1		0.1
Sclerolaena diacantha	0.2		0.2
Sclerolaena fusiformis	0.2		0.5
Senna artemisioides subsp. *filifolia*	1		1

PHOTOS

Site Name:	MLEQ-002
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490613E 6779251.47N
Orientation:	90/180
Community:	Q
Landform Type:	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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Tall very open shrubland of Melaleuca to 4 m, 5 % over tall open shrubland (Acacia sp.) to 2.5 m at 10% over low open shrubland dominated by Acacia species to 1 m at 5 %
Comments:	Some dead annuals not collected

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	490613	6779251	NW
Corner 2	490630	6779247	NE
Corner 3	490628	6779228	SE
Corner 4	490606	6779231	SW

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia latior*, *Acacia sibina*, *Melaleuca hamata*

Lower Stratum 1: *Amphipogon caricinus* var. *caricinus*, *Dianella revoluta* var. *divaricata*, *Monachather paradoxus*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		12
Acacia sibina	2.5		5
Amphipogon caricinus var. *caricinus*	0.3		0.1
Callitris columellaris			
Cheiranthera simplicifolia			0.01
Dianella revoluta var. *divaricata*	0.5		0.01
Eucalyptus kochii subsp. *amaryssia*			
Melaleuca hamata	3		6
Monachather paradoxus	0.3		0.1

PHOTOS

Site Name:	MLEQ-003
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490209.52E 6779482.02N
Orientation:	90/180
Community:	Q
Landform Type:	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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Fire:	> 20 years
Habitat:	Upper stratum isolated trees at 8 m, 10 % cover, upper stratum 2 - 4m < 10 % Melaleuca hamata. LS1 1-2 m mixed Acacias 30 % cover
Comments:	Dead daisies - not identified.

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	490210	6779482	NW
Corner 2	490225	6779482	NE
Corner 3	490230	6779460	SE
Corner 4	490207	6779460	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2		25
Acacia sibina	3		10
Eucalyptus kochii subsp. *amaryssia*	5		1

Melaleuca leiocarpa	3		5

PHOTOS

Site Name:	MLEQ-004
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 491118.14E 6779495.5N
Orientation:	9
Community:	R
Landform Type:	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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Tall isolated shrubs to 6 m over tall shrubland of Acacia species up to 2 m at 30 % over open shrubland to 1 m of mixed Acacias 5 %
Comments:	Dead annuals not collected

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	491118	6779496	NW
Corner 2	491136	6779488	NE
Corner 3	491132	6779469	SE
Corner 4	491114	6779472	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	2		20

Comesperma integerrimum			0.01
Eremophila eriocalyx	2		0.1
Maireana carnosa	0.05		0.01
Melaleuca hamata	3.5		2

PHOTOS

Site Name:	MLEQ-005
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 491690.05E 6779478.98N
Orientation:	90/180
Community:	R
Landform Type:	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:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Tall isolated shrubland of Melaleuca over tall shrubland of Acacia sp. 30 % over low sparse shrubland to 0.5 m
Comments:	Syncline Road

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	491690	6779479	NE
Corner 2	491675	6779481	NW
Corner 3	491693	6779461	SE
Corner 4	491672	6779461	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		2

Acacia burkittii	2		5
Acacia incognita	3		10
Amphipogon caricinus var. *caricinus*	0.2		0.2
Brachychiton gregorii			
Chamelaucium pauciflorum subsp. Perenjori (B.J. Conn 2181)	0.4		5
Dianella revoluta var. *divaricata*	0.4		0.1
Eremophila eriocalyx	0.1		0.1
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.4		3
Hibbertia arcuata			
Melaleuca hamata	3		1
Philotheca deserti subsp. *deserti*	0.4		2

PHOTOS

Site Name:	MLEQ-006
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 492242.75E 6779365.14N
Orientation:	90/180
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Very sparse tall shrubland 4m < 5% over shrubland 1.5-3m at 20 % over understorey to 0.5 m 25%

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	492243	6779365	NW
Corner 2	492262	6779366	NE
Corner 3	492264	6779349	SE
Corner 4	492250	6779349	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		0.5
Acacia burkittii	3		8
Acacia incognita	3		5

Amphipogon caricinus var. *caricinus*	0.3		0.2
Chamelaucium pauciflorum subsp. Perenjori (B.J. Conn 2181)	0.5		17
Eremophila eriocalyx	1		0.1
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.4		4
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Melaleuca hamata	4		1.5
Philotheca deserti subsp. *deserti*	0.5		4
Thysanotus sp.			0.1
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name:	MLEQ-007
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492127.59E 6778603.36N
Orientation:	90/180
Community:	G
Landform Type:	Flat
Slope Class:	Very Gently Inclined (1°)
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:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal, Old vehicle tracks (other)
Fire:	> 20 years
Habitat:	Open tall woodland > 10 m < 10 % over tall open shrubland 2m+ over sparse low shrubland 1 m over herbs and grasses

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	492128	6778603	NW
Corner 2	492150	6778606	NE
Corner 3	492151	6778586	SE
Corner 4	492130	6778585	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		5
Acacia tetragonophylla	2.5		2
Austrostipa elegantissima	0.4		

Enchylaena tomentosa var. *tomentosa*			
Eucalyptus loxophleba subsp. *supralaevis*			8
Maireana georgei			
Maireana trichoptera	0.15		1
Olearia pimeleoides	0.5		
Pimelea microcephala subsp. *microcephala*	1		
Ptilotus exaltatus	0.1		
Ptilotus obovatus	2.4		
Rhagodia drummondii	0.7		
Sclerolaena diacantha			
Sclerolaena fusiformis	0.1		
Senna artemisioides subsp. *filifolia*	1.5		1
Senna sp. Austin (A. Strid 20210)	1		

PHOTOS

Site Name:	MLEQ-008
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492554.73E 6778972.14N
Orientation:	90/180
Community:	R
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	WNW
Soil Type:	Clay Loam
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:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal, Rehab drill line outside of quadrat (other)
Fire:	> 20 years
Habitat:	Tall shrubland to 4 m 10 % of Melaleuca sp. over open shrubland of mixed Acacia sp. 2 m at 30 % over low shrubland at 1 m 10 %
Comments:	Quadrat is north of rehabilitated track. This vegetation is slightly different to the Acacia scrub to the west. More rocky here, and heading upslope to the north

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	492555	6778972	NW
Corner 2	492572	6778972	NE
Corner 3	492571	6778953	SE
Corner 4	492551	6778952	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		
Acacia latior	2		10
Amphipogon caricinus var. *caricinus*	0.2		0.1
Drummondita fulva (P3)	0.5		0.2
Eremophila clarkei	0.6		0.2
Eremophila latrobei subsp. *latrobei*	1		1
Hibbertia arcuata	1		1
Hysterobaeckea setifera subsp. *setifera*			
Melaleuca leiocarpa	4		10
Philotheca sericea	1		5
Prostanthera campbellii	0.7		
Ptilotus obovatus	0.4		0.1

Site Name:	MLEQ-009
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 493022.38E 6778854.22N
Orientation:	90/180
Community:	Q
Landform Type:	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:	<2%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal, Old vehicle tracks (other)
Habitat:	Tall open shrubland to 4 m, < 10 % over shrubland 1-2 m at 35 % over low shrub < 1 m at 10 %
Comments:	Dead annuals and acacias

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	493022	6778854	NW
Corner 2	493041	6778851	NE
Corner 3	493040	6778831	SE
Corner 4	493017	6778835	SW

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Acacia latior*, *Melaleuca leiocarpa*
Lower Stratum 1:	*Acacia latior*, *Melaleuca leiocarpa*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			30
Amphipogon caricinus var. *caricinus*	0.4		0.5
Melaleuca leiocarpa			15

PHOTOS

Site Name:	MLEQ-010
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 493596.46E 6779405.53N
Community:	R
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Tall sparse shrubland to 3 m < 5% over tall shrubland 1.5-2 m 20% over low sparse shrubs 0.5m 5%

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	493596	6779406	NW
Corner 2	493615	6779402	NE
Corner 3	493611	6779382	SE
Corner 4	493590	6779384	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	1		0.5
Acacia ramulosa var. *ramulosa*	3		8
Amphipogon caricinus var. *caricinus*	0.2		0.2
Chamelaucium pauciflorum subsp. Perenjori	0.4		6

(B.J. Conn 2181)			
Melaleuca hamata	3		1
Philotheca deserti subsp. *deserti*	1		3
Prostanthera campbellii	0.4		0.1
Waitzia acuminata var. *acuminata*	0.05		0.01

PHOTOS

Site Name:	MLEQ-011
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 493689.93E 6779289.69N
Orientation:	90/180
Community:	R
Landform Type:	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:	<2%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal, Road within 50 m (other)
Fire:	> 20 years
Habitat:	Tall open shrubland to 4 m of Mel. hamata < 10 % and Euc. leptop. over tall shrubland of Acacia sp. 2.5 m 40 %

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	493690	6779290	NW
Corner 2	493710	6779290	NE
Corner 3	493711	6779270	SE
Corner 4	493689	6779269	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		0.2
Acacia latior	2.5		45
Allocasuarina acutivalvis subsp. *prinsepiana*	2		0.5

Dianella revoluta var. *divaricata*	0.4		0.1
Eremophila clarkei	0.5		0.1
Eucalyptus arctata	4		3
Melaleuca hamata	4		3
Melaleuca leiocarpa	2		1

PHOTOS

Site Name:	MLEQ-012
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 496552.38E 6779525.13N
Orientation:	90/180
Community:	Q
Landform Type:	Plain
Slope Class:	Level (0°)
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:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal, Drill track nearby (other)
Fire:	> 20 years
Habitat:	Acacia shrubland with Eucalyptus. Open woodland to 10 m at 5% over tall shrubland 2-4 m at 15 % over shrubland 1-2 m at 15% over sparse isolated low shrubs
Comments:	Waste rock dump in distance of photo 2. Lots of dead Acacia and Philotheca desertii. Lots of dead annuals

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	496552	6779525	NW
Corner 2	496572	6779525	NE
Corner 3	496574	6779504	SE
Corner 4	496551	6779504	SW

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2.5		7
Acacia sibina	2.5		5
Allocasuarina acutivalvis subsp. *prinsepiana*	4		3
Dianella revoluta var. *divaricata*			
Eremophila clarkei	0.5		0.1
Eucalyptus kochii subsp. *amaryssia*	10		6
Monachather paradoxus	0.2		0.1
Philotheca brucei subsp. *brucei*	1		0.2
Philotheca deserti subsp. *deserti*	1		3

PHOTOS

Site Name:	MLEQ-013
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 496040.8E 6779278.67N
Orientation:	90/180
Community:	G
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Mixed Eucalyptus woodland and shrubland. Isolated trees to 10 m over tall shrubland to 4m at < 10 % over shrubland 1-3 m at 30 % over lower stratum to 0.5 m < 5 %
Comments:	Lots of dead annuals

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	496041	6779279	
Corner 2	496061	6779279	
Corner 3	496061	6779259	
Corner 4	496044	6779257	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive

Acacia burkittii	3.5		15
Acacia obtecta	2		3
Acacia tetragonophylla	1.5		3
Austrostipa elegantissima	0.4		0.1
Comesperma integerrimum			0.1
Enchylaena tomentosa var. *tomentosa*			
Eremophila clarkei	0.5		0.1
Eucalyptus loxophleba subsp. *supralaevis*			1
Exocarpos aphyllus	1		2
Hakea recurva subsp. *recurva*	2		1.5
Maireana convexa	0.4		0.1
Maireana trichoptera	0.1		0.1
Olearia pimeleoides	0.4		0.5
Ptilotus obovatus	0.4		0.1
Rhagodia drummondii	0.4		0.1
Senna artemisioides subsp. *filifolia*	1		0.2
Solanum lasiophyllum	0.4		0.1

PHOTOS

Site Name:	MLEQ-014
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495935.15E 6779532.02N
Orientation:	90/180
Community:	O
Landform Type:	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:	20-50%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Habitat:	Tall open shrubland to 4 m at 5 % over shrubland 1-3 m at 30 % over sparse shrubs 0.5 m at < 5%

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	495935	6779532	
Corner 2	495956	6779529	
Corner 3	495953	6779507	
Corner 4	495932	6779511	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		5
Acacia exocarpoides	1		3
Acacia latior	3		8
Alyxia buxifolia	2		0.3

Austrostipa elegantissima	0.4		0.1
Eremophila clarkei	1.5		3
Hakea recurva subsp. *recurva*	2.5		2
Hibbertia arcuata	1		0.5
Olearia humilis	0.4		
Philotheca brucei subsp. *brucei*	1.5		4
Santalum spicatum	2.5		0.5

PHOTOS

Site Name:	MLEQ-015
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495693.11E 6779205.2N
Orientation:	90/180
Community:	H
Landform Type:	Plain
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal
Habitat:	Shrubland to 2m, < 10 % in quadrat, thicker outside

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	495693	6779205	
Corner 2	495710	6779209	
Corner 3	495717	6779188	
Corner 4	495697	6779183	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera	3		2
Acacia burkittii	3		2
Acacia exocarpoides	1		0.3
Acacia latior			
Acacia obtecta	3		1
Acacia tetragonophylla	1.5		1.5

Atriplex ?vesicaria	0.4		0.1
Austrostipa elegantissima			
Austrostipa trichophylla	0.25		0.1
Cephalipterum drummondii	0.05		0.1
Comesperma integerrimum			
Enchylaena lanata	0.3		0.1
Eremophila pantonii			
Exocarpos aphyllus	1.3		0.2
Pimelea microcephala subsp. *microcephala*			
Ptilotus obovatus	0.3		0.1
Rhagodia drummondii	0.4		0.1
Sclerolaena fusiformis	0.15		0.2
Solanum lasiophyllum			

PHOTOS

Site Name:	MLEQ-016
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/10/2023
GPS Location:	GDA94 Zone 50 488112.32E 6778294.44N
Orientation:	90/180
Community:	R
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NNW
Soil Type:	Clay Loam
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:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 3 - Very Good
Disturbance:	Proximity to ex mining area, drill lines (other)
Fire:	> 20 years
Habitat:	Tall open shrubland 2-4 m of Acacia sp. 20 %, over low open shrubland to 1 m at < 5 %, occasional trees
Comments:	Lots of old death. Lots of dead daisies. Animal poo - kangaroos? Lots of insect activity

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii			
Acacia mulganeura			
Acacia ramulosa var. *ramulosa*	3.5		12
Acacia sibina	2.5		1
Eremophila clarkei	1		3
Eremophila latrobei subsp. *latrobei*	0.7		0.1

Eucalyptus loxophleba subsp. *supralaevis*			
Hakea recurva subsp. *recurva*	3		2
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.4		0.1
Melaleuca leiocarpa			
Senna charlesiana			
Thysanotus sp.			0.1

PHOTOS

Site Name:	MLEQ-017
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/10/2023
GPS Location:	GDA94 Zone 50 487178.49E 6778470.92N
Orientation:	90/180
Community:	R
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Fire:	> 20 years
Habitat:	Tall isolated shrubs > 3 m over shrubland 1-2 m at 25 % over low open shrubland < 1 m at 10 %
Comments:	Dead daisies, less than in previous

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	487178	6778471	
Corner 2	487198	6778472	
Corner 3	487197	6778450	
Corner 4	487178	6778451	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.5		6
Acacia ramulosa var. *ramulosa*	2		6
Acacia sibina	2		5

Acacia tetragonophylla			
Aluta aspera subsp. *hesperia*	0.5		3
Cephalipterum drummondii			
Eremophila clarkei	1.5		0.5
Eremophila latrobei subsp. *latrobei*	1.5		3
Hibbertia arcuata	0.5		1
Philotheca deserti subsp. *deserti*	0.5		4
Pimelea microcephala subsp. *microcephala*			
Scaevola spinescens			
Thysanotus sp.			0.1
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEQ-018
Site Type:	QUADRAT
Dimensions:	20m x 20m
Survey Date:	07/10/2023
GPS Location:	GDA94 Zone 50 486988.1E 6778042.93N
Orientation:	90/180
Community:	Q
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	SE
Soil Type:	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
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal, proximity to x mining area, roads (other)
Fire:	> 20 years
Habitat:	Tall isolated trees to 10 m over tall shrubland 2-4 m 20% over shrubland 1-2 m < 10 %
Comments:	Numerous dead annuals, lots of death overall

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	486988	6778043	
Corner 2	487008	6778046	
Corner 3	487007	6778019	
Corner 4	486989	6778023	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive

Acacia burkittii			
Acacia latior	2.5		20
Acacia sibina	2.5		3
Dianella revoluta var. *divaricata*			
Eucalyptus kochii subsp. *amaryssia*	10		3
Melaleuca nematophylla	2		2
Philotheca deserti subsp. *deserti*	1		0.2

PHOTOS

Relevés

Site Name: AIR-01

Site Type: AREA

Survey Date: 20/05/2009

GPS Location: GDA94 Zone 50 470697E 6767549N

Landform Type: Lowerslope, gentle rise

Slope Class: Very Gentle

Soil Type: Sand with some silt

Soil Colour: Brown-orange

Fire: >3

Comments: Thicket over low grasses.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		25
Acacia sibina	1.8		5
Amphipogon caricinus var. *caricinus*			
Baeckea benthamii ms	2.5		5
Borya sphaerocephala	0.1		0.1
Cryptandra imbricata			
Eucalyptus leptopoda subsp. *arctata*			
Hakea invaginata	1.7		1
Hemigenia benthamii	0.4		7
Monachather paradoxus	0.3		7
Philotheca glabra	0.3		
Ptilotus obovatus	0.3		0.5

PHOTOS

Site Name:	AIR-02
Site Type:	AREA
Survey Date:	20/05/2009
GPS Location:	GDA94 Zone 50 470029E 6768027N
Landform Type:	Plain
Slope Class:	Nil
Soil Type:	Silty-loam, hard packed
Soil Colour:	Red
Fire:	>3
Comments:	Open Woodland.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii			
Acacia ramulosa var. *ramulosa*	3		
Callitris columellaris	3		5
Dianella revoluta	0.5		
Eucalyptus loxophleba subsp. *supralaevis*	15		5
Hemigenia botryphylla	0.4		
Monachather paradoxus	0.3		
Persoonia pentasticha (P3)	0.4		
Ptilotus obovatus	0.3		
Senna artemisioides subsp. *filifolia*			
Senna charlesiana	2		

PHOTOS

Site Name:	AIR-03
Site Type:	AREA
Survey Date:	20/05/2009
GPS Location:	GDA94 Zone 50 469296E 6768317N
Landform Type:	Plain
Slope Class:	Nil
Soil Type:	Silty loam, fairly hard packed
Soil Colour:	Red
Fire:	>3
Comments:	Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	1.5		15
Acacia ramulosa var. *ramulosa*	3.5		10
Acacia tetragonophylla	2		1
Amphipogon caricinus var. *caricinus*			
Callitris columellaris			
Cryptandra imbricata	1		1.5
Dianella revoluta	0.5		0.1
Eucalyptus loxophleba subsp. *supralaevis*	15		8
Hakea recurva subsp. *arida*	2		1
Monachather paradoxus	0.3		3
Ptilotus obovatus	0.3		2
Rhagodia drummondii	1		0.5
Senna artemisioides subsp. *filifolia*			

PHOTOS

Site Name: AIR-04

Site Type: AREA

Survey Date: 20/05/2009

GPS Location: GDA94 Zone 50 468732E 6768537N

Landform Type: Plain

Slope Class: Nil

Soil Type: Silty loam, hard packed, sand on top

Soil Colour: Red

Fire: >3

Comments: Open Woodland/Shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	1.5		2
Acacia ramulosa var. *ramulosa*	3		7
Acacia tetragonophylla	2.5		1
Callitris columellaris	4		5
Cryptandra imbricata	1		2
Eucalyptus kochii subsp. *plenissima*	15		7
Hakea recurva subsp. *arida*	2		3
Monachather paradoxus	0.3		2
Persoonia pentasticha (P3)	0.4		0.1
Senna artemisioides subsp. *filifolia*	1.5		2
Senna charlesiana	1		0.2

PHOTOS

Site Name:	BP03-1
Site Type:	AREA
Survey Date:	08/02/2007
GPS Location:	GDA94 Zone 50 444349E 6770347N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	silty loam with ironstone gravels
Soil Colour:	red-brown
Fire:	>5
Comments:	Acacia thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		8
Acacia resinosa	3		10
Hakea recurva subsp. *recurva*			
Melaleuca hamata	3.5		5
Monachather paradoxus	0.3		0.1
Philotheca brucei subsp. *brucei*	1.5		3
Solanum ellipticum	0.1		0.1

Site Name: BP04-1

Site Type: AREA

Survey Date: 08/02/2007

GPS Location: GDA94 Zone 50 463396E 6771752N

Landform Type: midslope

Slope Class: gentle

Soil Type: silty loam

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		50
Amphipogon caricinus var. *caricinus*	0.3		1
Dianella revoluta	1		0.1
Ecdeiocolea monostachya			
Enekbatus stowardii	0.5		4
Eucalyptus leptopoda subsp. *arctata*	3		1
Hakea ?invaginata			
Melaleuca hamata	2.5		2
Philotheca glabra	0.5		0.5
Thryptomene costata	2		1

Site Name: C-001

Site Type: AREA

GPS Location: GDA94 Zone 50 479645E 6771716N

Landform Type: plain

Slope Class: nil

Soil Type: clay-silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		2
Acacia aneura	2		1
Acacia anthochaera	3		1
Acacia obtecta	2		7
Acacia ramulosa var. *ramulosa*	3.5		3
Acacia tetragonophylla	1.5		2
Austrodanthonia sp.	0.3		0.5
Dianella revoluta	1		0.5
Eremophila eriocalyx	2		0.5
Eucalyptus kochii subsp. ?*plenissima*	5		5
Eucalyptus loxophleba subsp. *supralaevis*	5		5
Exocarpos aphyllus	2		0.5
Hakea recurva subsp. *recurva*	3		0.5
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		8
Maireana thesioides	0.4		0.25
Olearia pimeleoides	0.5		2
Pimelea microcephala subsp. *microcephala*	1.5		0.5
Ptilotus drummondii	0.3		0.5
Ptilotus obovatus var. *obovatus*	0.5		0.5
Rhagodia drummondii	0.5		0.5
Rhyncharrhena linearis			0.05
Senna ?stricta	2		0.5
Senna artemisioides subsp. *filifolia*	2		4
Solanum lasiophyllum			
Solanum nummularium			

Site Name: C-002

Site Type: AREA

GPS Location: GDA94 Zone 50 479698E 6771902N

Landform Type: lower slope

Slope Class: gentle

Soil Type: clay silt with ironstone pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		40
Austrodanthonia sp.	0.1		0.5
Cheilanthes sieberi subsp. *sieberi*	0.05		0.5
Enekbatus stowardii	0.3		1
Erodium cygnorum	0.05		0.5
Eucalyptus leptopoda subsp. *arctata*	5		15
Grevillea globosa (P3)	1.5		1
Philotheca deserti subsp. *deserti*	1		3

Site Name: C-003

Site Type: AREA

GPS Location: GDA94 Zone 50 480042E 6771771N

Landform Type: plain

Slope Class: nil

Soil Type: clay silt with occasional ironstone pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	2		1
Austrostipa elegantissima			
Eremophila pantonii	2		0.5
Eucalyptus horistes			
Eucalyptus striaticalyx subsp. *striaticalyx*	10		30
Maireana marginata			
Rhagodia drummondii	0.5		0.5
Santalum acuminatum			
Sclerolaena fusiformis			
Senna artemisioides subsp. *filifolia*	1.5		0.5
Senna artemisioides subsp. *x artemisioides*	2		3
Solanum nummularium	0.5		0.5
Stylidium sp.			

Site Name: C-004

Site Type: AREA

GPS Location: GDA94 Zone 50 480058E 6771321N

Landform Type: plain - sheetwash

Slope Class: very gentle

Soil Type: clay silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.5		3
Acacia obtecta			0.25
Eremophila pantonii	2		6
Eucalyptus striaticalyx subsp. *striaticalyx*	12		30
Exocarpos aphyllus	2		0.5
Maireana marginata			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Sclerolaena fusiformis			
Senna artemisioides subsp. *x artemisioides*			0.25

Site Name: C-005

Site Type: AREA

GPS Location: GDA94 Zone 50 480085E 6770969N

Landform Type: plain

Slope Class: very gentle

Soil Type: clay silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eremophila pantonii	3		0.5
Eucalyptus horistes			
Eucalyptus striaticalyx subsp. *striaticalyx*	5		50

Site Name: C-006

Site Type: AREA

GPS Location: GDA94 Zone 50 480526E 6771403N

Landform Type: drainage line

Slope Class: gentle

Soil Type: clay silt with some granite rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*			
Acacia acuminata	3		5
Acacia ramulosa var. *ramulosa*	4		30
Acacia tetragonophylla	3		20
Astroloma serratifolium	0.5		0.5
Cheilanthes sieberi subsp. *sieberi*	0.1		0.5
Comesperma integerrimum			0.25
Dianella revoluta	1		0.5
Erodium cygnorum	0.025		0.5
Eucalyptus loxophleba subsp. *supralaevis*	3		2.5
Gnephosis tenuissima	0.15		2
Hakea recurva subsp. *recurva*	3		0.5
Hemigenia ?sp. Yuna (A.C. Burns 95)	0.5		3
Melaleuca hamata	8		15
Mirbelia bursarioides ms	1		2
Santalum acuminatum	6		1
Sida ?calyxhymenia	0.3		0.1
**Sonchus oleraceus*	0.1		0.1

Site Name: C-008

Site Type: AREA

GPS Location: GDA94 Zone 50 481011E 6772081N

Landform Type: crest of rocky rise

Soil Type: clay silt with rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		5
Acacia aneura	3		0.5
Acacia ramulosa var. *ramulosa*	3		20
Acacia sibina	2		2.5
Aluta aspera subsp. *hesperia*	1.5		20
Dianella revoluta	1		1
Melaleuca hamata	4		5

Site Name: C-009

Site Type: AREA

GPS Location: GDA94 Zone 50 481287E 6772627N

Landform Type: plain

Slope Class: flat

Soil Type: clay silt with some ironstone pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		2.5
Acacia ramulosa var. *ramulosa*	3.5		40
Acacia sibina	2		1
Eremophila clarkei	0.5		0.5
Eucalyptus leptopoda subsp. *arctata*	5		2
Exocarpos aphyllus	2		1
Hakea recurva subsp. *recurva*	4		4
Lysiana casuarinae			0.1
Melaleuca leiocarpa	5		2.5
Ptilotus obovatus var. *obovatus*	0.5		0.5
Santalum acuminatum	2		1

Site Name: C-010

Site Type: AREA

GPS Location: GDA94 Zone 50 481300E 6773164N

Landform Type: lower slope

Slope Class: gentle

Soil Type: clay silt with some rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	4		60
Eucalyptus leptopoda subsp. *arctata*	5		1
Eucalyptus loxophleba subsp. *supralaevis*			
Melaleuca leiocarpa	2		2.5
Melaleuca nematophylla	3		2.5
Persoonia hexagona	3		2.5

Site Name: C-011

Site Type: AREA

GPS Location: GDA94 Zone 50 481250E 6773800N

Landform Type: plain

Slope Class: nil

Soil Type: clay silt with ironstone pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		7
Acacia acuminata	4		4
Acacia ramulosa var. *ramulosa*	3		20
Acacia tetragonophylla	1		2
Allocasuarina acutivalvis subsp. *prinsepiana*	10		0.5
Austrostipa elegantissima	0.6		0.5
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Hakea recurva subsp. *recurva*	3		0.5
Maireana thesioides	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.3		2
Rhagodia drummondii	0.4		1.5
Santalum acuminatum	6		0.5
Senna artemisioides subsp. *filifolia*	0.3		0.5

Site Name: C-012

Site Type: AREA

GPS Location: GDA94 Zone 50 480854E 6772904N

Landform Type: plain

Slope Class: nil

Soil Type: clay silt with ironstone gravel

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	1		2
Acacia acuaria	2		1
Acacia ?burkittii	1.5		0.5
Acacia obtecta			
Acacia ramulosa var. *ramulosa*	2		0.5
Acacia tetragonophylla	2		7
Austrodanthonia sp.			
Austrostipa elegantissima	0.5		0.5
Comesperma integerrimum			0.05
Dianella revoluta	1		0.5
Eremophila decipiens	1.5		0.5
Eucalyptus loxophleba subsp. *supralaevis*	10		20
Eucalyptus striaticalyx subsp. *striaticalyx*	10		1.5
Exocarpos aphyllus	2		1
Maireana sp.	0.2		0.05
Olearia pimeleoides			
Pittosporum angustifolium			
Ptilotus obovatus var. *obovatus*	0.5		4
Rhagodia drummondii	0.5		1
Rhyncharrhena linearis			
Santalum acuminatum	3		0.5
Senna artemisioides subsp. *filifolia*	1.5		0.5
Senna cardiosperma	1		0.5

Site Name: C-013

Site Type: AREA

GPS Location: GDA94 Zone 50 480954E 6773821N

Landform Type: lower slope

Slope Class: mod-gentle

Soil Type: hard clay silt with ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		6
Acacia ramulosa var. *ramulosa*	3		30
Allocasuarina acutivalvis subsp. *prinsepiana*	3		30
Aluta aspera subsp. *hesperia*	1.5		10
Dianella revoluta	1		0.5
Eremophila clarkei	1.5		0.5
Grevillea obliquistigma subsp. *obliquistigma*	1.5		1
Hakea invaginata			
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Melaleuca hamata	4		2
Melaleuca nematophylla			
Philotheca deserti subsp. *deserti*	0.5		4

Site Name: C-014

Site Type: AREA

GPS Location: GDA94 Zone 50 480417E 6773682N

Slope Class: moderate

Soil Type: hard clay silt over rocky BIF

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		10
Acacia exocarpoides	2		3
Acacia ramulosa var. *ramulosa*	3.5		40
Allocasuarina acutivalvis subsp. *prinsepiana*	3		5
Aluta aspera subsp. *hesperia*	1		15
Eucalyptus leptopoda subsp. *arctata*	4		1.5

Site Name: C-015

Site Type: AREA

GPS Location: GDA94 Zone 50 480492E 6773792N

Landform Type: mid-slope

Slope Class: moderate

Soil Type: clay silt with gravel and ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	2		5
Acacia ramulosa var. *ramulosa*	4		40
Allocasuarina acutivalvis subsp. *prinsepiana*	4		30
Cheilanthes sieberi subsp. *sieberi*	0.05		0.5
Grevillea obliquistigma subsp. *obliquistigma*	2		1
Grevillea paradoxa			
Hemigenia sp. Jibberding (J. D'Alonzo 418)	1		5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		1
Melaleuca nematophylla	3		2
Philotheca deserti subsp. *deserti*	0.5		5

Site Name: C-016

Site Type: AREA

GPS Location: GDA94 Zone 50 480370E 6773564N

Landform Type: lower slope-drainage area

Slope Class: gentle

Soil Type: clay silt with gravel

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	4		50
Cheiranthera filifolia var. *simplicifolia*			0.05
Daviesia benthamii subsp. *benthamii*	1.5		1
Eucalyptus leptopoda subsp. *arctata*	3		2
Grevillea nematophylla subsp. *supraplana*	2		0.5
Hemigenia divaricata	0.5		5
Malleostemon tuberculatus			
Melaleuca hamata	4		1
Melaleuca leiocarpa			
Monachather paradoxus	0.2		0.25
Poaceae sp.	0.2		0.5

Site Name: C-017

Site Type: AREA

GPS Location: GDA94 Zone 50 481107E 6774539N

Landform Type: plain, lower slope

Slope Class: very gentle

Soil Type: clay silt with gravel and occasional rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		50
Daviesia benthamii subsp. *benthamii*	1		0.5
Eucalyptus leptopoda subsp. *arctata*	4		1
Grevillea globosa (P3)	2		0.5
Melaleuca hamata	3		0.5
Melaleuca nematophylla	2		0.5

Site Name: C-018

Site Type: AREA

Survey Date: 20/05/2004

GPS Location: GDA94 Zone 50 481003E 6774755N

Landform Type: Plain

Slope Class: V. gentle

Soil Type: Clay silt loam with sand

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		2
Acacia aneura	4		1
Acacia anthochaera	5		4
Acacia obtecta	2		2
Acacia ramulosa var. *ramulosa*	3		20
Acacia tetragonophylla	2		5
Callitris columellaris	6		10
Dodonaea viscosa subsp. *angustissima*	3.5		2
Eucalyptus horistes	15		10
Hakea recurva subsp. *recurva*	2		2

Site Name: C-019

Site Type: AREA

Survey Date: 20/05/2004

GPS Location: GDA94 Zone 50 480422E 6774652N

Landform Type: Plain

Soil Type: Hard clay silt

Soil Colour: Red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		25
Acacia anthochaera	3		1
Acacia assimilis subsp. *assimilis*	0.5		1
Acacia obtecta	1.5		5
Acacia ramulosa var. *ramulosa*	3		3
Acacia tetragonophylla	1.5		3
Austrodanthonia sp.	0.2		0.1
Callitris columellaris	6		5
Comesperma integerrimum			
Erodium cygnorum	0.05		0.1
Hakea recurva subsp. *recurva*	2.5		2
Ptilotus obovatus var. *obovatus*	0.5		5
Rhagodia drummondii	1		3
Santalum acuminatum	3		0.5
Senna cardiosperma	1		0.5

Site Name: C-020

Site Type: AREA

GPS Location: GDA94 Zone 50 479943E 6774354N

Landform Type: plain

Slope Class: very very gentle

Soil Type: hard silt-clay with occasional small rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		5
Acacia exocarpoides			
Acacia obtecta	2		2
Acacia ramulosa var. *ramulosa*	3		10
Acacia tetragonophylla	1.5		3
Callitris columellaris			
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Hakea recurva subsp. *recurva*	3		1
Hemigenia sp. Jibberding (J. D'Alonzo 418)			
Olearia pimeleoides	1		1.5
Ptilotus obovatus var. *obovatus*	0.4		4
Rhagodia drummondii	0.5		0.5

Site Name: C-021

Site Type: AREA

GPS Location: GDA94 Zone 50 480184E 6774240N

Landform Type: lower slope-plain

Slope Class: moderate

Soil Type: hard silt-clay with small ironstone

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		10
Acacia anthochaera	4		0.5
Acacia exocarpoides	2		2
Acacia obtecta	2.5		6
Acacia ramulosa var. *ramulosa*	4		20
Acacia tetragonophylla	2		2
Aluta aspera subsp. *hesperia*	1		0.5
Hakea recurva subsp. *recurva*	2		1
Melaleuca leiocarpa	4		0.5
Melaleuca nematophylla	3		0.5
Santalum acuminatum	2.5		0.5
Solanum nummularium	0.3		0.5

Site Name: C-022

Site Type: AREA

GPS Location: GDA94 Zone 50 480369E 6774159N

Landform Type: mid-slope

Slope Class: moderate-steep

Soil Type: granite over rocky BIF

Soil Colour: brown-purple

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		1
Acacia assimilis subsp. *assimilis*	2		30
Acacia exocarpoides	2.5		5
Acacia ramulosa var. *ramulosa*	1.5		1
Allocasuarina acutivalvis subsp. *prinsepiana*			
Dodonaea petiolaris			
Eremophila clarkei	2		0.5
Eremophila latrobei subsp. *latrobei*	1.5		5
Grevillea nematophylla subsp. *supraplana*	3		8
Melaleuca nematophylla	3		2
Mirbelia bursarioides ms	1.5		1
Philotheca sericea	1.5		15
Santalum acuminatum	2		0.5
Sida excedentifolia ms			

Site Name: C-023

Site Type: AREA

GPS Location: GDA94 Zone 50 480435E 6774094N

Landform Type: crest

Slope Class: steep on sides

Soil Type: hard clay silt with BIF and granite

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		0.5
Acacia exocarpoides	2		3
Acacia sp. Karara (C. Godden 14)	2.5		10
Allocasuarina acutivalvis subsp. *prinsepiana*	4		10
Alyxia buxifolia	1.5		0.5
Comesperma integerrimum			0.5
Daviesia benthamii subsp. *benthamii*	1		0.5
Dodonaea petiolaris	2		1
Gastrolobium laytonii	1.5		0.5
Grevillea paradoxa	1.5		1
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		0.5
Hibbertia arcuata			
Melaleuca nematophylla	4		10
Mirbelia bursarioides ms	1.5		0.5
Philotheca sericea	1.5		10
Rhyncharrhena linearis			0.05
Sida ?*calyxhymenia*	0.3		0.5

Site Name: C-024

Site Type: AREA

GPS Location: GDA94 Zone 50 478418E 6773794N

Landform Type: Plain - lower rise

Slope Class: Very gentle

Soil Type: Clay-silt with gravel and ironstone rocks

Soil Colour: red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		5
Acacia exocarpoides	1.5		15
Acacia ramulosa var. *ramulosa*	5		3
Allocasuarina acutivalvis subsp. *prinsepiana*	3		10
Aluta aspera subsp. *hesperia*	0.5		25
Cheilanthes sieberi subsp. *sieberi*	0.05		0.05
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus leptopoda subsp. *arctata*	4		1
Hibbertia arcuata			
Malleostemon tuberculatus			
Melaleuca nematophylla	1.5		1
Philotheca sericea	0.5		0.5

Site Name: C-025

Site Type: AREA

GPS Location: GDA94 Zone 50 478075E 6773279N

Landform Type: Plain-lower slope

Slope Class: V. gentle

Soil Type: Clay silt

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		2
Acacia ramulosa var. *ramulosa*	4		30
Acacia sibina	3		5
Allocasuarina acutivalvis subsp. *prinsepiana*	2		0.5
Aluta aspera subsp. *hesperia*	1.5		10
Cheilanthes sieberi subsp. *sieberi*	0.05		0.5
Dianella revoluta	1		0.5
Dodonaea pinifolia	2		1
Enekbatus stowardii	0.3		0.5
Eucalyptus leptopoda subsp. *arctata*	3		1
Grevillea nematophylla subsp. *supraplana*	1.5		0.5
Grevillea paradoxa	1		0.5
Melaleuca leiocarpa	3		0.5
Melaleuca nematophylla	1		0.5

Site Name: C-026

Site Type: AREA

Survey Date: 20/05/2004

GPS Location: GDA94 Zone 50 477405E 6772908N

Landform Type: Plain-sheetwash

Soil Type: Hard clay-silt-loam

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		4
Acacia ramulosa var. *ramulosa*	4		10
Acacia tetragonophylla	2		5
Alyxia buxifolia	2		1
Callitris columellaris			
Cratystylis subspinescens	1		1
Dodonaea pinifolia	2		1
Enchylaena tomentosa var. *tomentosa*	0.5		1
Eremophila clarkei	2		1
Eremophila oldfieldii subsp. *angustifolia*	2		2
Eremophila oppositifolia subsp. *angustifolia*	2.5		1
Eucalyptus kochii subsp. ?*plenissima*	10		10
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Hakea recurva subsp. *recurva*	0.5		1
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		4
Olearia pimeleoides	0.5		3
Pimelea microcephala subsp. *microcephala*	1		1
Ptilotus obovatus var. *obovatus*	0.4		6
Santalum acuminatum	3		1
Senna artemisioides subsp. *filifolia*	2		5
Sida ?*calyxhymenia*	0.3		0.5

Site Name: C-027

Site Type: AREA

Survey Date: 20/05/2004

GPS Location: GDA94 Zone 50 476990E 6772640N

Landform Type: Drainage line-plain

Slope Class: V. gentle

Soil Type: Hard clay-loam with occasional rocks

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		10
Acacia ramulosa var. *ramulosa*	4		25
Acacia sibina	2		1
Acacia tetragonophylla	3		15
Allocasuarina acutivalvis subsp. *prinsepiana*	3		2
Dianella revoluta	0.5		1
Dodonaea pinifolia	3		3
Eremophila clarkei	0.5		1
Eucalyptus kochii subsp. ?*plenissima*	10		10
Eucalyptus loxophleba subsp. *supralaevis*			
Hakea recurva subsp. *recurva*	3		3
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		1
Hibbertia arcuata	1		4
Mirbelia bursarioides ms			
Philotheca deserti subsp. *deserti*	1		2

Site Name: C-028

Site Type: AREA

GPS Location: GDA94 Zone 50 476952E 6770314N

Landform Type: plain

Slope Class: very gentle

Soil Type: clay-silt, crusted with occasional rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	1		1
Acacia ramulosa var. *ramulosa*	2		60
Enekbatus stowardii	0.3		0.25
Eucalyptus leptopoda subsp. *arctata*	3.5		0.5
Melaleuca leiocarpa	3		0.5

Site Name: C-029

Site Type: AREA

GPS Location: GDA94 Zone 50 477148E 6770227N

Landform Type: lower slope-plain

Slope Class: gentle

Soil Type: clay-silt with rocks and gravels

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		15
Acacia aneura			
Acacia ramulosa var. *ramulosa*	3		10
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*	1		30
Callitris columellaris			
Enekbatus stowardii	1		1
Hibbertia arcuata	1		2
Melaleuca hamata	5		2.5
Melaleuca nematophylla	3		1
Philotheca deserti subsp. *deserti*	0.5		0.5

Site Name: C-030

Site Type: AREA

GPS Location: GDA94 Zone 50 477649E 6770418N

Landform Type: lower slope

Slope Class: moderate

Soil Type: clay-silt with ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		1
Acacia ramulosa var. *ramulosa*	3		20
Acacia sp. Karara (C. Godden 14)	3		1
Acacia tetragonophylla	3		1
Allocasuarina acutivalvis subsp. *prinsepiana*	3		25
Astroloma serratifolium	0.5		2
Dodonaea inaequifolia			
Eucalyptus kochii subsp. ?*plenissima*	10		10
Eucalyptus loxophleba subsp. *supralaevis*			
Hemigenia sp. Jibberding (J. D'Alonzo 418)	1		5
Melaleuca nematophylla	3		2
Melaleuca radula			
Mirbelia bursarioides ms	2		1
Philotheca brucei subsp. *brucei*	1.5		7
Senna charlesiana			

Site Name: C-031

Site Type: AREA

GPS Location: GDA94 Zone 50 477429E 6771240N

Landform Type: mid-slope

Slope Class: moderate

Soil Type: clay-silt with ironstone rocks and gravel

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura			
Acacia assimilis subsp. *assimilis*	1.5		1
Acacia exocarpoides	3		2
Acacia ramulosa var. *ramulosa*	0.5		10
Acacia tetragonophylla	3		3
Allocasuarina acutivalvis subsp. *prinsepiana*	3		2
Aluta aspera subsp. *hesperia*	1.5		15
Eremophila clarkei	1.5		1
Hibbertia arcuata	0.5		3
Melaleuca nematophylla	3		10
Mirbelia bursarioides ms	1		0.5
Philotheca brucei subsp. *brucei*	1		1
Philotheca sericea	1		3

Site Name: C-032

Site Type: AREA

GPS Location: GDA94 Zone 50 477905E 6771294N

Landform Type: crest

Slope Class: steep

Soil Type: clay-silt with bif, granite and ironstone

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	2		0.5
Acacia ramulosa var. *ramulosa*	1		0.5
Acacia sp. Karara (C. Godden 14)	2		4
Allocasuarina acutivalvis subsp. *prinsepiana*	3		40
Aluta aspera subsp. *hesperia*			
Eremophila clarkei	1.5		1
Grevillea paradoxa			
Hibbertia arcuata	0.5		0.5
Melaleuca nematophylla	1.5		10
Minuria cunninghamii	0.3		2
Philotheca brucei subsp. *brucei*	1.5		10
Philotheca sericea	1.5		2

Site Name: C-033

Site Type: AREA

GPS Location: GDA94 Zone 50 478040E 6771354N

Slope Class: steep

Soil Type: rocky, ironstone, clay-silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	1.5		0.5
Acacia assimilis subsp. *assimilis*	1.5		2
Acacia exocarpoides	2		6
Acacia ramulosa var. *ramulosa*	2		1
Acacia sp. Karara (C. Godden 14)	1.5		1
Allocasuarina acutivalvis subsp. *prinsepiana*	4		35
Aluta aspera subsp. *hesperia*	1		5
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1.5		10
Grevillea paradoxa	1		0.5
Hibbertia arcuata	1		0.5
Minuria cunninghamii	0.5		5
Mirbelia bursarioides ms	1		0.5
Olearia pimeleoides			

Site Name: C-034

Site Type: AREA

GPS Location: GDA94 Zone 50 477306E 6771953N

Landform Type: lower slope

Slope Class: moderate-gentle

Soil Type: clay-silt with ironstone rocks and gravel

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		2
Acacia assimilis subsp. *assimilis*	2.5		2
Acacia exocarpoides	3		10
Acacia ramulosa var. *ramulosa*	4		20
Aluta aspera subsp. *hesperia*	1.5		20
Eremophila clarkei	1.5		0.5
Eremophila latrobei subsp. *latrobei*	2		0.5
Eucalyptus leptopoda subsp. *arctata*			
Grevillea nematophylla subsp. *supraplana*	2		1
Hibbertia arcuata	1		0.5
Melaleuca leiocarpa	2		

Site Name: C-035

Site Type: AREA

GPS Location: GDA94 Zone 50 477821E 6772060N

Landform Type: mid-slope

Slope Class: moderate

Soil Type: clay-silt with ironstone rocks/pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		4
Acacia assimilis subsp. *assimilis*	2		3
Acacia exocarpoides	2		7
Acacia ramulosa var. *ramulosa*	3		5
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*	1.5		20
Cheilanthes sieberi subsp. *sieberi*	0.05		0.05
Eremophila latrobei subsp. *latrobei*	1		0.5
Grevillea nematophylla subsp. *supraplana*	4		1
Hibbertia arcuata	1		1
Melaleuca nematophylla	3		2
Philotheca brucei subsp. *brucei*	1		3
Philotheca sericea	1		5

Site Name: C-036

Site Type: AREA

GPS Location: GDA94 Zone 50 478148E 6772028N

Landform Type: crest-upper slope

Slope Class: steep

Soil Type: rocky, some clay-silt over BIF

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	2		5
Acacia exocarpoides	2.5		4
Acacia sp. Karara (C. Godden 14)	2		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3		25
Aluta aspera subsp. *hesperia*	1.5		10
Astroloma serratifolium	0.5		0.5
Cheilanthes sieberi subsp. *sieberi*	0.01		0.05
Comesperma integerrimum			0.05
Dodonaea petiolaris	0.1		0.05
Eremophila clarkei	2		0.5
Eucalyptus leptopoda subsp. *arctata*	4		0.5
Grevillea paradoxa	1.5		2
Hakea recurva subsp. *recurva*	3		0.5
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.7		3
Hibbertia arcuata	1		2
Lepidosperma sp. Karara BIF	0.5		0.5
Melaleuca nematophylla	1.5		7
Mirbelia bursarioides ms	1.5		3
Philotheca brucei subsp. *brucei*	0.3		0.1
Philotheca sericea	1		10
Sida excedentifolia ms	0.2		0.1

Site Name: C-037

Site Type: AREA

GPS Location: GDA94 Zone 50 478121E 6770218N

Landform Type: lower slope

Slope Class: moderate-gentle

Soil Type: silt-loam with scattered ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		3
Acacia aneura			
Acacia assimilis subsp. *assimilis*	2		2
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*	3		40
Acacia sibina	3		1
Acacia tetragonophylla	1.5		3
Eremophila clarkei	0.5		0.5
Eucalyptus kochii subsp. ?*plenissima*	15		10
Eucalyptus loxophleba subsp. *supralaevis*	5		1
Melaleuca hamata	3		10
Melaleuca leiocarpa	3		5
Monachather paradoxus	0.15		0.25
Olearia humilis	0.5		7
Philotheca brucei subsp. *brucei*			
Ptilotus obovatus var. *obovatus*	0.4		4
Rhagodia drummondii	0.4		1
Senna artemisioides subsp. *filifolia*	1		0.5
Sida ?*calyxhymenia*			

Site Name: C-038

Site Type: AREA

GPS Location: GDA94 Zone 50 478127E 6770481N

Landform Type: mid-lower slope

Slope Class: moderate

Soil Type: silt-clay with ironstone rocks

Soil Colour: brown-red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		2
Acacia ramulosa var. *ramulosa*	4		50
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*	1		5
Astroloma serratifolium			
Cheilanthes sieberi subsp. *sieberi*	0.05		3
Comesperma integerrimum			
Eremophila clarkei	1		1
Eremophila latrobei subsp. *latrobei*			
Eucalyptus leptopoda subsp. *arctata*	6		2
Grevillea paradoxa			
Hibbertia arcuata			
Philotheca brucei subsp. *brucei*	1.5		10
Philotheca deserti subsp. *deserti*	1		3
Ptilotus obovatus var. *obovatus*	0.3		1
Xanthosia bungei	0.3		3

Site Name: C-039

Site Type: AREA

GPS Location: GDA94 Zone 50 478128E 6770624N

Landform Type: midslope

Slope Class: steep

Soil Type: silt-shallow clay with lots of ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		3
Acacia exocarpoides	3		0.5
Acacia ramulosa var. *ramulosa*	3		40
Acacia tetragonophylla	1.5		0.5
Arthropodium dyeri			
Cheilanthes sieberi subsp. *sieberi*	0.05		5
Drosera sp. climbing			0.01
Eremophila clarkei	2		2
Eremophila latrobei subsp. *latrobei*	2		0.5
Erodium cygnorum	0.01		0.5
Eucalyptus kochii subsp. ?*plenissima*	6		2
Eucalyptus leptopoda subsp. *arctata*	3		0.5
Hakea recurva subsp. *recurva*	2.5		2
Lepidosperma sp. Karara BIF			
Lysiana casuarinae			
Olearia humilis			
Persoonia pentasticha (P3)			
Philotheca brucei subsp. *brucei*	1		3
Philotheca deserti subsp. *deserti*	1.5		1
Scaevola spinescens			
Solanum lasiophyllum	0.5		0.5
Xanthosia bungei	0.3		1

Site Name: C-040

Site Type: AREA

GPS Location: GDA94 Zone 50 478129E 6770689N

Landform Type: upper slope

Slope Class: steep

Soil Type: very shallow silt-clay, large BIF outcropping

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	2.5		2
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		20
Arthropodium dyeri	0.2		0.05
Asteraceae sp.	0.1		7
Atriplex ?amnicola			
Cheilanthes sieberi subsp. *sieberi*	0.05		4
Crassula colorata var. *acuminata*	0.01		0.05
Dodonaea inaequifolia	1.5		0.5
Eremophila clarkei	2		5
Hakea recurva subsp. *recurva*	2.5		5
Lysiana casuarinae			0.5
Philotheca brucei subsp. *brucei*	1.5		3
Philotheca deserti subsp. *deserti*	1.5		3
Ptilotus obovatus var. *obovatus*	0.3		0.5
Solanum lasiophyllum	0.3		0.5

Site Name: C-041

Site Type: AREA

GPS Location: GDA94 Zone 50 479124E 6771297N

Landform Type: plain

Slope Class: very gentle

Soil Type: clay-loam, some gravel

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		2
Acacia ramulosa var. *ramulosa*	4		30
Acacia tetragonophylla	1.5		0.5
Cheilanthes sieberi subsp. *sieberi*	0.05		0.5
Comesperma integerrimum	0.4		0.25
Daviesia benthamii subsp. *benthamii*	1		0.5
Eremophila clarkei	2		5
Erodium cygnorum			
Eucalyptus kochii subsp. ?*plenissima*	10		10
Exocarpos aphyllus			
Hakea minyma	3		0.5
Melaleuca hamata			
Olearia humilis	0.3		1
Philotheca deserti subsp. *deserti*	1.5		6
Pimelea microcephala subsp. *microcephala*	1.5		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Scaevola spinescens	1.5		0.5
Senna artemisioides subsp. *filifolia*	1.5		1
Wurmbea tenella			

Site Name: C-042

Site Type: AREA

GPS Location: GDA94 Zone 50 478701E 6771329N

Landform Type: lower slope, small drainage areas throughout

Slope Class: gentle

Soil Type: sandy clay with surface rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		3
Acacia exocarpoides	3		1
Acacia ramulosa var. *ramulosa*	3		60
Acacia sibina			
Allocasuarina acutivalvis subsp. *prinsepiana*	4		10
Cheilanthes sieberi subsp. *sieberi*	0.05		1
Dianella revoluta	1		0.5
Drosera sp. climbing	0.1		0.05
Erodium cygnorum	0.05		0.5
Grevillea paradoxa	2		0.5
Hakea minyma			
Hemigenia sp. Cue (K.F. Kenneally 47A)			
Hibbertia arcuata	1.5		4
Malleostemon tuberculatus			
Melaleuca nematophylla	3		2
Philotheca brucei subsp. *brucei*	1.5		2
Philotheca deserti subsp. *deserti*	1		5
Xanthosia bungei	0.2		1

Site Name: C-043

Site Type: AREA

GPS Location: GDA94 Zone 50 478801E 6771850N

Landform Type: plain-lower slope

Slope Class: very gentle

Soil Type: clay-silt with surface rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		30
Acacia ramulosa var. *ramulosa*	2		2
Allocasuarina acutivalvis subsp. *prinsepiana*	3		10
Aluta aspera subsp. *hesperia*	1.5		10
Cheilanthes sieberi subsp. *sieberi*	0.05		3
Drosera sp. climbing			0.005
Erodium cygnorum	0.05		1
Grevillea paradoxa	1.5		3
Hemigenia sp. Cue (K.F. Kenneally 47A)	1		15
Solanum lasiophyllum	0.5		0.5
Thysanotus sp.			0.005
Xanthosia bungei	0.5		3

Site Name: C-044

Site Type: AREA

GPS Location: GDA94 Zone 50 479180E 6772068N

Landform Type: plain-lower slope

Slope Class: very gentle

Soil Type: clay-silt with small rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		60
Allocasuarina acutivalvis subsp. *prinsepiana*			
Calothamnus gilesii	2		5
Cheilanthes sieberi subsp. *sieberi*	0.05		7
Dianella revoluta			
Grevillea obliquistigma subsp. *obliquistigma*	2		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.5		3
Philotheca deserti subsp. *deserti*	1.5		6
Xanthosia bungei	0.5		7

Site Name: C-045

Site Type: AREA

GPS Location: GDA94 Zone 50 481024E 6775061N

Landform Type: plain

Soil Type: loamy-sand

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		15
Acacia obtecta	2		5
Acacia tetragonophylla	2.5		6
Alyxia buxifolia	2		0.5
Austrostipa elegantissima	1		0.5
Callitris columellaris	6		7.5
Comesperma integerrimum			0.005
Dodonaea viscosa subsp. *angustissima*	2		0.5
Erodium cygnorum	0.05		0.05
Exocarpos aphyllus	3		1
Hakea recurva subsp. *recurva*	1.5		1
Olearia pimeleoides	0.5		0.5
Persoonia pentasticha (P3)	0.5		0.5
Ptilotus obovatus var. *obovatus*	0.5		0.5
Rhagodia drummondii	0.5		0.5
Solanum nummularium			

Site Name: C-046

Site Type: AREA

GPS Location: GDA94 Zone 50 481332E 6774962N

Landform Type: plain-floodwash area

Slope Class: nil

Soil Type: sandy-silty-clay

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		3
Acacia acuminata	5		2
Acacia aneura	8		0.5
Acacia anthochaera	0.5		0.5
Acacia assimilis subsp. *assimilis*			
Acacia obtecta			
Acacia ramulosa var. *ramulosa*			
Austrostipa elegantissima	1		0.5
Callitris columellaris			
Dianella revoluta			
Eremophila pantonii			
Eucalyptus horistes	10		10
Eucalyptus leptopoda subsp. *arctata*			
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Eucalyptus striaticalyx subsp. *striaticalyx*	10		10
Exocarpos aphyllus			
Hakea minyma			
Hakea recurva subsp. *recurva*			
Maireana thesioides			
Microcorys sp. Mt Gibson (S. Patrick 2098)	1		3
Olearia dampieri subsp. *eremicola* ms	0.5		1
Olearia pimeleoides			
Persoonia pentasticha (P3)			
Ptilotus exaltatus var. *exaltatus*	0.1		0.05
Ptilotus obovatus var. *obovatus*	0.5		0.5
Rhagodia drummondii			
Senna artemisioides subsp. *filifolia*	2		1
Solanum lasiophyllum			

Solanum nummularium			

Site Name: C-047

Site Type: AREA

GPS Location: GDA94 Zone 50 482597E 6774791N

Landform Type: plain

Slope Class: very gentle-nil

Soil Type: silty-clay with few stones

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		1
Acacia acuminata			
Acacia aneura			
Acacia exocarpoides	1.5		0.5
Acacia ?oswaldii	2		1
Acacia ramulosa var. *ramulosa*	3		2
Acacia tetragonophylla	2		1
Bursaria occidentalis	1		0.5
Eucalyptus loxophleba subsp. *supralaevis*	12		20
Hakea recurva subsp. *recurva*			
Maireana georgei			
Maireana thesioides	0.3		0.5
Olearia humilis	0.4		0.5
Pimelea microcephala subsp. *microcephala*			
Ptilotus obovatus var. *obovatus*	0.3		1
Rhagodia drummondii	0.4		0.5
Senna artemisioides subsp. *filifolia*			
Solanum lasiophyllum			
Solanum nummularium			
Wurmbea tenella	0.05		0.01

Site Name: C-048

Site Type: AREA

GPS Location: GDA94 Zone 50 482565E 6774072N

Landform Type: lower slope

Slope Class: moderate

Soil Type: silty-clay with lots of ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		5
Acacia aneura	4		2
Acacia assimilis subsp. *assimilis*	2		10
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*	3		30
Acacia sibina	3		15
Acacia tetragonophylla	2		0.5
Aluta aspera subsp. *hesperia*	0.5		2
Astroloma serratifolium	0.5		0.5
Bursaria occidentalis			
Eremophila clarkei	2		0.5
Eremophila latrobei subsp. *latrobei*	1.5		0.5
Hibbertia arcuata	1		0.5
Maireana thesioides			
Melaleuca leiocarpa	3		0.5
Melaleuca nematophylla	2		3
Micromyrtus sp. Warriedar (S. Patrick 1879A)			
Mirbelia bursarioides ms	2		0.5
Philotheca brucei subsp. *brucei*	1		1
Philotheca sericea	1		6

Site Name: C-049

Site Type: AREA

GPS Location: GDA94 Zone 50 482553E 6773861N

Landform Type: crest

Slope Class: steep

Soil Type: shallow clay-silt, very rocky over BIF

Soil Colour: brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura			
Acacia assimilis subsp. *assimilis*	1		0.5
Acacia exocarpoides	1.5		1
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla	2		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3		5
Chamaexeros macranthera	0.3		0.5
Dodonaea inaequifolia	1.5		5
Eremophila clarkei	1.5		1
Eremophila latrobei subsp. *latrobei*	1		3
Hakea recurva subsp. *recurva*	2		4
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2		7
Mirbelia bursarioides ms	1.5		3
Philotheca brucei subsp. *brucei*	1.5		10
Philotheca sericea	0.4		3
Prostanthera patens	0.3		7
Santalum spicatum	3		0.5
Scaevola spinescens	1		1

Site Name: C-050

Site Type: AREA

GPS Location: GDA94 Zone 50 482600E 6775137N

Landform Type: Lower slope

Slope Class: Moderate

Soil Type: Clay-silt, very rocky, ironstone

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia acuminata	3		3
Acacia assimilis subsp. *assimilis*	2		3
Acacia ramulosa var. *ramulosa*	3		20
Acacia sp. Karara (C. Godden 14)	1		1
Allocasuarina acutivalvis subsp. *prinsepiana*	4		10
Cheilanthes sieberi subsp. *sieberi*	0.05		2.5
Eremophila clarkei			
Erodium cygnorum	0.05		0.5
Grevillea paradoxa	2		3
Hibbertia arcuata	0.5		3
Melaleuca hamata	6		15
Melaleuca nematophylla			
Philotheca brucei subsp. *brucei*	2		3
Philotheca sericea			
Sida ?calyxhymenia	0.2		0.1
Thysanotus sp.			0.01
Xanthosia bungei			

Site Name: C-051

Site Type: AREA

GPS Location: GDA94 Zone 50 482604E 6775237N

Landform Type: crest

Slope Class: steep

Soil Type: ironstone BIF

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	3		10
Acacia sp. Karara (C. Godden 14)	1.5		2
Allocasuarina acutivalvis subsp. *prinsepiana*	3.5		15
Arthropodium dyeri	0.1		0.05
Asteraceae sp.	0.1		3
Cheilanthes sieberi subsp. *sieberi*			3
Gastrolobium callistachys	2.5		5
Grevillea paradoxa	2		1
Hibbertia arcuata	1		1
Lepidosperma sp. Karara BIF	0.5		5
Melaleuca nematophylla	3.5		15
Philotheca sericea	0.5		0.5
Xanthosia bungei	0.5		15

Site Name: C-052

Site Type: AREA

GPS Location: GDA94 Zone 50 482594E 6775271N

Landform Type: mid slope-drainage line

Soil Type: clay-silt, lots BIF

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		50
Acacia aneura	4		0.5
Arthropodium dyeri	0.2		0.25
Chamaexeros macranthera			
Cheilanthes sieberi subsp. *sieberi*	0.05		3
Dodonaea inaequifolia	1		0.5
Eremophila clarkei	2		3
Eremophila latrobei subsp. *latrobei*	2		1
Erodium cygnorum	0.05		2
Eucalyptus leptopoda subsp. *arctata*	3		0.5
Hibbertia arcuata	1		1
Mirbelia bursarioides ms	2		4
Philotheca brucei subsp. *brucei*	0.3		0.5
Philotheca sericea	2		10
Poaceae sp.	0.1		0.05
Sida ?calyxhymenia	0.2		0.25
Solanum lasiophyllum	0.5		0.5
Thysanotus sp.			0.05

Site Name: C-053

Site Type: AREA

GPS Location: GDA94 Zone 50 482561E 6775386N

Landform Type: ridge

Slope Class: gentle - moderate

Soil Type: sandy-clay

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia aulacophylla	3		10
Acacia exocarpoides			
Acacia tetragonophylla			
Allocasuarina acutivalvis subsp. *prinsepiana*	3		10
Chamaexeros macranthera	0.3		0.5
Dodonaea inaequifolia	1.5		5
Eremophila latrobei subsp. *latrobei*	1		0.5
Melaleuca nematophylla	2		2
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2		3
Mirbelia bursarioides ms	2		3
Philotheca brucei subsp. *brucei*	1.5		10
Philotheca sericea	1		5
Prostanthera patens	0.5		2
Sida ?calyxhymenia			

Site Name: C-054

Site Type: AREA

GPS Location: GDA94 Zone 50 482486E 6775424N

Landform Type: upper slope

Slope Class: steep-moderate

Soil Type: clay-silt, lots of ironstone

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia aneura	3		1
Acacia assimilis subsp. *assimilis*	2.5		2
Acacia exocarpoides	3		2
Acacia ramulosa var. *ramulosa*			
Allocasuarina acutivalvis subsp. *prinsepiana*	3		20
Cheilanthes sieberi subsp. *sieberi*	0.05		3
Eremophila latrobei subsp. *latrobei*	1.5		3
Erodium cygnorum	0.05		1
Grevillea obliquistigma subsp. *obliquistigma*	3.5		2
Micromyrtus sp. Warriedar (S. Patrick 1879A)	3		3
Persoonia hexagona	2		2
Philotheca sericea	1.5		30
Santalum spicatum			
Solanum lasiophyllum	0.3		0.5
Xanthosia bungei			

Site Name: C-055

Site Type: AREA

GPS Location: GDA94 Zone 50 483335E 6775363N

Landform Type: Lower slope

Slope Class: Gentle

Soil Type: Silty clay, scattered ironstone rocks

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		70
Aluta aspera subsp. *hesperia*	1		3
Cheilanthes sieberi subsp. *sieberi*	0.05		0.5
Drosera sp. climbing			0.005
Erodium cygnorum	0.05		0.5
Eucalyptus leptopoda subsp. *arctata*	4		1
Melaleuca hamata	4		1
Melaleuca nematophylla	3		1
Philotheca deserti subsp. *deserti*	0.3		0.5
Poaceae sp.	0.1		0.05

Site Name: C-056

Site Type: AREA

GPS Location: GDA94 Zone 50 483889E 6775513N

Landform Type: Plain

Soil Type: Silty-loam-clay

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	5		2
Acacia anthochaera	3		1
Acacia ramulosa var. *ramulosa*	4		10
Acacia sibina	2		1
Eremophila clarkei	2		0.5
Eucalyptus kochii subsp. ?*plenissima*	10		3
Eucalyptus loxophleba subsp. *supralaevis*	10		3
Olearia humilis	0.5		0.5
Ptilotus obovatus var. *obovatus*	0.3		4
Rhagodia drummondii	0.5		0.5

Site Name: C-057

Site Type: AREA

Survey Date: 23/06/2004

GPS Location: GDA94 Zone 50 484764E 6775828N

Landform Type: Plain

Slope Class: V. gentle

Soil Type: Silty-clay, some small surface rocks

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	5		8
Acacia exocarpoides	2		1
Acacia ramulosa var. *ramulosa*	5		25
Acacia sibina	4		1
Acacia tetragonophylla	3		1
Aluta aspera subsp. *hesperia*	0.5		1
Bursaria occidentalis	1.5		1
Cheilanthes sieberi subsp. *sieberi*	0.05		1
Eremophila clarkei	2		3
Eremophila latrobei subsp. *latrobei*	1.5		1
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus leptopoda subsp. *arctata*	6		1
Eucalyptus loxophleba subsp. *supralaevis*			
Hakea recurva subsp. *recurva*	3		5
Hibbertia arcuata	1		1
Melaleuca leiocarpa	3		1
Olearia humilis	0.3		1
Ptilotus obovatus var. *obovatus*	0.3		1

Site Name: C-058

Site Type: AREA

Survey Date: 23/06/2004

GPS Location: GDA94 Zone 50 485386E 6776118N

Landform Type: Plain

Soil Type: Silty clay with surface ironstone rocks

Soil Colour: Red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		2
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*	3		30
Acacia sibina	3		30
Aluta aspera subsp. *hesperia*	1.5		2
Cheilanthes sieberi subsp. *sieberi*	0.05		1
Eremophila latrobei subsp. *latrobei*			
Hibbertia arcuata	1		1
Melaleuca nematophylla	2		1
Mirbelia bursarioides ms	1.5		1
Persoonia hexagona	2		2
Philotheca brucei subsp. *brucei*	1		4
Philotheca sericea	1		4

Site Name: C-059

Site Type: AREA

GPS Location: GDA94 Zone 50 484187E 6775980N

Landform Type: plain

Slope Class: flat

Soil Type: silty-clay no rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.4		25
Acacia aneura			
Acacia anthochaera			
Acacia exocarpoides			
Acacia obtecta	1.5		3
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla	2		1
Callitris columellaris	8		5
Eucalyptus leptopoda subsp. *arctata*	4		1
Eucalyptus loxophleba subsp. *supralaevis*	6		0.5
Maireana thesioides			
Melaleuca leiocarpa			
Olearia humilis	0.5		0.5
Olearia pimeleoides	0.5		1
Persoonia hexagona			
Ptilotus obovatus var. *obovatus*	0.5		1
Rhagodia drummondii	0.5		1
Senna artemisioides subsp. *filifolia*	1.5		0.5

Site Name: C-060

Site Type: AREA

GPS Location: GDA94 Zone 50 484136E 6776243N

Landform Type: mid slope

Slope Class: gentle

Soil Type: silty-clay with ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		20
Acacia assimilis subsp. *assimilis*	3		10
Acacia ramulosa var. *ramulosa*	2.5		2
Allocasuarina acutivalvis subsp. *prinsepiana*	4		25
Aluta aspera subsp. *hesperia*	1		5
Cheiranthera filifolia var. *simplicifolia*			0.05
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		20
Eremophila clarkei	2		2
Eremophila latrobei subsp. *latrobei*	1.5		2
Hibbertia arcuata	1		1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.5		1
Melaleuca nematophylla	3		0.5

Site Name: C-061

Site Type: AREA

GPS Location: GDA94 Zone 50 484597E 6775543N

Landform Type: lower slope

Slope Class: gentle-moderate

Soil Type: silty-clay, lots of ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		3
Acacia aneura			
Acacia assimilis subsp. *assimilis*	2		4
Acacia exocarpoides	3		0.5
Acacia ramulosa var. *ramulosa*	3		5
Acacia sp. Murchison (B.R. Maslin 7331)	3		10
Acacia tetragonophylla	3		1
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*	1		20
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		5
Eremophila clarkei	3		0.5
Eremophila latrobei subsp. *latrobei*	2		1
Hakea recurva subsp. *recurva*	1		0.5
Melaleuca nematophylla	3		1
Mirbelia bursarioides ms			
Prostanthera magnifica			
Santalum spicatum	3		0.5

Site Name: C-062

Site Type: AREA

GPS Location: GDA94 Zone 50 484627E 6775410N

Landform Type: upper slope

Slope Class: moderate

Soil Type: silty-clay under ironstone rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		20
Acacia ramulosa var. *ramulosa*			
Acacia sp. Murchison (B.R. Maslin 7331)	3		20
Aluta aspera subsp. *hesperia*	1		50
Astroloma serratifolium			
Drosera sp. climbing			
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		10
Eremophila latrobei subsp. *latrobei*	1.5		1
Hibbertia arcuata			
Melaleuca nematophylla	2		1
Mirbelia bursarioides ms	1		5

Site Name: C-063

Site Type: AREA

GPS Location: GDA94 Zone 50 484714E 6775278N

Landform Type: crest

Slope Class: gentle

Soil Type: shallow silty-clay, much ironstone rocks

Soil Colour: brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	4		2
Acacia assimilis subsp. *assimilis*	3		15
Acacia exocarpoides	2.5		1
Acacia ramulosa var. *ramulosa*			
Acacia sp. Murchison (B.R. Maslin 7331)	2.5		15
Aluta aspera subsp. *hesperia*	1.5		25
Dodonaea inaequifolia	2		0.5
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		2.5
Eremophila clarkei	2		1
Grevillea obliquistigma subsp. *obliquistigma*			
Hakea recurva subsp. *recurva*	1		0.5
Hibbertia arcuata			
Mirbelia bursarioides ms	1		1

Site Name: C-064

Site Type: AREA

GPS Location: GDA94 Zone 50 485059E 6776543N

Landform Type: plain-floodplain

Slope Class: flat

Soil Type: silty-clay no rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		5
Acacia aneura			
Acacia anthochaera	3.5		2
Acacia ramulosa var. *ramulosa*	4		30
Acacia tetragonophylla	1.5		1
Bursaria occidentalis	1		0.5
Eremophila latrobei subsp. *latrobei*	1		0.5
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus	2.5		0.5
Hakea recurva subsp. *recurva*	3		1
Olearia humilis	0.5		0.5
Olearia pimeleoides	1		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Rhagodia drummondii	1		0.5
Santalum spicatum	3		0.5
Senna cardiosperma	1		0.5

Site Name: C-065

Site Type: AREA

GPS Location: GDA94 Zone 50 488109E 6777640N

Landform Type: mid slope-rise

Slope Class: gentle

Soil Type: hard silt with gravel and small ironstone

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	5		4
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia exocarpoides	1		0.5
Acacia ramulosa var. *ramulosa*	3.5		40
Acacia sibina	3		5
Acacia tetragonophylla	3		0.5
Eremophila clarkei	2		0.5
Eremophila latrobei subsp. *latrobei*	2		0.5
Eucalyptus leptopoda subsp. *arctata*			
Hibbertia arcuata	1		1
Melaleuca leiocarpa	3		4
Mirbelia bursarioides ms			
Olearia humilis	0.4		1
Philotheca brucei subsp. *brucei*	1		0.5
Philotheca sericea	1.5		4

Site Name: C-066

Site Type: AREA

GPS Location: GDA94 Zone 50 488119E 6777940N

Landform Type: mid slope

Slope Class: gentle

Soil Type: silty-clay with ironstone

Soil Colour: brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		4
Acacia assimilis subsp. *assimilis*	2		2
Acacia exocarpoides	3		4
Acacia ramulosa var. *ramulosa*	4		40
Acacia sibina	2.5		1
Cheilanthes sieberi subsp. *sieberi*	0.05		0.05
Comesperma integerrimum			0.05
Eremophila clarkei	2		0.5
Eremophila latrobei subsp. *latrobei*	2		1
Hibbertia arcuata	1		0.5
Melaleuca nematophylla	3		5
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2		0.5
Mirbelia bursarioides ms	1		1
Olearia pimeleoides	1		0.5
Philotheca sericea	1		5
Prostanthera patens	0.3		4
Xanthosia bungei	0.3		0.5

Site Name: C-067

Site Type: AREA

GPS Location: GDA94 Zone 50 488173E 6778681N

Landform Type: plain

Soil Type: silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	3		0.5
Acacia anthochaera			
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*	6		40
Melaleuca leiocarpa			
Ptilotus obovatus var. *obovatus*			

Site Name: C-068

Site Type: AREA

GPS Location: GDA94 Zone 50 488634E 6778372N

Landform Type: mid slope

Slope Class: gentle

Soil Type: silty-clay, some surface rock

Soil Colour: brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	4		1
Acacia assimilis subsp. *assimilis*	2		1
Acacia ramulosa var. *ramulosa*	3		30
Acacia sibina	3		10
Aluta aspera subsp. *hesperia*			
Callitris columellaris	7		0.5
Cheilanthes sieberi subsp. *sieberi*	0.01		0.05
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		1
Eremophila latrobei subsp. *latrobei*	2		1
Erodium cygnorum	0.01		0.05
Grevillea obliquistigma subsp. *obliquistigma*	2		0.5
Hibbertia arcuata	1		0.5
Melaleuca nematophylla	1		3
Micromyrtus sp. Warriedar (S. Patrick 1879A)	1.5		0.5
Mirbelia bursarioides ms	1.5		0.5
Philotheca brucei subsp. *brucei*	1		0.5

Site Name: C-069

Site Type: AREA

Survey Date: 03/10/2023

GPS Location: GDA94 Zone 50 489489E 6778173N

Landform Type: Plain

Soil Type: Silty Clay (other)

Soil Colour: Red-Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	4		1
Acacia latior	3		20
Eremophila clarkei	1		1
Eremophila forrestii subsp. *forrestii*	0.3		1
Eucalyptus kochii subsp. *amaryssia*	12		10
Olearia humilis	1		1
Philotheca brucei subsp. *brucei*	1.5		1
Rhagodia drummondii	1		0.5
Senna artemisioides subsp. *filifolia*	1		0.5

PHOTOS

Site Name: C-086

Site Type: AREA

GPS Location: GDA94 Zone 50 487248E 6778257N

Landform Type: lowerslope

Slope Class: very gentle

Soil Type: silty clay, few rocks

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura			
Acacia assimilis subsp. *assimilis*	4		0.5
Acacia ramulosa var. *ramulosa*	3		30
Acacia sibina	2		1
Aluta aspera subsp. *hesperia*	0.5		1
Dianella revoluta			
Eremophila georgei			
Eucalyptus kochii subsp. ?*plenissima*			
Melaleuca hamata	4		3
Melaleuca leiocarpa	1.5		2
Melaleuca nematophylla	2		1
Philotheca deserti subsp. *deserti*	1		3

Site Name: C-089

Site Type: AREA

GPS Location: GDA94 Zone 50 487656E 6778075N

Landform Type: drainage area, flat

Slope Class: flat

Soil Type: silty clay

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura	7		3
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia obtecta	2		1
Acacia ramulosa var. *ramulosa*	3		30
Acacia tetragonophylla	3		1
Brachychiton gregorii			
Cryptandra imbricata	0.5		0.5
Eucalyptus loxophleba subsp. *supralaevis*	5		
Hakea recurva subsp. *recurva*			
Maireana marginata	0.2		0.5
Melaleuca hamata	4		1
Olearia humilis	0.5		0.5
Pimelea microcephala subsp. *microcephala*	0.5		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5

Site Name: C-090

Site Type: AREA

GPS Location: GDA94 Zone 50 487500E 6777923N

Landform Type: drainage area, lake

Slope Class: flat

Soil Type: cracking clay

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		1
Acacia aneura	3		0.5
Asteraceae sp.	0.15		0.05
Centipeda thespidioides	0.1		0.05
Dysphania glandulosa	0.05		0.05
Erodium cygnorum	0.05		0.25
Melaleuca eleuterostachya	3		5
Melaleuca hamata			

Site Name: C-091

Site Type: AREA

GPS Location: GDA94 Zone 50 487334E 6777514N

Landform Type: plain

Slope Class: very gentle

Soil Type: fine silt

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		70
Dianella revoluta	0.5		0.5
Erodium cygnorum	0.01		0.5
Grevillea globosa (P3)	2		5
Melaleuca leiocarpa	4		1
Philotheca deserti subsp. *deserti*			

Site Name: C-092

Site Type: AREA

GPS Location: GDA94 Zone 50 487399E 6777333N

Landform Type: rise

Slope Class: gentle

Soil Type: silty clay, hard

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		10
Acacia aneura	4		1
Acacia assimilis subsp. *assimilis*	2		3
Acacia exocarpoides	4		5
Acacia ramulosa var. *ramulosa*	4		10
Acacia sibina	2		0.5
Aluta aspera subsp. *hesperia*	1.5		5
Comesperma integerrimum			0.05
Drummondita aff. *microphylla (R. Cranfield 8586 A)*	1		0.5
Eremophila latrobei subsp. *latrobei*	2		0.5
Hibbertia arcuata	0.5		0.5
Philotheca brucei subsp. *brucei*	1		0.5

Site Name: GI-1

Site Type: AREA

Survey Date: 11/10/2006

GPS Location: GDA94 Zone 50 443704E 6770308N

Landform Type: Midslope

Slope Class: Gentle

Soil Type: Clay-loam with gravel

Soil Colour: Red-brown

Fire: >5

Comments: Thicket - some degradation due to clearing for track.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.7		1.5
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia ?resinosa	2.5		10
Aluta aspera subsp. *hesperia*	1.4		4
Amphipogon caricinus var. *caricinus*	0.3		0.5
Brunonia australis	0.1		0.1
Calycopeplus paucifolius	2.2		2
Comesperma integerrimum			0.1
Dianella revoluta			
Eremophila clarkei			
Eremophila latrobei subsp. *latrobei*	1.6		0.5
Grevillea obliquistigma	2		1
Keraudrenia velutina			
Melaleuca hamata	4		1.5
Monachather paradoxus	0.2		0.5
Podolepis sp.	0.1		0.1
Ricinocarpos velutinus			
Solanum lasiophyllum			
Velleia rosea			

Site Name:	GI-2
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 440510E 6763668N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Thin silty sand on granite
Soil Colour:	Light brown
Fire:	>5
Comments:	Light brown, thin silty sand on granite. Has been grazed 2/3.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Allocasuarina acutivalvis subsp. *prinsepiana*	3		3
Austrodanthonia setacea	0.1		0.2
Austrostipa elegantissima	0.4		0.1
Austrostipa scabra	0.2		0.2
Borya sphaerocephala	0.1		4
Calandrinia primuliflora	0.1		0.1
Calytrix glutinosa	0.2		1.5
Dodonaea inaequifolia			
Eremophila latrobei subsp. *latrobei*	0.5		0.1
Erymophyllum ?glossanthus	0.05		0.5
Maireana planifolia	0.3		0.1
**Mesembryanthemum nodiflorum*	0.05		0.2
Mirbelia microphylla	1		0.1
Monachather paradoxus	0.1		0.1
**Pentaschistis airoides*	0.05		0.1
Ptilotus obovatus var. *obovatus*	0.3		0.1
Ricinocarpos velutinus			
Sclerolaena densiflora	0.1		0.1
Thryptomene costata	1.5		1

Site Name:	GI-3
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 440478E 6763627N
Landform Type:	Midslope
Slope Class:	Gentle-moderate
Soil Type:	Clay silt over granite (weathered)
Soil Colour:	Light brown
Fire:	>5
Comments:	Light brown clay/silt over granite(weathered)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.5		1.5
Acacia andrewsii	0.5		1.5
Allocasuarina acutivalvis subsp. *prinsepiana*	2		1.5
Austrostipa elegantissima	0.4		0.1
Comesperma integerrimum			0.1
Dodonaea inaequifolia	2		4
Enchylaena lanata	0.4		3
Eremophila clarkei	1.5		0.2
Eremophila decipiens subsp. *decipiens*	1.2		0.1
Erymophyllum ramosum subsp. *ramosum*			
Eucalyptus loxophleba subsp. *supralaevis*	6		5
Maireana carnosa	0.2		0.2
Maireana marginata	0.05		0.1
Maireana planifolia	0.3		0.1
Melaleuca nematophylla	2		2
Rhagodia drummondii	0.5		0.1
Sclerolaena diacantha	0.05		0.1

Site Name: GI-4

Site Type: AREA

Survey Date: 11/10/2006

GPS Location: GDA94 Zone 50 440421E 6763460N

Landform Type: Lowerslope

Slope Class: Gentle

Soil Type: Sandy loam with occasional granite

Soil Colour: Light brown

Fire: >5

Comments: Light brown sandy loam with occasional granite

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3.5		15
Acacia andrewsii	1		5
Acacia erinacea	0.5		4
Acacia resinosa			
Austrostipa elegantissima			
Austrostipa scabra			
**Bromus rubens*			
Calothamnus gilesii			
Dodonaea inaequifolia	1.5		1
Eremophila decipiens subsp. *decipiens*	1.5		0.5
Eremophila oldfieldii subsp. *angustifolia*			
Eremophila oppositifolia subsp. *oppositifolia*	2		1
Erymophyllum ramosum subsp. *ramosum*	0.1		0.1
Eucalyptus loxophleba subsp. *supralaevis*	6		8
Lawrencella rosea			
Maireana georgei			
Maireana marginata	0.05		0.1
**Medicago ?truncatula*			
Melaleuca eleuterostachya			
**Monoculus monstrosus*			
**Pentaschistis airoides*			
Pittosporum angustifolium			
Ptilotus exaltatus			
Ptilotus obovatus var. *obovatus*			

Rhagodia drummondii	1		0.5
Sclerolaena densiflora			
Sclerolaena diacantha	0.05		0.1
Senna artemisioides subsp. *filifolia*			
**Trifolium* sp.			
Zygophyllum ?aurantiacum			

Site Name:	GI-5
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 440358E 6763081N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Clay-loam with occasional granite
Soil Colour:	Brown
Fire:	>5
Comments:	Brown clay/loam, occasional granite.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		15
Acacia andrewsii	0.5		
Acacia ramulosa var. *ramulosa*			
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		
Austrostipa elegantissima	0.5		0.1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	0.4		
Borya sphaerocephala			
Comesperma integerrimum			0.1
Dodonaea inaequifolia	1		0.5
Enchylaena lanata			
Eremophila clarkei	0.5		
Eucalyptus loxophleba subsp. *supralaevis*	8		2
Hakea recurva subsp. *recurva*	1.5		1
Maireana georgei			
Melaleuca eleuterostachya			
Melaleuca radula			
Minuria cunninghamii			
Mirbelia microphylla			
Ptilotus exaltatus			
Ptilotus obovatus var. *obovatus*	0.4		0.4
Senna sp. Austin (A. Strid 20210)	2.5		3

Site Name:	GI-6
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 440087E 6763075N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Clay-loam on weathered granite
Soil Colour:	Red-brown
Fire:	>5
Comments:	red/brown clay-loam on weathered granite. Fire break, has been grazed.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		7.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3		4
Austrostipa elegantissima	0.2		0.1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	0.4		2.5
Borya sphaerocephala	0.1		2
Comesperma integerrimum			0.1
Dianella revoluta	0.5		0.1
Dodonaea inaequifolia	1		0.2
Eucalyptus loxophleba subsp. *supralaevis*	5		1
Malleostemon tuberculatus	1		
Melaleuca eleuterostachya	2		1
Melaleuca hamata	2.5		6
Mirbelia microphylla			
Velleia rosea			

Site Name:	GI-7
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 439909E 6763071N
Landform Type:	Upperslope
Slope Class:	Gentle
Soil Type:	Silty-sandy clay on granite
Soil Colour:	Brown
Fire:	>5
Comments:	brown silty-sandy-clay/granite

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		8
Allocasuarina acutivalvis subsp. *prinsepiana*	3		2.5
Austrostipa elegantissima	0.5		0.1
Borya sphaerocephala	0.1		0.2
Brunonia australis	0.1		0.1
Dodonaea inaequifolia	1		0.2
Erymophyllum ?glossanthus	0.01		0.1
Eucalyptus loxophleba subsp. *supralaevis*	8		2
Melaleuca hamata	2.5		4
Melaleuca radula	1.5		
Mirbelia microphylla			
Ptilotus obovatus var. *obovatus*	0.2		0.1

Site Name:	GI-8
Site Type:	AREA
Survey Date:	11/10/2006
GPS Location:	GDA94 Zone 50 439784E 6763085N
Landform Type:	Upperslope-crest
Slope Class:	Moderate
Soil Type:	Skeletal silt on granite
Soil Colour:	Light brown
Fire:	>5
Comments:	Light brown skeletal silt on granite

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Allocasuarina acutivalvis subsp. *prinsepiana*	3		1.5
Amphipogon caricinus	0.1		0.1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)			
Borya sphaerocephala	0.1		0.5
Dodonaea inaequifolia	1.5		1
Enchylaena lanata	0.3		0.2
Eremophila clarkei	1		0.2
Eucalyptus ?*horistes*			
Eucalyptus loxophleba subsp. *supralaevis*	4.5		1
Gilruthia osbornei			
Hakea recurva subsp. *recurva*	1.2		0.5
Maireana planifolia	0.3		0.2
Melaleuca nematophylla	3		5
Mirbelia microphylla			
Philotheca brucei subsp. *brucei*	1		1
Ptilotus obovatus var. *obovatus*	0.5		0.5

Site Name: HR01

Site Type: AREA

Survey Date: 05/02/2007

GPS Location: GDA94 Zone 50 431307E 6770253N

Landform Type: midslope

Slope Class: gentle

Soil Type: loam

Soil Colour: red/brown

Fire: >5

Comments: Immediate road reserve only. Past clearing

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera	3		2
Acacia assimilis subsp. *assimilis*	3		5
Acacia burkittii	3		2
Acacia ramulosa var. *ramulosa*	3		30
Acacia resinosa	3		1
Acacia tetragonophylla	2		2
Austrostipa elegantissima	0.5		0.5
Austrostipa sp.	0.1		0.1
Comesperma integerrimum			0.2
**Cucumis myriocarpus*			0.1
Grevillea obliquistigma subsp. *obliquistigma*	3		4
Maireana sp.	0.4		0.5
Melaleuca hamata	2		1
Ptilotus obovatus var. *obovatus*	0.3		5
Rulingia luteiflora	2		0.5
Sida excedentifolia ms	0.1		0.2
Solanum lasiophyllum	0.4		0.5
Solanum nummularium	0.3		0.1

Site Name:	HR02
Site Type:	AREA
Survey Date:	05/02/2007
GPS Location:	GDA94 Zone 50 430609E 6770260N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	loam
Soil Colour:	red
Fire:	>5
Comments:	Degraded woodland mainly on northern side of road

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii	1.4		0.5
Acacia burkittii	3		2
Acacia ramulosa var. *ramulosa*	3		4
Acacia tetragonophylla	2		1
Aristida contorta	0.1		0.5
Enchylaena tomentosa	0.4		0.5
Eucalyptus loxophleba subsp. *lissophloia*	2.5		0.5
Eucalyptus loxophleba subsp. *supralaevis*	10		15
Maireana brevifolia	0.3		2
Maireana ?planifolia	0.4		1.5
Ptilotus obovatus var. *obovatus*	0.4		6
Sida excedentifolia ms	0.2		0.1
Solanum lasiophyllum	0.3		0.2

Site Name:	HR03
Site Type:	AREA
Survey Date:	05/02/2007
GPS Location:	GDA94 Zone 50 429641E 6770246N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	loam with gravel
Soil Colour:	red/brown
Fire:	>5
Comments:	Acacia scrubland with lots of grassy weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	2		8
Acacia acuminata	3		5
Aristida contorta	0.3		0.5
Austrostipa elegantissima	1		1
Dodonaea inaequifolia	1.5		1
Eremophila ?miniata	1.3		0.1
Maireana ?planifolia	0.3		4
Maireana ?tomentosa	0.6		3
Pimelea microcephala subsp. *microcephala*	1		1
Ptilotus obovatus var. *obovatus*	1		4
Senna glutinosa subsp. *chatelainiana*	1		
Sida atrovirens ms	1.5		5
Sida excedentifolia ms	0.1		0.1
Solanum lasiophyllum	0.3		0.5

Site Name: HR04

Site Type: AREA

GPS Location: GDA94 Zone 50 429229E 6770234N

Landform Type: upperslope

Slope Class: undulating

Soil Type: loamy/rocky

Soil Colour: red/brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*			
Acacia acuminata			
Acacia andrewsii			
Acacia tetragonophylla			
Aristida contorta			
Austrostipa elegantissima			
Dodonaea inaequifolia			
Eremophila ?clarkei			
Hakea recurva subsp. *recurva*			
Ptilotus obovatus var. *obovatus*			
Santalum spicatum			

Site Name: HR05

Site Type: AREA

Survey Date: 05/02/2007

GPS Location: GDA94 Zone 50 428269E 6770225N

Landform Type: upperslope

Slope Class: gentle

Soil Type: sandy silt on gravel

Soil Colour: brown

Fire: >5

Comments: Acacia thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		25
Acacia duriuscula	4		10
Acacia ?nigripilosa subsp. *nigripilosa*	2.5		0.5
Acacia puncticulata	0.4		0.1
Acacia ramulosa var. *ramulosa*	2		0.2
Aristida contorta	0.2		6
Austrostipa elegantissima	0.5		0.5
Borya sphaerocephala	0.2		0.1
Daviesia hakeoides subsp. *hakeoides*	2		5
Grevillea levis	2		0.5
Grevillea obliquistigma subsp. *obliquistigma*	3		0.5
Lepidosperma sp. Karara (H. Pringle 3865)	0.4		2
Malleostemon tuberculatus	2.5		0.2
Mirbelia microphylla	0.3		0.1
Ptilotus obovatus var. *obovatus*	0.4		0.1
Solanum lasiophyllum	0.4		0.1

Site Name:	HR06
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 427408E 6770274N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	silty sand with granite
Soil Colour:	red/brown
Fire:	>5
Comments:	Thicket/Acacia scrub, same community on both sides of Haul Road

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		3
Acacia duriuscula	3		1
Acacia quadrimarginea			
Acacia ramulosa var. *ramulosa*	2		1
Acacia restiacea			
Acacia ?speckii			
Acacia tetragonophylla	2		1
Allocasuarina huegeliana	2		5
Aristida contorta			
Borya sphaerocephala	0.2		10
Brunonia australis			
Calycopeplus paucifolius	2.5		4
Cephalipterum drummondii			
Daviesia hakeoides subsp. *hakeoides*	2		1
Dianella revoluta			
Grevillea levis	1.5		0.5
Grevillea paradoxa	2		1
Malleostemon tuberculatus	1.4		8
Melaleuca fulgens subsp. *steedmanii*			
Melaleuca hamata	2.3		1
Mirbelia ?microphylla			
Myriocephalus guerinae			
Solanum ?ellipticum			
Solanum lasiophyllum			

Thysanotus pyramidalis			
Velleia rosea			
Waitzia acuminata			

Site Name:	HR07
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 426732E 6770778N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	sandy silt on granite
Soil Colour:	brown/red
Fire:	>5
Comments:	Acacia thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia duriuscula	2.5		8
Acacia quadrimarginea			
Borya sphaerocephala	0.1		35
Calycopeplus paucifolius	2.5		2
Daviesia hakeoides subsp. *hakeoides*			
Dioscorea hastifolia			0.2
Grevillea paradoxa			
Malleostemon tuberculatus	1.5		20
Melaleuca fulgens subsp. *steedmanii*			
Monachather paradoxus			

Site Name:	HR08
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 426282E 6770654N
Landform Type:	midslope
Slope Class:	moderate
Soil Type:	silty gravel on granite
Soil Colour:	brown
Fire:	>5
Comments:	Dense thicket with emergent Allocasuarina

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii	1.4		0.5
Acacia quadrimarginea	4		3
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla	2		15
Allocasuarina dielsiana	6		1
Aristida contorta	0.1		0.2
Borya sphaerocephala	0.1		2
Comesperma integerrimum			0.2
Dodonaea inaequifolia	2		10
Grevillea paradoxa	1		1
Hakea recurva subsp. *recurva*	0.3		0.1
Lepidosperma sp. Karara (H. Pringle 3865)	0.3		1
**Pentaschistis airoides*			
Ptilotus obovatus var. *obovatus*	0.3		0.2
Solanum ?ellipticum	0.2		1
Solanum lasiophyllum			

Site Name:	HR09
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 425520E 6770478N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	silt with occasional granite and ironstone pebbles
Soil Colour:	red/brown
Fire:	>5
Comments:	Acacia scrub/thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	5		0.5
Acacia quadrimarginea	3		2
Acacia ramulosa var. *ramulosa*	3		1
Acacia tetragonophylla	3		30
Austrostipa elegantissima			
Borya sphaerocephala	0.1		0.1
Chenopodium gaudichaudianum			
Comesperma integerrimum			0.1
Dianella revoluta	0.6		0.1
Dodonaea inaequifolia	1		0.5
Enchylaena ?tomentosa			
Eremophila clarkei	2		0.5
Hakea recurva subsp. *recurva*	3		30
Podolepis capillaris	0.2		0.1
Ptilotus obovatus var. *obovatus*			
Ptilotus schwartzii			
Rhagodia ?drummondii	0.3		0.2
Senna charlesiana			
Senna glutinosa subsp. *chatelainiana*	1		0.5
Senna sp. Austin (A. Strid 20210)	1		0.1
Solanum ?ellipticum	0.1		0.1
Solanum lasiophyllum			

Site Name: HR10

Site Type: AREA

Survey Date: 06/02/2007

GPS Location: GDA94 Zone 50 425049E 6770104N

Landform Type: in creekline

Soil Type: silt with occasional granite

Soil Colour: red/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii			
Acacia quadrimarginea	3.5		3
Acacia tetragonophylla	3		30
Chenopodium gaudichaudianum			
Comesperma integerrimum			0.2
Dodonaea inaequifolia	1.5		4
Eremophila clarkei			
Hakea recurva subsp. *recurva*	1		0.2
Senna charlesiana			
Solanum ?ellipticum			

Site Name:	HR11
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 425129E 6770043N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	silt with exposed granite
Soil Colour:	pale brown
Fire:	>5
Comments:	Thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia quadrimarginea	3		10
Acacia ramulosa var. *ramulosa*	2		0.5
Acacia tetragonophylla	1.5		2
Allocasuarina huegeliana	2.5		1
Alyxia buxifolia	2.5		1
Astroloma serratifolium			
Austrostipa elegantissima	0.4		0.1
Borya sphaerocephala	0.1		3
Calycopeplus paucifolius	2		5
Comesperma integerrimum			
Dodonaea inaequifolia	2.5		8
Eremophila clarkei			
Grevillea paradoxa	1.5		4
Hakea recurva subsp. *recurva*	0.5		1
Lepidosperma sp. Karara (H. Pringle 3865)	0.4		4
Melaleuca hamata	4		1
Mirbelia microphylla	0.6		0.1
Philotheca brucei subsp. *brucei*	0.5		0.5
Solanum ?ellipticum	0.1		0.1

Site Name:	HR12
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 424718E 6769599N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	silt with ironstone pebbles
Soil Colour:	red/brown
Fire:	>5
Comments:	Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii	1.5		15
Acacia burkittii	2.5		0.5
Acacia ramulosa var. *ramulosa*	2		5
Acacia tetragonophylla	2		8
Amyema miquelii			0.1
Comesperma integerrimum			0.1
Dianella revoluta	1		0.1
Dodonaea inaequifolia	2		2
Enchylaena ?tomentosa	0.5		0.2
Eremophila clarkei	1.5		2
Eucalyptus loxophleba subsp. *supralaevis*	8		15
Hakea recurva subsp. *recurva*	3		0.5
Monachather paradoxus			
Persoonia pentasticha (P3)	0.6		0.1
Podolepis capillaris	0.3		0.2
Ptilotus obovatus var. *obovatus*	0.5		0.5

Site Name:	HR13
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 424674E 6769668N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	silt with ironstone gravel
Soil Colour:	red/brown
Fire:	>5
Comments:	Mallee in thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		4
Acacia kochii	0.5		0.5
Acacia ?*nigripilosa* subsp. *nigripilosa*	1		3
Acacia prainii	2		0.5
Acacia ramulosa var. *ramulosa*	2.5		2
Acacia stereophylla var. *stereophylla*	2		0.5
Dodonaea inaequifolia	1.5		0.5
Eremophila clarkei	1		0.5
Eucalyptus ebbanoensis subsp. *ebbanoensis*	5		20
Grevillea obliquistigma subsp. *obliquistigma*	2		5
Senna glutinosa subsp. *chatelainiana*	0.5		4

Site Name:	HR14
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 424471E 6769426N
Landform Type:	midslope
Slope Class:	moderate
Soil Type:	silty loam with ironstone gravel
Soil Colour:	red/brown
Fire:	>5
Comments:	Acacia thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia stereophylla var. *stereophylla*	1.5		1
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*	0.2		0.5
Eucalyptus leptopoda subsp. *arctata*	2.1		1
Grevillea obliquistigma subsp. *obliquistigma*	2		5
Grevillea paradoxa			
Hakea multilineata	0.5		5
Halgania ?cyanea var. *cyanea*			
Hemigenia sp. Jibberding (J. D'Alonzo 418)			
Ptilotus obovatus var. *obovatus*	1.2		1
Ricinocarpos velutinus			
Senna charlesiana	2		50
Thysanotus sp.			
Velleia rosea			
Waitzia acuminata			

Site Name:	HR15
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 424028E 6769241N
Landform Type:	midslope
Slope Class:	moderate
Soil Type:	silty loam with occasional granite
Soil Colour:	red/brown
Fire:	>5
Comments:	Thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	1.7		0.5
Acacia stereophylla var. *stereophylla*	2.5		2
Allocasuarina huegeliana			
Aluta aspera subsp. *hesperia*	1.5		0.5
Austrostipa elegantissima	0.5		0.5
Comesperma integerrimum			0.1
Eremophila clarkei	0.5		0.2
Grevillea obliquistigma subsp. *obliquistigma*	2.5		4
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		7
Melaleuca cordata	2		5
Mirbelia ?microphylla	0.5		0.1

Site Name:	HR16
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 423747E 6769215N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	silty sand with ironstone gravel
Soil Colour:	brown/red
Fire:	>5
Comments:	Mallee woodland other thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	1		8
Acacia assimilis subsp. *assimilis*	2		1
Acacia ?nigripilosa subsp. *nigripilosa*	1		1
Aluta aspera subsp. *hesperia*	1		1
Amphipogon caricinus var. *caricinus*			
Cryptandra apetala var. *apetala*	1		3
Eucalyptus ebbanoensis subsp. *ebbanoensis*	3		20
Grevillea obliquistigma subsp. *obliquistigma*	2.5		2
Monachather paradoxus			
Senna charlesiana	2.5		30

Site Name: HR17

Site Type: AREA

Survey Date: 06/02/2007

GPS Location: GDA94 Zone 50 423079E 6769062N

Landform Type: mid/lowerslope

Slope Class: flat

Soil Type: loamy

Soil Colour: red

Fire: >5

Comments: Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	1.5		2
Acacia anthochaera	2		
Acacia longispinea			
Acacia ramulosa var. *ramulosa*	3		1.5
Acacia stereophylla var. *stereophylla*			
Austrostipa elegantissima	0.5		0.5
Chenopodium gaudichaudianum			
Daviesia benthamii subsp. *benthamii*	1.5		7
Dianella revoluta	1		0.5
Enchylaena ?tomentosa	1		0.5
Eucalyptus ebbanoensis subsp. *ebbanoensis*	8		15
Eucalyptus leptopoda subsp. *arctata*	8		1
Grevillea obliquistigma subsp. *obliquistigma*	1.5		
**Hypochaeris glabra*			
Monachather paradoxus			
Rhagodia ?drummondii			
Senna glutinosa subsp. *chatelainiana*	0.5		
Thysanotus patersonii			0

Site Name:	HR18
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 421723E 6768718N
Landform Type:	mid/lowerslope
Slope Class:	flat
Soil Type:	loamy
Soil Colour:	red/brown
Fire:	>5
Comments:	Road verge woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	2		1
Acacia ramulosa var. *ramulosa*	2		2
Acacia tetragonophylla			
Austrostipa elegantissima	0.5		2
Chenopodium gaudichaudianum	0.5		5
Daviesia benthamii subsp. *benthamii*	1		6
Eucalyptus ebbanoensis subsp. *ebbanoensis*	6		2.5
Grevillea obliquistigma subsp. *obliquistigma*	0.5		2
Hakea recurva subsp. *recurva*	0.5		0.2
Maireana ?planifolia	0.3		2
Pimelea microcephala subsp. *microcephala*			1
Ptilotus schwartzii	0.3		0.3
Solanum lasiophyllum			

Site Name: HR20

Site Type: AREA

GPS Location: GDA94 Zone 50 421261E 6768601N

Landform Type: red/brown

Slope Class: very gentle

Soil Type: loamy

Soil Colour: red/brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera			
Acacia ramulosa var. *ramulosa*	2		6
Atriplex ?*bunburyana*	1.5		1
Austrostipa elegantissima	1		2
Chenopodium gaudichaudianum	0.2		5
?*Enchylaena tomentosa*	0.3		2
Eucalyptus kochii subsp. *plenissima*	8		3
Eucalyptus loxophleba subsp. *supralaevis*	8		2
Hakea recurva subsp. *recurva*	3		2
Maireana brevifolia	0.4		3
Maireana georgei			
Maireana ?*planifolia*	0.4		4
**Mesembryanthemum nodiflorum*	0.3		5
Senna charlesiana			
Senna glutinosa subsp. *chatelainiana*			

Site Name: HR21

Site Type: AREA

Survey Date: 06/02/2007

GPS Location: GDA94 Zone 50 420876E 6768868N

Soil Type: sandy loam

Soil Colour: red/brown

Fire: >5

Comments: Degraded roadside woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii	1.5		3
Acacia anthochaera	2		3
Acacia ramulosa var. *ramulosa*	2.5		5
Austrostipa elegantissima	0.5		3
Bursaria occidentalis	3		2
Chenopodium gaudichaudianum	1		5
Dianella revoluta			
Eucalyptus ebbanoensis subsp. *ebbanoensis*			
Eucalyptus kochii subsp. ?*plenissima*	7		6
Eucalyptus loxophleba subsp. *supralaevis*			
Hakea recurva subsp. *recurva*	3		2
Maireana brevifolia	0.6		3
Maireana georgei	0.3		2
**Mesembryanthemum nodiflorum*	0.3		2
Ptilotus obovatus var. *obovatus*	0.5		4
Senna charlesiana	1.5		5
Senna glutinosa subsp. *chatelainiana*	2		8

Site Name:	HR22
Site Type:	AREA
Survey Date:	06/02/2007
GPS Location:	GDA94 Zone 50 420895E 6770339N
Landform Type:	mid/upperslope
Slope Class:	gentle
Soil Type:	silt with ironstone pebbles and some granite
Soil Colour:	brown
Fire:	>5
Comments:	Acacia thicket/scrub

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		10
Acacia stereophylla var. *stereophylla*			
Acacia tetragonophylla			
Allocasuarina huegeliana			
Aristida contorta			
Austrostipa elegantissima			
Austrostipa ?*nodosa*	0.3		0.1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	0.4		10
Borya sphaerocephala	0.1		0.1
Eucalyptus ebbanoensis subsp. *ebbanoensis*			
Grevillea obliquistigma subsp. *obliquistigma*			
Melaleuca hamata	2		5
Mirbelia ?*microphylla*	0.8		0.5
Ptilotus obovatus var. *obovatus*			
Senna charlesiana	2		1
Solanum ?*ellipticum*	0.1		0.1
Thysanotus patersonii			0.1

Site Name: HR23

Site Type: AREA

Survey Date: 06/02/2007

GPS Location: GDA94 Zone 50 420887E 6770926N

Soil Type: sandy silt

Soil Colour: orange/brown

Comments: Mallee with Acacia, lots of dead grasses

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		2
Acacia stereophylla var. *stereophylla*	3		0.5
Austrostipa elegantissima	0.5		1
Chenopodium gaudichaudianum			
Dianella revoluta			
Eucalyptus leptopoda subsp. *arctata*	6		8
Grevillea obliquistigma subsp. *obliquistigma*	2		5
Melaleuca cordata			
Monachather paradoxus	0.3		5
Ricinocarpos velutinus			
Senna charlesiana	3		6
Solanum lasiophyllum			

Site Name: KM-001

Site Type: AREA

Survey Date: 26/06/2006

GPS Location: GDA94 Zone 50 481625E 6772274N

Landform Type: Midslope

Slope Class: Very gentle

Soil Type: Silt with small ironstone pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1.7		10
Acacia ramulosa var. *ramulosa*	3.5		5
Acacia sibina	2		2
Aluta aspera subsp. *hesperia*	1		25
Comesperma integerrimum			0.1
Eremophila latrobei (variant)	0.5		0.5
Grevillea obliquistigma subsp. *obliquistigma*	1.7		1
Malleostemon tuberculatus	1.5		2
Melaleuca hamata	50		0.1
Monachather paradoxus	0.3		0.1
Philotheca deserti subsp. *deserti*	1		1
Pimelea microcephala subsp. *microcephala*	0.3		0.1

Site Name: KM-002

Site Type: AREA

Survey Date: 26/06/2006

GPS Location: GDA94 Zone 50 483613E 6773206N

Landform Type: Flat, lowerslope

Slope Class: Very gentle

Soil Type: clay-silt with scattered small ironstone pebbles

Soil Colour: red-brown

Fire: >5 yr

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1.5		2
Acacia anthochaera	0.5		0.1
Acacia assimilis subsp. *assimilis*	2		0.5
Acacia obtecta	1.7		7
Acacia ramulosa var. *ramulosa*	2		15
Acacia tetragonophylla	3		2
Austrostipa elegantissima	0.5		1
Eucalyptus loxophleba subsp. *supralaevis*	8		5
Exocarpos aphyllus	1.7		2
Maireana carnosa	0.4		0.5
Maireana georgei	0.4		0.5
Maireana marginata	0.1		1
Olearia pimeleoides	1		2.5
Ptilotus exaltatus var. *exaltatus*	0.1		0.1
Ptilotus obovatus var. *obovatus*	0.3		4
Rhagodia drummondii	0.5		1
Sclerolaena diacantha	0.1		1
Sclerolaena fusiformis	0.15		2
Senna charlesiana	1.5		2
Senna stowardii	1.5		2

Site Name: KM-003

Site Type: AREA

Survey Date: 26/06/2006

GPS Location: GDA94 Zone 50 483362E 6772993N

Landform Type: Flat, lowerslope

Slope Class: Very gentle

Soil Type: clay-silt with ironstone pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		20
Acacia sibina	2.5		20
Acacia tetragonophylla	2		2
Amphipogon caricinus var. *caricinus*	0.2		0.5
Eremophila clarkei			
Hakea recurva subsp. *recurva*	2		2
Melaleuca eleuterostachya			
Melaleuca hamata	4		6
Monachather paradoxus	0.2		1
Pimelea microcephala subsp. *microcephala*	0.4		0.1
Ptilotus obovatus var. *obovatus*	0.3		
Ptilotus schwartzii	0.2		

Site Name: KM-004

Site Type: AREA

Survey Date: 26/06/2006

GPS Location: GDA94 Zone 50 483049E 6772782N

Landform Type: Flat, lowerslope

Slope Class: Very gentle

Soil Type: clay-silt with lots of ironstone pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		1
Acacia aneura var. ?*conifera*	4		3
Acacia ramulosa var. *ramulosa*			
Acacia sp. Murchison (B.R. Maslin 7331)	2.5		1
Acacia tetragonophylla	3		0.5
Cuscuta sp.			
Eremophila clarkei			
Euphorbia drummondii subsp. *drummondii*	0.05		20
Hakea recurva subsp. *recurva*	1.5		0.5
Prostanthera patens			
Ptilotus obovatus var. *obovatus*	0.3		6
Ptilotus schwartzii			
Sclerolaena diacantha	0.1		1
Sclerolaena fusiformis	0.1		0.5
Solanum nummularium			

Site Name: KM-005

Site Type: AREA

Survey Date: 27/06/2006

GPS Location: GDA94 Zone 50 482818E 6771891N

Landform Type: Upperslope, crest

Slope Class: Very gentle

Soil Type: clay-silt with granite rocks

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	1.7		10
Acacia sp. Murchison (B.R. Maslin 7331)	3		7
Acacia tetragonophylla	2.5		10
Allocasuarina dielsiana	4		3
Dodonaea inaequifolia	1.7		2.5
Eremophila oldfieldii subsp. *angustifolia*	3		4
Grevillea hakeoides subsp. *stenophylla*	2		0.5
Grevillea scabrida (P3)			
Maireana marginata			
Pimelea microcephala subsp. *microcephala*	0.5		0.5
Ptilotus obovatus var. *obovatus*	0.4		1
Scaevola spinescens	1		1.5
Senna artemisioides subsp. *filifolia*	1.6		2
Senna sp. Austin (A. Strid 20210)	2		5
Zygophyllum sp.	0.1		0.1

Site Name: KM-008

Site Type: AREA

Survey Date: 27/06/2006

GPS Location: GDA94 Zone 50 481510E 6771918N

Landform Type: Lowerslope

Slope Class: Gentle

Soil Type: clay-silt, occasional pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.5		3
Acacia ramulosa var. *ramulosa*	1.5		1
Acacia tetragonophylla	1.5		3
Atriplex semilunaris	0.1		0.1
Austrostipa elegantissima	1		0.5
Eremophila pantonii	0.4		0.1
Eucalyptus loxophleba subsp. *supralaevis*	10		10
Exocarpos aphyllus	2		0.1
Hemigenia macphersonii	0.4		0.1
Maireana carnosa	0.4		0.2
Maireana marginata	0.1		0.2
Pimelea microcephala subsp. *microcephala*	0.4		0.1
Ptilotus exaltatus var. *exaltatus*	0.1		0.1
Ptilotus obovatus var. *obovatus*	0.5		0.5
Rhagodia drummondii	0.5		0.2
Santalum acuminatum	2		1
Sclerolaena diacantha	0.4		0.2
Sclerolaena fusiformis	0.2		0.2
Senna stowardii	2		0.5
Solanum nummularium	0.5		0.1
Zygophyllum sp.	0.1		0.3

Site Name:	KM-009
Site Type:	AREA
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 480690E 6776105N
Landform Type:	Flat
Slope Class:	Very gentle
Soil Type:	silt with sand at surface
Soil Colour:	red-brown
Fire:	>5
Comments:	Grazed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia inceana subsp. *conformis*	3		10
Austrostipa elegantissima	0.5		0.5
Comesperma integerrimum			0.5
Dodonaea viscosa subsp. *angustissima*	2		1
Eremophila pantonii	2		1
Exocarpos aphyllus	1.6		1
Frankenia setosa	0.4		3.5
Olearia muelleri			
Ptilotus divaricatus var. *divaricatus*	0.4		0.2
Ptilotus obovatus var. *obovatus*	0.4		2
Rhagodia drummondii			
Scaevola spinescens	0.7		10
Sclerolaena diacantha	0.1		0.5
Senna charlesiana	0.2		0.1
Solanum nummularium	0.5		0.2
Templetonia smithiana			

Site Name:	KM-010
Site Type:	AREA
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 480327E 6776970N
Landform Type:	Flat
Slope Class:	Very gentle
Soil Type:	clay loam, soft, some calcrete
Soil Colour:	red-brown
Fire:	>5
Comments:	Woodland/nothing

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Austrodanthonia sp.	0.2		0.1
Eremophila pantonii	0.5		0.2
Eucalyptus striaticalyx subsp. *striaticalyx*	8		60
Exocarpos aphyllus	2		0.1
Pittosporum angustifolium	3		0.1

Site Name:	KM-011
Site Type:	AREA
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 479518E 6776904N
Landform Type:	Ephemeral wetland
Slope Class:	Nil
Soil Type:	cracking clay and silt
Soil Colour:	brown
Fire:	>5
Comments:	Fairly degraded - paterson's curse throughout, lots of kangaroo grazing. Many dead annuals.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aristida holathera var. *holathera*	0.2		0.5
**Echium plantagineum*	0.2		5
Exocarpos aphyllus	3		0.2
Frankenia setosa	0.3		0.1
Muehlenbeckia florulenta	1.7		10
Ptilotus obovatus var. *obovatus*	0.4		0.5
Sclerostegia disarticulata	0.7		10

Site Name:	KM-012
Site Type:	AREA
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 479749E 6776923N
Landform Type:	ephemeral wetland
Slope Class:	Nil
Soil Type:	cracking clay with silt, very soft
Soil Colour:	brown
Fire:	>5
Comments:	This area of wetland is free of paterson's curse, less degraded. Lots of dead annuals.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta			
Atriplex ?amnicola			
Atriplex semilunaris	0.3		6
**Echium plantagineum*	0.1		1
Enchylaena lanata			
Maireana brevifolia	0.5		2
Maireana carnosa	0.5		0.5
Maireana georgei	0.4		0.5
Salsola tragus			
Sclerolaena diacantha			
Sclerolaena fusiformis			
Sclerostegia disarticulata	0.4		15

Site Name:	KM-013
Site Type:	AREA
Survey Date:	27/06/2006
GPS Location:	GDA94 Zone 50 480179E 6776977N
Landform Type:	Low rise beside ephemeral wetland
Slope Class:	Very gentle
Soil Type:	clay-silt with sand
Soil Colour:	brown
Fire:	>5
Comments:	Some dead annuals.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aristida holathera var. *holathera*	0.1		0.1
Frankenia setosa	0.3		15
Maireana carnosa	0.4		2
Maireana georgei	0.4		1
Sclerostegia disarticulata	0.5		2
Solanum nummularium	0.1		0.5

Site Name: KM-019

Site Type: AREA

Survey Date: 28/06/2006

GPS Location: GDA94 Zone 50 479531E 6770765N

Landform Type: Lowerslope

Slope Class: Very Gentle

Soil Type: clay-loam with occ. quartz

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia obtecta	1.5		1
Acacia tetragonophylla	1.5		1
Austrostipa elegantissima	0.5		0.1
Eremophila pantonii	2		0.5
Eucalyptus salubris	10		15
Exocarpos aphyllus	2		1.5
Maireana georgei	0.5		2
Maireana marginata	0.1		2
Ptilotus exaltatus var. *exaltatus*	0.1		0.5
Ptilotus obovatus var. *obovatus*	0.4		4
Rhagodia drummondii	0.4		2
Sclerolaena diacantha	0.4		4
Sclerolaena fusiformis	0.2		3
Senna stowardii	2		0.5
Zygophyllum sp.	0.1		3

Site Name: KM-020

Site Type: AREA

Survey Date: 28/06/2006

GPS Location: GDA94 Zone 50 478806E 6769635N

Landform Type: Midslope

Slope Class: Very Gentle

Soil Type: clay-loam with ironstone pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		75
Cheilanthes sieberi subsp. *sieberi*	0.1		1
Daviesia benthamii subsp. *benthamii*	0.5		4
Dianella revoluta	1		0.01
Eucalyptus leptopoda subsp. *arctata*	3		2
Grevillea globosa (P3)	1.5		0.01
Monachather paradoxus	0.3		0.1
Philotheca deserti subsp. *deserti*	1.3		3

Site Name: KM-021

Site Type: AREA

Survey Date: 28/06/2006

GPS Location: GDA94 Zone 50 478620E 6769429N

Landform Type: Lowerslope

Slope Class: Very Gentle

Soil Type: clay-loam

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		8
Acacia ramulosa var. *ramulosa*	3		5
Acacia tetragonophylla	3		5
Austrostipa elegantissima	0.3		0.1
Austrostipa sp.	0.2		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Dianella revoluta	0.5		0.05
Eremophila granitica			
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus	2.5		0.5
Hakea recurva subsp. *recurva*	3		1
Lysiana casuarinae			0.1
Minuria cunninghamii	0.5		0.5
Persoonia pentasticha (P3)	0.3		0.1
Ptilotus obovatus var. *obovatus*	0.3		0.5
Ptilotus schwartzii	0.3		0.1
Rhagodia drummondii	0.5		0.1
Sida ?calyxhymenia	0.2		0.1
Solanum lasiophyllum	0.5		0.1
Solanum nummularium	0.3		0.1

Site Name: KM-022

Site Type: AREA

Survey Date: 28/06/2006

GPS Location: GDA94 Zone 50 478476E 6769296N

Landform Type: Lowerslope

Slope Class: Very Gentle

Soil Type: clay-silt

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		6
Acacia ramulosa var. *ramulosa*	2		1
Acacia tetragonophylla	3		3
Austrostipa elegantissima	1		0.1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.5
Eremophila granitica	0.5		0.5
Eremophila latrobei (variant)	1		0.1
Eremophila pantonii	3		0.5
Eucalyptus loxophleba subsp. *supralaevis*	10		4
Exocarpos aphyllus	1		0.5
Grevillea extorris	1.2		0.1
Hakea recurva subsp. *recurva*	1.5		1
Minuria cunninghamii	0.5		0.1
Olearia pimeleoides	0.5		0.1
Persoonia pentasticha (P3)	0.4		0.1
Ptilotus drummondii	0.3		0.1
Ptilotus exaltatus var. *exaltatus*	0.1		0.2
Ptilotus obovatus var. *obovatus*	0.4		5
Rhagodia drummondii	0.3		0.5
Sclerolaena diacantha	0.3		0.5
Sclerolaena fusiformis	0.2		0.1
Solanum nummularium	0.4		2

Site Name: KM-025

Site Type: AREA

Survey Date: 28/06/2006

GPS Location: GDA94 Zone 50 486738E 6779221N

Landform Type: Upperslope

Slope Class: Gentle

Soil Type: silt over BIF

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura var. ?*argentea*	4		
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	0.5		0.2
Acacia sibina	1		0.1
Acacia sp. Murchison (B.R. Maslin 7331)	2.5		6
Astroloma serratifolium	0.4		1
Austrostipa elegantissima	0.3		0.1
Brachychiton gregorii	4		
Calycopeplus paucifolius	2		
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Eremophila latrobei subsp. *latrobei*	2		5
Hibbertia arcuata	0.5		0.5
Melaleuca nematophylla	2.5		2
Mirbelia bursarioides ms	1.5		0.1
Philotheca sericea	1.4		10
Thryptomene costata	1.4		8
Xanthosia bungei	0.4		2

Site Name: KM-036

Site Type: AREA

Survey Date: 29/06/2006

GPS Location: GDA94 Zone 50 482506E 6778055N

Landform Type: Lower-midslope

Slope Class: Very Gentle

Soil Type: sandy loam

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		8
Acacia inceana subsp. *conformis*	4		2
Acacia obtecta	3		3
Acacia tetragonophylla	2.5		2
Alyxia buxifolia	1		0.1
Austrostipa elegantissima	1		0.2
Dodonaea viscosa subsp. *angustissima*	3		1
Enchylaena lanata	0.3		2
Enchylaena tomentosa var. *tomentosa*	0.5		0.5
Eremophila glabra	0.5		0.5
Eremophila granitica	0.3		0.1
Eremophila pantonii	2		2
Exocarpos aphyllus	2.5		1
Hakea recurva subsp. *recurva*	2		0.5
Persoonia pentasticha (P3)	0.3		0.1
Pittosporum angustifolium	1		0.1
Ptilotus obovatus var. *obovatus*	0.3		4
Rhagodia drummondii	0.5		4
Santalum spicatum	1.5		0.1
Scaevola spinescens	1		0.1
Solanum nummularium	0.5		0.5

Site Name: KM-037

Site Type: AREA

Survey Date: 29/06/2006

GPS Location: GDA94 Zone 50 482521E 6777763N

Landform Type: Flat-undulating

Slope Class: Very Gentle

Soil Type: sandy loam

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		2
Acacia anthochaera	6		1
Acacia obtecta	2		0.5
Alyxia buxifolia	2		0.1
Aristida contorta			
Austrostipa elegantissima	0.3		0.5
Calytrix sp. Paynes Find (F. & J. Hort 1188)			
Dianella revoluta	0.5		0.1
Dodonaea viscosa subsp. *angustissima*	2.5		0.5
Enchylaena lanata	0.3		0.1
Enchylaena tomentosa var. *tomentosa*	0.3		0.1
Eremophila pantonii	1		0.5
Eucalyptus kochii subsp. ?*plenissima*	13		1
Eucalyptus loxophleba subsp. *supralaevis*	12		8
Exocarpos aphyllus	2.5		1
Mirbelia ramulosa			
Olearia pimeleoides	1		0.5
Pittosporum angustifolium	7		0.1
Ptilotus exaltatus var. *exaltatus*	0.1		2
Ptilotus obovatus var. *obovatus*	0.3		1
Rhagodia drummondii	0.5		0.5
Solanum lasiophyllum	0.3		0.1
Zygophyllum sp.	0.3		0.1

Site Name: KM-038

Site Type: AREA

Survey Date: 29/06/2006

GPS Location: GDA94 Zone 50 482565E 6777400N

Landform Type: Flat-undulating

Slope Class: Very Gentle

Soil Type: sandy-loam

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		4
Acacia inceana subsp. *conformis*	1		0.1
Acacia obtecta	3.5		7
Acacia tetragonophylla	0.5		0.5
Alyxia buxifolia	2		0.1
Amphipogon caricinus var. *caricinus*	0.3		0.1
Austrostipa elegantissima	0.4		0.5
Callitris columellaris	7		7
Cryptandra imbricata	0.5		0.2
Dodonaea viscosa subsp. *angustissima*	0.5		0.1
Maireana georgei	0.4		0.1
Monachather paradoxus	0.2		0.1
Olearia pimeleoides			
Persoonia pentasticha (P3)	0.3		0.1
Rhagodia drummondii	1		3
Santalum spicatum	2		0.1
Senna stowardii	2		0.1
Solanum lasiophyllum	0.2		0.1

Site Name: KM-039

Site Type: AREA

Survey Date: 29/06/2006

GPS Location: GDA94 Zone 50 483217E 6778416N

Landform Type: Flat

Slope Class: Gentle

Soil Type: clay-silt

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		0.5
Acacia inceana subsp. *conformis*	4		6
Acacia obtecta	0.3		0.1
Acacia tetragonophylla	2		0.1
Austrostipa elegantissima	1		0.1
Comesperma integerrimum			0.01
Enchylaena tomentosa var. *tomentosa*	0.3		0.1
Eremophila glabra	0.5		0.1
Eremophila pantonii	2		5
Exocarpos aphyllus	3		4
Persoonia pentasticha (P3)	0.5		0.1
Ptilotus divaricatus var. *divaricatus*	0.2		0.1
Ptilotus obovatus var. *obovatus*	0.3		5
Santalum spicatum	2		0.1
Scaevola spinescens	1		0.2
Solanum nummularium	0.3		0.1
Templetonia smithiana	1		0.1

Site Name: KM-103

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 477582E 6768606N

Landform Type: flat

Slope Class: nil

Soil Type: silty loam

Soil Colour: red brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria			
Acacia acuminata	0.5		0.1
Acacia obtecta	2		7
Acacia sp. nov 3 (gind_71-05, KM_103-2)	3		9
Acacia tetragonophylla	1		1
Amphipogon caricinus var. *caricinus*	0.2		0.1
Austrostipa elegantissima	0.5		0.1
Calocephalus multiflorus	0.05		0.1
Cheilanthes sieberi subsp. *sieberi*	0.05		0.1
Comesperma integerrimum			
Dianella revoluta	0.4		0.1
Eremophila decipiens	0.5		1
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*	9		6
Hakea recurva subsp. *recurva*	3		6
Lomandra effusa			
Maireana carnosa			
Maireana georgei	0.3		1
Microcorys sp. Mt Gibson (S. Patrick 2098)			
Minuria cunninghamii	0.3		1
Monachather paradoxus	0.3		0.2
Olearia pimeleoides	0.7		1
Ptilotus obovatus var. *obovatus*	0.4		5
Ptilotus schwartzii	0.3		0.1
Rhagodia drummondii	0.5		0.5

Senna artemisioides subsp. *filifolia*			
Solanum lasiophyllum			
Solanum nummularium	0.4		0.5

Site Name: KM-104

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475976E 6769324N

Landform Type: upperslope/crest

Slope Class: gentle

Soil Type: silty loam with ironstone gravel

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		3
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2		3
Amphipogon caricinus var. *caricinus*	0.2		1
Cheiranthera filifolia var. *simplicifolia*			0.01
Dianella revoluta	1		0.1
Enekbatus stowardii	0.5		5
Eucalyptus leptopoda subsp. *arctata*	3		3
Grevillea obliquistigma subsp. *obliquistigma*	2		0.5
Hakea invaginata	2		1
Hibbertia stenophylla	0.3		0.1
Melaleuca hamata			
Monachather paradoxus	0.3		0.1
Philotheca deserti subsp. *deserti*			
Stylidium ?*warriedarense*	0.01		0.01
Thryptomene costata	2		10
Thysanotus sp.			0.01

Site Name: KM-105

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475775E 6769127N

Landform Type: mid-upper slope

Slope Class: very gentle

Soil Type: silty loam with occ ironstone pebbles

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		40
Amphipogon caricinus var. *caricinus*	0.1		0.3
Daviesia benthamii subsp. ?*acanthoclona*	1.7		1
Eucalyptus kochii subsp. ?*plenissima*	4.5		7
Eucalyptus leptopoda subsp. *arctata*	3		1
Hakea multilineata	3		1
Monachather paradoxus	0.2		0.1
Philotheca deserti subsp. *deserti*	1		3
Philotheca tomentella	1.5		1
Ptilotus obovatus var. *obovatus*	0.3		0.5

Site Name: KM-106

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475402E 6770495N

Landform Type: midslope

Slope Class: very gentle

Soil Type: silt

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2		65
Amphipogon caricinus var. *caricinus*	0.1		0.1
Calocephalus multiflorus	0.05		0.1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Eucalyptus kochii subsp. ?*plenissima*			
Melaleuca hamata	3		6
Monachather paradoxus	0.1		0.1

Site Name: KM-107

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 474993E 6770201N

Landform Type: midslope

Slope Class: very gentle

Soil Type: silty loam with scattered ironstone and quartz pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		2
Acacia ramulosa var. *ramulosa*	3		25
Acacia tetragonophylla	1.5		0.5
Amphipogon caricinus var. *caricinus*	0.3		3
Astroloma serratifolium	0.4		0.1
Borya sphaerocephala	0.1		0.1
Comesperma integerrimum			0.1
Eremophila clarkei	1.7		0.1
Eremophila forrestii subsp. *forrestii*	1.5		0.5
Grevillea extorris	0.5		
Hakea recurva subsp. *recurva*	1.7		0.1
Melaleuca eleuterostachya	3		0.1
Melaleuca hamata	4		9
Monachather paradoxus	0.3		0.1
Philotheca brucei subsp. *brucei*	1		4
Philotheca deserti subsp. *deserti*	1		4
Pimelea spiculigera var. *thesioides*	0.4		0.5
Thryptomene costata	1.7		0.5

Site Name: KM-108

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 474647E 6770005N

Landform Type: upperslope

Slope Class: very gentle

Soil Type: silt on granite with granite rocks

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		10
Acacia sp. Murchison (B.R. Maslin 7331)	2.5		1
Acacia tetragonophylla	1.5		0.5
Aristida contorta	0.1		0.1
Astroloma serratifolium	0.4		0.3
Austrostipa sp.			
Borya sphaerocephala	0.15		5
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Dodonaea inaequifolia	1.5		0.5
Eremophila clarkei	0.5		1
Grevillea extorris	1		3
Hakea recurva subsp. *recurva*	0.5		0.1
Melaleuca hamata	3.5		10
Mirbelia bursarioides ms	1		0.5
Mirbelia microphylla			
Philotheca brucei subsp. *brucei*	0.5		0.5
Pimelea spiculigera var. *thesioides*	0.4		0.1
Ptilotus obovatus var. *obovatus*	0.3		0.1
Sida ?*calyxhymenia*	0.4		0.01
Thryptomene costata	1.5		2

Site Name: KM-109

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 474459E 6769599N

Landform Type: outcrop granite

Slope Class: gentle

Soil Type: fine silt

Soil Colour: pale brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla	2		8
Acacia ramulosa var. *ramulosa*	1		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	2		0.5
Astroloma serratifolium	0.5		0.5
Austrostipa elegantissima	0.5		0.1
Borya sphaerocephala	0.05		2
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Dodonaea inaequifolia	0.3		0.1
Eremophila clarkei	1		0.1
Eremophila forrestii subsp. *forrestii*	0.5		0.5
Eremophila latrobei subsp. *latrobei*	1		0.5
Mirbelia bursarioides ms	1.5		1
Philotheca brucei subsp. *brucei*	0.5		0.5
Prostanthera patens	0.5		2.5
Solanum lasiophyllum	0.2		0.1

Site Name: KM-110

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475598E 6770621N

Landform Type: lower slope

Slope Class: gentle

Soil Type: sandy loam with scattered ironstone pebbles

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	3		0.5
Acacia obtecta	1		0.5
Acacia sp. nov 3 (gind_71-05, KM_103-2)	4		10
Acacia tetragonophylla	2		1
Austrostipa elegantissima	0.3		0.1
Daviesia benthamii subsp. ?*acanthoclona*	3		1
Dianella revoluta	0.7		0.1
Enchylaena tomentosa var. *tomentosa*	0.4		0.1
Eucalyptus kochii subsp. ?*plenissima*	8		4
Eucalyptus loxophleba subsp. *supralaevis*	9		4
Maireana georgei	0.3		0.5
Maireana triptera	0.2		0.1
Melaleuca leiocarpa	3		1
Minuria cunninghamii	0.4		0.5
Ptilotus exaltatus var. *exaltatus*	0.2		0.1
Ptilotus obovatus var. *obovatus*	0.4		4
Rhagodia drummondii	0.5		1
Sclerolaena fusiformis	0.2		0.5
Senna artemisioides subsp. *filifolia*	2		1
Sida ?*calyxhymenia*	0.2		0.01
Solanum nummularium	0.4		0.1

Site Name: KM-111

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475473E 6771221N

Landform Type: lower slope

Slope Class: very gentle

Soil Type: silty clay loam with occasional ironstone pebbles

Soil Colour: red brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		1
Acacia obtecta	1.5		1
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia sp. nov 3 (gind_71-05, KM_103-2)	3		9
Acacia tetragonophylla	3		0.5
Amphipogon caricinus var. *caricinus*	0.2		1
Austrostipa elegantissima	0.5		0.5
Eremophila clarkei	0.4		0.1
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*	9		8
Exocarpos aphyllus	3		0.5
Hakea recurva subsp. *recurva*	3		1
Maireana triptera	0.3		0.1
Minuria cunninghamii	0.4		1
Ptilotus exaltatus var. *exaltatus*	0.1		0.1
Ptilotus obovatus var. *obovatus*	0.4		4
Rhagodia drummondii	0.4		0.2

Site Name: KM-112

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475114E 6771897N

Landform Type: lower slope

Slope Class: very gentle

Soil Type: silty loam

Soil Colour: red brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		20
Acacia tetragonophylla	2		0.5
Eucalyptus leptopoda subsp. *arctata*	3		0.1
Melaleuca leiocarpa	2.5		20
Monachather paradoxus	0.1		0.1
Solanum lasiophyllum	0.1		0.1

Site Name: KM-113

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 474601E 6772554N

Landform Type: mid-lower slope

Slope Class: very gentle

Soil Type: silty clay with ironstone pebbles

Soil Colour: red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		6
Acacia ramulosa var. *ramulosa*	2		2
Acacia sibina	2		6
Acacia tetragonophylla	2		1
Aluta aspera subsp. *hesperia*	1		0.1
Amphipogon caricinus var. *caricinus*	0.2		1.5
Austrostipa elegantissima	0.5		0.2
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Comesperma integerrimum			0.1
Dianella revoluta	0.5		0.1
Eremophila compacta subsp. *compacta*	1.5		2
Eremophila forrestii subsp. *forrestii*	1.5		4
Eremophila latrobei (variant)	1		0.1
Eucalyptus ewartiana			
Eucalyptus kochii subsp. ?*plenissima*	8		6
Grevillea extorris	0.5		0.1
Hakea recurva subsp. *recurva*	3		0.1
Melaleuca hamata	4		4
Minuria cunninghamii	0.4		5
Monachather paradoxus	0.1		0.1
Philotheca deserti subsp. *deserti*	1		0.1
Solanum oldfieldii	0.3		0.1

Site Name: KM-114

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475064E 6772488N

Landform Type: mid slope

Slope Class: gentle

Soil Type: sandy loam

Soil Colour: red brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	1.5		1
Acacia colletioides	1.5		3
Acacia exocarpoides	1.7		0.1
Allocasuarina acutivalvis subsp. *prinsepiana*	6		1
Alyxia buxifolia	2		0.1
Callitris columellaris	4		12
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.4		0.5
Dianella revoluta	1		0.2
Eremophila clarkei	0.5		0.1
Eucalyptus kochii subsp. ?*plenissima*	7		10
Lomandra effusa	0.5		1
Microcorys sp. Mt Gibson (S. Patrick 2098)	0.5		5
Mirbelia ramulosa	0.4		3
Monachather paradoxus	0.2		0.2
Olearia dampieri subsp. *eremicola* ms	1		1
Pimelea spiculigera var. *thesioides*	0.5		0.1
Ptilotus divaricatus var. *divaricatus*	0.3		0.5
Ptilotus obovatus var. *obovatus*	0.5		0.1

Site Name: KM-115

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475933E 6773041N

Landform Type: upperslope

Slope Class: moderate

Soil Type: silt on ironstone

Soil Colour: red brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		2
Acacia ramulosa var. *ramulosa*	3		12
Acacia sp. Karara (C. Godden 14)	2		5
Acacia tetragonophylla	2		1
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		1
Amphipogon caricinus var. *caricinus*	0.2		1
Calycopeplus paucifolius	3		1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Hakea recurva subsp. *recurva*	2		1
Melaleuca hamata			
Mirbelia bursarioides ms	1		0.2
Monachather paradoxus	0.3		0.1
Pimelea spiculigera var. *thesioides*	0.4		0.1
Solanum lasiophyllum	0.4		0.1
Solanum oldfieldii	0.2		0.1

Site Name: KM-116

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 475837E 6773157N

Landform Type: upperslope

Slope Class: moderate

Soil Type: silt over ironstone and quartz

Soil Colour: red brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides	1		1
Acacia ramulosa var. *ramulosa*	2		4
Acacia sp. Karara (C. Godden 14)	1.7		5
Acacia tetragonophylla	2		1
Amphipogon caricinus var. *caricinus*	0.2		0.1
Eremophila latrobei subsp. *latrobei*	0.5		0.5
Mirbelia bursarioides ms	1		1
Monachather paradoxus	0.2		0.1
Pimelea spiculigera var. *thesioides*	0.3		0.2
Thryptomene costata	1.5		15

Site Name: KM-117

Site Type: AREA

Survey Date: 04/08/2006

GPS Location: GDA94 Zone 50 476529E 6773042N

Landform Type: upperslope

Slope Class: gentle - moderate

Soil Type: silt with ironstone pebbles

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		0.5
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		50
Aluta aspera subsp. *hesperia*	1.5		6
Calycopeplus paucifolius	1.5		1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Eremophila latrobei subsp. *latrobei*	0.4		0.5
Hibbertia arcuata	0.5		2
Melaleuca hamata	3		2
Melaleuca nematophylla	2		3
Philotheca brucei subsp. *brucei*	0.5		0.5

Site Name: KM-117a

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 485455E 6775686N

Landform Type: crest

Slope Class: moderate

Soil Type: BIF with silt

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura var. ?*argentea*	4		2
Acacia assimilis subsp. *assimilis*	1.5		5
Acacia exocarpoides	1.5		0.5
Acacia ramulosa var. *ramulosa*	2.5		3
Allocasuarina acutivalvis subsp. *prinsepiana*			
Austrostipa elegantissima	0.5		0.1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.01
Dodonaea inaequifolia	2		0.2
Drosera sp. climbing			0.01
Eremophila latrobei subsp. *latrobei*	1		2
Hakea recurva subsp. *recurva*	1		0.5
Melaleuca hamata	2.5		6
Micromyrtus sp. Warriedar (S. Patrick 1879A)	2		2
Mirbelia bursarioides ms	1.5		3
Monachather paradoxus	0.2		0.1
Philotheca sericea	1		9
Prostanthera magnifica	0.4		0.1
Sida ?*calyxhymenia*	0.2		0.1
Xanthosia bungei	0.5		0.2

Site Name: KM-121

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 480863E 6775808N

Landform Type: midslope

Slope Class: very gentle

Soil Type: sandy silt

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		5
Acacia inceana subsp. *conformis*			
Acacia obtecta	2		1
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia tetragonophylla	2.5		5
Alyxia buxifolia	2		0.5
Austrostipa elegantissima	0.4		0.1
Callitris columellaris	5		9
Comesperma integerrimum			0.1
Dianella revoluta	1		0.1
Dodonaea viscosa subsp. *angustissima*	2		0.5
Eremophila decipiens	0.5		0.1
Eremophila georgei	2		0.5
Exocarpos aphyllus	2		2
Maireana thesioides	0.4		0.1
Monachather paradoxus	0.3		0.5
Olearia pimeleoides	0.5		0.1
**Pentaschistis airoides*	0.1		0.1
Persoonia pentasticha (P3)	0.4		0.5
Ptilotus obovatus var. *obovatus*	0.4		3
Ptilotus schwartzii	0.3		0.5
Rhagodia drummondii	0.5		0.5
Santalum acuminatum	2		0.5
Solanum lasiophyllum	0.2		0.1
Zygophyllum eremaeum	0.5		0.5

Site Name: KM-122

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 480351E 6775471N

Landform Type: flat

Slope Class: nil

Soil Type: sandy silt

Soil Colour: red-brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	0.5		7
Acacia inceana subsp. *conformis*	4		10
Austrostipa elegantissima	0.7		1
Austrostipa sp.	0.4		0.3
Callitris columellaris			
Comesperma integerrimum			0.1
Dodonaea viscosa subsp. *angustissima*	0.2		0.1
Eremophila decipiens	0.5		4
Eremophila pantonii	1		3
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus	3		2
Frankenia setosa	0.3		0.5
Maireana thesioides	0.5		0.5
**Pentaschistis airoides*	0.1		0.1
Ptilotus obovatus var. *obovatus*	0.4		1
Ptilotus schwartzii	0.2		1
Rhagodia drummondii	0.5		3
Scaevola spinescens	1		1

Site Name: KM-123

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 478120E 6774199N

Landform Type: upperslope/crest

Slope Class: moderate

Soil Type: silt with ironstone rocks

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura var. ?*aneura*	3.5		3
Acacia assimilis subsp. *assimilis*	2		1
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	1.5		1
Acacia ramulosa var. *ramulosa*	3		5
Acacia sibina	1.5		2
Allocasuarina acutivalvis subsp. *prinsepiana*	2		1
Aluta aspera subsp. *hesperia*	1		10
Amphipogon caricinus var. *caricinus*	0.2		0.3
Eremophila clarkei	1.5		1
Eremophila latrobei subsp. *latrobei*	1		2
Hakea invaginata	1.5		1
Hibbertia arcuata	1		1
Mirbelia bursarioides ms	1.3		2
Philotheca brucei subsp. *brucei*	1.5		3
Philotheca sericea	1		4
Xanthosia bungei	0.4		0.5

Site Name: KM-124

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 478041E 6774921N

Landform Type: lower slope near drainage line

Slope Class: gentle

Soil Type: silty clay

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		10
Acacia ramulosa var. *ramulosa*	3		2
Acacia tetragonophylla	2		3
Amphipogon caricinus var. *caricinus*	0.2		0.5
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Hemigenia ?sp. Yuna (A.C. Burns 95)	1		0.1
Melaleuca eleuterostachya	3		1
Melaleuca hamata	3.5		8
Mirbelia microphylla	0.5		1
**Pentaschistis airoides*	0.1		0.1
Pimelea spiculigera var. *thesioides*	0.4		0.2
Ptilotus obovatus var. *obovatus*	0.4		4
Sclerolaena fusiformis	0.2		0.1
Sida ?calyxhymenia	0.2		0.1

Site Name: KM-125

Site Type: AREA

Survey Date: 05/08/2006

GPS Location: GDA94 Zone 50 478071E 6775237N

Landform Type: midslope

Slope Class: very gentle

Soil Type: silty clay with quartz and ironstone

Soil Colour: brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		20
Acacia assimilis subsp. *assimilis*	1.5		0.5
Acacia tetragonophylla	1.5		1
Amphipogon caricinus var. *caricinus*	0.3		0.3
Austrostipa sp.	0.4		0.5
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Eremophila latrobei (variant)	1		1
Hakea recurva subsp. *recurva*	1		0.5
Hemigenia ?sp. Yuna (A.C. Burns 95)	0.4		0.1
Melaleuca eleuterostachya	3		6
Melaleuca hamata	4		6
Mirbelia microphylla	0.5		4
Ptilotus obovatus var. *obovatus*	0.4		0.1
Sida ?calyxhymenia	0.2		0.1
Solanum lasiophyllum	0.2		0.1

Site Name: KM-126

Site Type: AREA

Survey Date: 08/08/2006

GPS Location: GDA94 Zone 50 476499E 6773361N

Landform Type: Upper slope

Slope Class: Gentle

Soil Type: Sandy loam-clay with exposed granite

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Allocasuarina acutivalvis subsp. *prinsepiana*	2.5		20
Astroloma serratifolium	0.4		1
Dodonaea inaequifolia	1		1
Eremophila clarkei	1		0.5
Lomandra effusa	0.4		0.5
Melaleuca hamata			
Melaleuca nematophylla	2		10
Philotheca brucei subsp. *brucei*	0.5		3
Prostanthera patens	0.4		1
Xanthosia bungei	0.4		2
Xerolirion divaricata	0.4		3

Site Name: KM-127

Site Type: AREA

Survey Date: 08/08/2006

GPS Location: GDA94 Zone 50 478507E 6773028N

Landform Type: lower - mid slope

Slope Class: gentle

Soil Type: silty loam with ironstone pebbles

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		1
Acacia aff. *coolgardiensis (A. Markey & S. Dillon 3313)*	2.5		35
Acacia longispinea	2		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	2		6
Calycopeplus paucifolius	1.5		1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Comesperma integerrimum			0.1
Eremophila latrobei subsp. *latrobei*	1.5		0.5
Eucalyptus kochii subsp. ?*plenissima*	5		6
Eucalyptus leptopoda subsp. *arctata*	3		2
Hemigenia sp. Cue (K.F. Kenneally 47A)	0.4		8
Melaleuca leiocarpa	2.5		2
Philotheca deserti subsp. *deserti*	0.5		5
Scaevola spinescens			

Site Name: KM-128

Site Type: AREA

Survey Date: 08/08/2006

GPS Location: GDA94 Zone 50 478633E 6772226N

Landform Type: upper slope

Slope Class: steep - moderate

Soil Type: BIF and quartz on silty loam

Soil Colour: red-brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		3
Allocasuarina acutivalvis subsp. *prinsepiana*	4		30
Amphipogon caricinus var. *caricinus*	0.2		0.1
Callitris columellaris	2.5		1
Cheilanthes sieberi subsp. *sieberi*	0.01		0.1
Drosera sp. climbing			0.01
Eucalyptus leptopoda subsp. *arctata*	3		1
Grevillea paradoxa	2		5
Hemigenia sp. Cue (K.F. Kenneally 47A)	0.4		0.1
Hibbertia arcuata	0.7		0.5
Lepidosperma sp. Karara BIF	0.4		8
Melaleuca nematophylla	2.5		5
Persoonia hexagona	2		0.5
Philotheca sericea	0.5		0.5
Thysanotus sp.			0.01
Xanthosia bungei	0.4		15

Site Name: LIC 013

Site Type: AREA

Survey Date: 09/10/2008

GPS Location: GDA94 Zone 50 379313E 6759415N

Landform Type: midslope

Slope Class: gentle

Soil Type: sand

Soil Colour: yellow/brown

Fire: >5

Comments: Disturbed Low woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia blakelyi	1.5		1
Acanthocarpus sp. Ajana (C.A. Gardner 8596)	0.3		0.3
Aristida contorta	0.2		0.2
Austrostipa elegantissima	0.5		1
**Avena fatua*	1		4
**Briza maxima*	0.2		0.2
Ecdeiocolea monostachya	0.4		0.3
**Echium plantagineum*	0.3		0.3
**Ehrharta calycina*	0.3		3
Eucalyptus jucunda	6		9
Eucalyptus pyriformis	6		4
Grevillea leptopoda (P3)			
Hakea preissii	5		1
Monachather paradoxus	0.2		0.1
Podolepis canescens	0.3		3
Ptilotus polystachyus	0.4		0.5
**Raphanus raphanistrum*	0.5		4
Thryptomene denticulata	2		1
**Ursinia anthemoides*	0.2		0.2

PHOTOS

Site Name:	LIC 014
Site Type:	AREA
Survey Date:	09/10/2008
GPS Location:	GDA94 Zone 50 374704E 6760367N
Landform Type:	upslope
Slope Class:	gentle
Soil Type:	sand
Soil Colour:	yellow
Fire:	>5
Comments:	Open Low woodland Actinostrobus over annuals/weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Actinostrobus arenarius	4		7
**Arctotheca calendula*	0.3		4
Austrostipa elegantissima	0.5		0.5
**Avena fatua*	1		1
**Bromus diandrus*	0.3		4
Calothamnus quadrifidus	2		0.5
**Echium plantagineum*	0.4		1
**Ehrharta calycina*	0.5		2
Eremaea beaufortioides var. ?*beaufortioides*	0.5		0.3
Grevillea amplexans subsp. ?*amplexans*	1		0.3
**Lolium rigidum*	0.5		3
**Lupinus angustifolius*	0.4		0.5
**Raphanus raphanistrum*	1		50

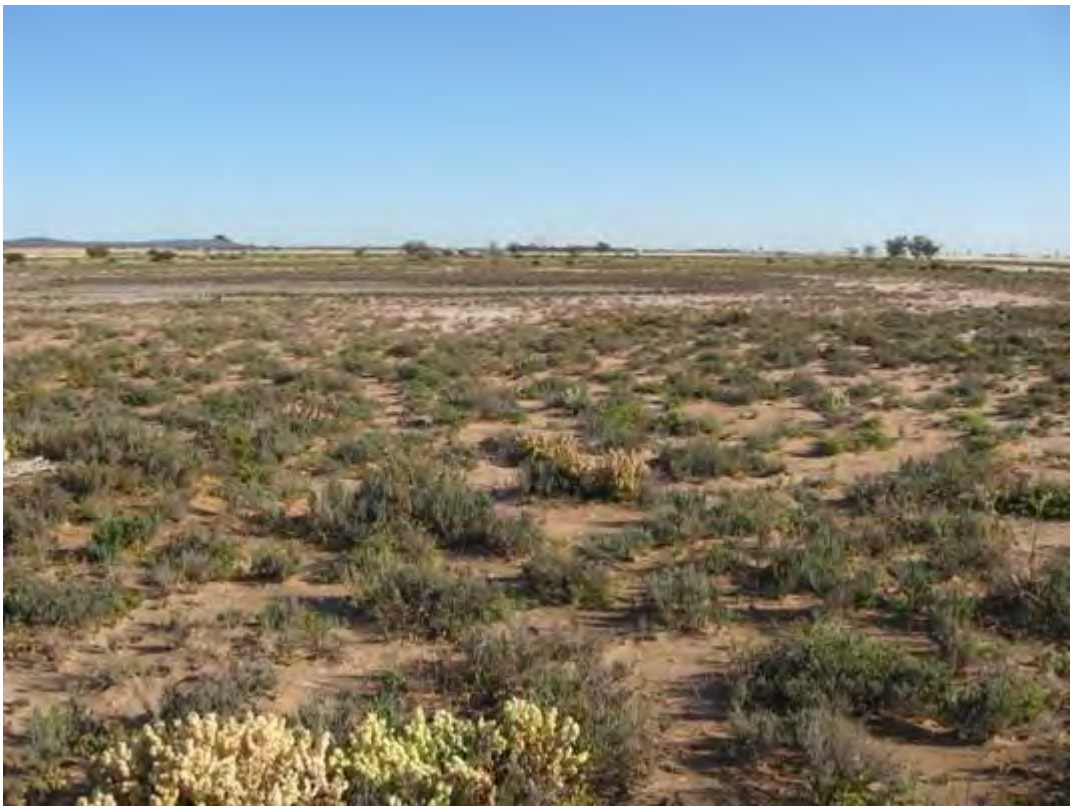
PHOTOS

Site Name:	LIC 016
Site Type:	AREA
Survey Date:	10/10/2008
GPS Location:	GDA94 Zone 50 394312E 6758215N
Landform Type:	claypan drainage line
Slope Class:	flat
Soil Type:	sand
Soil Colour:	brown
Fire:	>5
Comments:	Samphire flats

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex lindleyi subsp. *inflata*	0.2		4
Calandrinia eremaea	0.1		0.2
Crassula colorata var. *acuminata*	0.05		0.2
Didymanthus roei	0.1		0.1
Eragrostis dielsii	0.1		0.1
Frankenia ?pauciflora	0.2		0.1
Gnephosis acicularis	0.1		0.3
Gunniopsis quadrifida	0.1		0.1
Gunniopsis septifraga	0.05		0.1
Maireana amoena	0.1		0.1
**Mesembryanthemum nodiflorum*	0.1		3
Pogonolepis muelleriana	0.1		0.4
Pogonolepis stricta	0.05		3
Sclerolaena eurotioides	0.2		0.2
Tecticornia ?halocnemoides	0.4		0.3
Tecticornia ?peltata	0.5		0.3
Tecticornia pergranulata	0.3		15

PHOTOS



Site Name: LIC 017

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 405048E 6758087N

Landform Type: flat saltpan

Slope Class: flat

Soil Type: loamy clay

Soil Colour: red/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Gunniopsis quadrifida	0.1		0.2
Tecticornia fimbriata (P3)	0.4		20
Tecticornia ?halocnemoides			
Tecticornia ?peltata	0.3		1

Site Name: LIC 018

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 404877E 6758058N

Landform Type: flat plain adjacent to salt flat

Slope Class: flat

Soil Type: clay loam

Soil Colour: red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex ?bunburyana	0.5		4
Enchylaena tomentosa	0.3		0.5
Eremophila dielsiana	0.1		1
Gunniopsis quadrifida	0.1		40
Melaleuca adnata	4		6
Salsola tragus	0.2		0.3
Sclerolaena sp.	0.1		0.1

Site Name: LIC 019

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 394375E 6758142N

Landform Type: flat clay drainage line

Slope Class: flat

Soil Type: sandy clay

Soil Colour: cream/grey

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex ?bunburyana	0.2		0.5
Frankenia pauciflora	0.2		4
Gunniopsis quadrifida	0.1		9
Gunniopsis rodwayi	0.1		0.5
Gunniopsis septifraga	0.1		1
Podolepis sp.	0.1		0.2
Tecticornia indica subsp. *bidens*	0.3		12
Tecticornia pergranulata	0.2		12

Site Name: LIC 020

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 395009E 6758741N

Landform Type: valley flats

Slope Class: flat

Soil Type: sandy loam

Soil Colour: red/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	6		3
**Aira caryophyllea*	0.1		0.1
Austrostipa elegantissima	0.5		0.1
Borya sphaerocephala	0.1		0.2
Dianella revoluta var. *divaricata*	0.7		0.2
Eucalyptus gittinsii subsp. *illucida*	5		4
Eucalyptus horistes	10		5
Eucalyptus loxophleba subsp. ?*supralaevis*	10		9
Gunniopsis quadrifida	0.2		0.4
Gunniopsis rodwayi	0.1		0.2
Lomandra effusa	0.3		3
?*Malleostemon hursthousei*	2		2
Melaleuca stereophloia	3		0.3
Olearia dampieri ms	0.7		0.2
Rhagodia drummondii	0.5		0.3
Triodia danthonioides	0.4		0.1

Site Name: LIC 021

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 394912E 6758645N

Landform Type: saline flats

Slope Class: flat

Soil Type: sand

Soil Colour: cream over brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eremophila dielsiana	0.1		0.1
Frankenia pauciflora	0.3		4
Gunniopsis quadrifida	0.1		4
Melaleuca stereophloia	4		3
Podolepis sp.	0.1		0.3
Tecticornia ?halocnemoides	0.4		16
Tecticornia indica subsp. *bidens*	0.4		1

Site Name: LIC 022

Site Type: AREA

Survey Date: 09/03/2009

GPS Location: GDA94 Zone 50 395406E 6758887N

Landform Type: samphire flats

Slope Class: flat

Soil Type: sandy clay

Soil Colour: cream/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex ?bunburyana	0.2		0.3
Austrostipa elegantissima	0.3		0.1
Eragrostis dielsii	0.1		0.2
Frankenia pauciflora	0.1		1
Gunniopsis quadrifida	0.2		5
Tecticornia ?halocnemoides	0.4		0.2
Tecticornia indica subsp. *bidens*	0.5		11
Tecticornia pergranulata	0.3		0.3

Site Name: M-09

Site Type: AREA

Survey Date: 27/10/2005

GPS Location: GDA94 Zone 50 488094E 6775565N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty loam, stoney

Soil Colour: Red

Fire: >5

Comments: Open Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	5		5
Acacia aneura	7		0.5
Acacia inceana subsp. *conformis*	4		0.5
Acacia obtecta	2		0.5
Acacia ramulosa var. *ramulosa*	4		5
Acacia sibina	3		0.5
Acacia tetragonophylla	3		1
Arthropodium dyeri	0.3		0.5
Calocephalus multiflorus	0.1		0.5
Cephalipterum drummondii	0.3		10
Eremophila oldfieldii subsp. *angustifolia*	6		0.5
Erodium cygnorum	0.1		0.5
Exocarpos aphyllus	3.5		0.5
Gunniopsis divisa (P3)	0.1		0.5
Maireana carnosa	0.1		0.5
Maireana tomentosa subsp. *tomentosa*	0.3		0.5
Myriocephalus guerinae	0.2		0.5
**Pentaschistis airoides*	0.1		0.5
Podolepis canescens	0.2		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Rhagodia drummondii	0.4		0.5
Sclerolaena fusiformis	0.1		0.5
Waitzia acuminata	0.2		0.5

Site Name: M-24

Site Type: AREA

Survey Date: 15/11/2005

GPS Location: GDA94 Zone 50 488053E 6773762N

Landform Type: Flats

Slope Class: Flat

Soil Type: Silty clay

Soil Colour: Red

Fire: >5

Comments: Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		1
Acacia anthochaera			
Acacia assimilis subsp. *assimilis*	0.5		0.5
Acacia colletioides	0.4		0.5
Acacia erinacea	1		0.5
Acacia inceana subsp. *conformis*	4		0.5
Acacia tetragonophylla	1		0.5
Austrostipa elegantissima	0.5		0.5
Austrostipa ?*nitida*	0.25		0.5
Calandrinia sp.	0.05		1
Calocephalus multiflorus	0.1		0.5
Eremophila oppositifolia subsp. *angustifolia*	2		1
Erymophyllum ramosum subsp. ?*ramosum*	0.15		0.5
Eucalyptus kochii subsp. ?*plenissima*	6		
Eucalyptus loxophleba subsp. *supralaevis*	8		0.5
Eucalyptus striaticalyx subsp. *striaticalyx*	10		7
Exocarpos aphyllus	2		0.5
Gilruthia osbornei			0.5
Gunniopsis divisa (P3)	0.1		0.5
Maireana carnosa	0.1		0.5
Maireana georgei	0.2		0.5
Maireana thesioides	0.5		0.5
Myriocephalus guerinae	0.3		0.5
Ptilotus exaltatus var. *exaltatus*	0.2		0.5

Ptilotus obovatus var. *obovatus*	0.4		0.5
Santalum spicatum	2		0.5
Scaevola spinescens	1		0.5
Sclerolaena fusiformis	0.2		1

PHOTOS

Site Name: MH-01

Site Type: AREA

Survey Date: 24/10/2005

GPS Location: GDA94 Zone 50 476467E 6772224N

Landform Type: Lower slope

Slope Class: Gentle

Soil Type: Silty Gravel

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		2
Acacia anthochaera	4		0.5
Acacia assimilis subsp. *assimilis*	1		0.5
Acacia exocarpoides	3		0.5
Acacia ramulosa var. *ramulosa*	4		0.5
Acacia sibina	3		0.5
Acacia sibirica	3		1
Acacia tetragonophylla	3		1
Allocasuarina acutivalvis subsp. *prinsepiana*	6		1
Aluta aspera subsp. *hesperia*	1		0.5
Austrostipa elegantissima	1		0.5
Bromus arenarius	0.3		0.5
Cephalipterum drummondii	0.1		0.5
Comesperma integerrimum			0.5
Eremophila clarkei	2.5		0.5
Eremophila oldfieldii subsp. *angustifolia*	3		0.5
Eucalyptus kochii subsp. ?*plenissima*	8		3
Eucalyptus loxophleba subsp. *supralaevis*	10		3
Exocarpos aphyllus	3		0.5
Gilruthia osbornei	0.01		0.5
Hyalosperma glutinosum subsp. *venustum*	0.1		0.5
Maireana carnosa	0.05		0.5
Maireana trichoptera	1		0.5
Minuria cunninghamii	0.5		0.5
Pimelea microcephala subsp. *microcephala*	1		0.5

Podolepis canescens	0.1		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.3		2
Rhagodia drummondii	0.3		0.5
Santalum spicatum	2		0.5
Sclerolaena eriacantha	0.1		0.5
Sclerolaena fusiformis	0.05		0.5
Senna artemisioides subsp. *filifolia*	1.5		
Zygophyllum ovatum	0.1		1

Site Name:	MH-02
Site Type:	AREA
Survey Date:	24/10/2005
GPS Location:	GDA94 Zone 50 475558E 6772344N
Landform Type:	Upper slope
Slope Class:	Gentle
Soil Type:	Silt, rocky on surface
Soil Colour:	Red
Fire:	>5
Comments:	Open Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		3
Acacia assimilis subsp. *assimilis*	4		2
Acacia ramulosa var. *ramulosa*	4		4
Acacia tetragonophylla	1		0.5
**Aira caryophyllea*	0.1		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3		0.5
Astroloma serratifolium	0.4		0.5
Austrostipa ?nitida	0.3		0.5
Austrostipa scabra	0.4		0.5
Brunonia australis	0.1		0.5
Bursaria occidentalis	0.5		0.5
Calocephalus multiflorus	0.1		0.5
Cephalipterum drummondii	0.2		0.5
Comesperma integerrimum			
Dodonaea inaequifolia	1.5		0.5
Gilruthia osbornei	0.1		0.5
Hyalosperma glutinosum subsp. *venustum*	0.1		0.5
Lawrencia ?rosea	0.2		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.5		0.5
Lobelia winfridae	0.2		0.5
Melaleuca hamata	2.5		0.5
Melaleuca leiocarpa	1		0.5
Melaleuca nematophylla	2		1

Mirbelia bursarioides ms	1		2
Philotheca brucei subsp. *brucei*	0.5		0.5
Philotheca deserti subsp. *deserti*	0.5		0.5
Plantago debilis	0.1		0.5
Podolepis canescens	0.1		1
Ptilotus gaudichaudii var. *parviflorus*	0		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5
Samolus repens var. *floribundus*			
Waitzia acuminata	0.2		0.5
Xanthosia bungei			

Site Name: MH-03

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 475253E 6772402N

Landform Type: Plain

Slope Class: Gentle

Soil Type: Sandy Silt

Soil Colour: Red

Fire: >5

Comments: Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuaria	2		4
Acacia assimilis subsp. *assimilis*	4		0.5
Acacia exocarpoides	2		0.5
Acacia ligulata	2.5		0.5
Acacia prainii	2.5		0.5
Acacia ramulosa var. *ramulosa*	4		2
Acacia tetragonophylla	2.5		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	3		0.5
Austrostipa elegantissima	0.5		0.5
Austrostipa ?nitida	0.3		0.5
Callitris columellaris	4		0.5
Calocephalus multiflorus	0.1		0.5
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.3		0.5
Comesperma integerrimum			0.5
Comesperma volubile			
Eremophila forrestii subsp. *forrestii*	1.5		0.5
Eremophila georgei	1		3
Eremophila oldfieldii subsp. *angustifolia*	3		0.5
Eucalyptus horistes	8		3
Eucalyptus loxophleba subsp. *supralaevis*	8		0.5
Gilruthia osbornei	0.1		0.5
Hakea recurva subsp. *recurva*	1		0.5
Lawrencia ?rosea	0.3		0.5
Melaleuca leiocarpa	3		0.5

Microcorys sp. Mt Gibson (S. Patrick 2098)	1.5		0.5
Minuria cunninghamii	0.5		0.5
Mirbelia ramulosa	0.2		0.5
Monachather paradoxus	0.4		0.5
Olearia dampieri subsp. *eremicola* ms	1		0.5
Olearia pimeleoides	1		0.5
Philotheca tomentella	1		0.5
Pimelea microcephala subsp. *microcephala*	1		0.5
Ptilotus drummondii	0.3		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		2
Senna artemisioides subsp. *filifolia*	2		0.5
Solanum nummularium	0.4		0.5
Stenopetalum anfractum	0.2		0.5
Waitzia acuminata	0.3		0.5

Site Name: MH-04

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 474599E 6772520N

Soil Type: Silty clay, rocky on surface

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		0.5
Acacia ramulosa var. *ramulosa*	4		5
Acacia tetragonophylla	2		0.5
Amphipogon caricinus var. *caricinus*			
Austrostipa ?*nitida*	0.3		0.5
Austrostipa scabra	0.5		0.5
Comesperma volubile			0.5
Eremophila forrestii subsp. *forrestii*	1		0.5
Eremophila georgei	1.5		0.5
Eucalyptus horistes	8		5
Gilruthia osbornei	0.1		0.5
Hakea recurva subsp. *recurva*			
Lawrencia ?*rosea*	0.4		0.5
Minuria cunninghamii	0.5		2
Olearia pimeleoides	0.5		0.5
Ptilotus obovatus var. *obovatus*	0.3		1

Site Name: MH-05

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 474478E 6772537N

Landform Type: Unknown

Slope Class: Unknown

Soil Type: Silty clay

Soil Colour: Red

Comments: Open Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	1.5		0.5
Acacia ramulosa var. *ramulosa*	4		3
Acacia sp. Murchison (B.R. Maslin 7331)	3		0.5
Acacia tetragonophylla	1		0.5
Amphipogon caricinus var. *caricinus*	0.3		0.5
Angianthus prostratus (P3)	0.1		0.5
Calandrinia primuliflora			
Calocephalus multiflorus	0.1		2
Cheiranthera filifolia var. *simplicifolia*			0.5
Comesperma volubile			0.5
Eremophila ?eriocalyx	1		0.5
Eremophila forrestii subsp. *forrestii*	1		0.5
Gilruthia osbornei	1		0.5
Gnephosis tenuissima	0.05		
Grevillea pityophylla	1		0.5
Hakea recurva subsp. *recurva*	3.5		0.5
Hyalosperma glutinosum subsp. *venustum*	0.2		0.5
Lawrencia ?rosea	0.3		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1.5		0.5
Lobelia winfridae	0.1		0.5
Maireana carnosa	0.1		0.5
Melaleuca hamata	3		4
Pimelea microcephala subsp. *microcephala*			
Podolepis canescens			

Ptilotus gaudichaudii var. *parviflorus*	0.1		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Rulingia luteiflora	1.5		0.5
Schoenia cassiniana	0.1		0.5
Sida ?calyxhymenia	0.2		0.5
Solanum nummularium	0.1		0.5
Stenopetalum anfractum	0.2		0.5
Thryptomene costata	1.5		0.5

Site Name: MH-06

Site Type: AREA

GPS Location: GDA94 Zone 50 473573E 6772525N

Landform Type: ?Top of hill

Slope Class: Unknown

Soil Type: Silty loam, granitic outcrop

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia kochii			
Acacia quadrimarginea			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Acacia umbraculiformis			
**Aira caryophyllea*			
Austrostipa scabra			
Cephalipterum drummondii			
Chenopodium gaudichaudianum			
Erodium cygnorum			
Grevillea ?paniculata			
Hakea recurva subsp. *recurva*			
Helipterum craspedioides			
Hyalosperma glutinosum subsp. *venustum*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Solanum lasiophyllum			

Site Name: MH-07

Site Type: AREA

GPS Location: GDA94 Zone 50 471711E 6772507N

Landform Type: Lower slope

Slope Class: Unknown

Soil Type: Silty clay

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
**Aira caryophyllea*			
Amphipogon caricinus var. *caricinus*			
Austrostipa scabra			
Calocephalus multiflorus			
Cephalipterum drummondii			
**Cynodon dactylon*			
**Echium plantagineum*			
Erodium cygnorum			
Gilruthia osbornei			
Hakea recurva subsp. *recurva*			
Hemigenia sp. Jibberding (J. D'Alonzo 418)			
Hyalosperma glutinosum subsp. *venustum*			
Lobelia winfridae			
Monachather paradoxus			
Ptilotus obovatus var. *obovatus*			
Schoenia cassiniana			
Solanum lasiophyllum			
Thyridolepis multiculmis			

Site Name: MH-08

Site Type: AREA

GPS Location: GDA94 Zone 50 470979E 6772452N

Landform Type: Valley floor

Slope Class: Flat

Soil Type: Silty sand clay

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Austrostipa elegantissima			
Austrostipa ?*nitida*			
Cephalipterum drummondii			
Cryptandra ?*apetala* var. *apetala*			
Eucalyptus horistes			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*			
Gilruthia osbornei			
Grevillea pityophylla			
Hakea recurva subsp. *recurva*			
Hyalosperma glutinosum subsp. *venustum*			
Maireana thesioides			
Maireana trichoptera			
Melaleuca hamata			
Melaleuca stereophloia			
Minuria cunninghamii			
Monachather paradoxus			
Persoonia pentasticha (P3)			
Pimelea microcephala subsp. *microcephala*			
Plantago debilis			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Samolus repens var. *floribundus*			

Schoenia cassiniana			
Sida ?calyxhymenia			
Solanum lasiophyllum			
Solanum nummularium			
Stenanthemum poicilum (P3)			

Site Name: MH-09

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 469444E 6772004N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty clay

Soil Colour: Red

Fire: >5

Comments: Open heath

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		1
Acacia sp. Murchison (B.R. Maslin 7331)	4		2
Borya sphaerocephala	0.1		30
Cephalipterum drummondii	0.2		2
Hyalosperma glutinosum subsp. *venustum*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Santalum spicatum	2		0.5
Thryptomene costata	2		10
Waitzia acuminata	0.2		0.5

Site Name: MH-10

Site Type: AREA

GPS Location: GDA94 Zone 50 468946E 6771886N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Sandy silt

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Bellida graminea			
Calandrinia primuliflora			
Callitris columellaris			
Calocephalus multiflorus			
Calotis hispidula			
Comesperma integerrimum			
Dianella revoluta			
Eucalyptus kochii subsp. ?*plenissima*			
Gilberta tenuifolia			
Hakea recurva subsp. *recurva*			
Helipterum craspedioides			
Lawrencia ?*rosea*			
Malleostemon tuberculatus			
Melaleuca hamata			
Monachather paradoxus			
Persoonia hexagona			
Philotheca deserti subsp. *deserti*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Solanum lasiophyllum			

Site Name: MH-11

Site Type: AREA

GPS Location: GDA94 Zone 50 468614E 6771756N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty clay

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia longispinea			
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Calocephalus multiflorus			
Comesperma volubile			
Dianella revoluta			
Drummondita fulva (P3)			
Eucalyptus leptopoda subsp. *arctata*			
Hakea invaginata			
Hakea minyma			
Hyalosperma glutinosum subsp. *venustum*			

Site Name: MH-12

Site Type: AREA

GPS Location: GDA94 Zone 50 467837E 6771560N

Landform Type: Lower slope

Slope Class: Flat

Soil Type: Sandy silt

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Allocasuarina acutivalvis subsp. *prinsepiana*			
Amphipogon caricinus var. *caricinus*			
Bellida graminea			
Calocephalus multiflorus			
Eucalyptus sp.			
Gilruthia osbornei			
Hakea invaginata			
Hibbertia stenophylla			
Melaleuca hamata			
Melaleuca leiocarpa			
Philotheca deserti subsp. *deserti*			
Plantago debilis			

Site Name: MH-13

Site Type: AREA

GPS Location: GDA94 Zone 50 467529E 6771530N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty gravel

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Calocephalus multiflorus			
Darwinia halophila ms			
Ecdeiocolea monostachya			
Hakea invaginata			
Hemigenia sp. Yalgoo (A.M. Ashby 2624)			
Melaleuca barlowii (P3)			
Melaleuca cordata			
Philotheca deserti subsp. *deserti*			
Thysanotus manglesianus			
Wrixonia prostantheroides			

Site Name:	MH-14
Site Type:	AREA
Survey Date:	25/10/2005
GPS Location:	GDA94 Zone 50 466960E 6771502N
Landform Type:	Mid slope
Slope Class:	Gentle
Soil Type:	Silty clay sand
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		0.5
Acacia ramulosa var. *ramulosa*	3		0.5
Acacia sibina			
Acacia tetragonophylla	3		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	4		0.5
Austrostipa scabra	0.5		0.5
Borya sphaerocephala	0.2		0.5
Calocephalus multiflorus	0		0.5
Ecdeiocolea monostachya	1		0.5
Eucalyptus kochii subsp. ?*plenissima*	8		5
Hakea minyma			
Lobelia winfridae	0.1		0.5
Melaleuca eleuterostachya	5		3
Melaleuca hamata	4		0.5
Mirbelia ramulosa	0.2		0.5
Olearia dampieri subsp. *eremicola* ms	1		0.5
Ptilotus drummondii	0.4		0.5
Schoenia cassiniana	0.2		0.5

Site Name: MH-15

Site Type: AREA

GPS Location: GDA94 Zone 50 466503E 6771546N

Landform Type: Upper Slope

Slope Class: Gentle

Soil Type: Silty clay

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Acacia tetragonophylla			
Allocasuarina acutivalvis subsp. *prinsepiana*			
Amphipogon caricinus var. *caricinus*			
Comesperma integerrimum			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*			
Gnephosis tenuissima			
Hakea recurva subsp. *recurva*			
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)			
Lobelia winfridae			
Melaleuca eleuterostachya			
Ptilotus gaudichaudii var. *parviflorus*			
Santalum acuminatum			
Schoenia cassiniana			
Tricoryne ?*elatior*			
Xanthosia bungei			

Site Name: MH-16

Site Type: AREA

GPS Location: GDA94 Zone 50 465038E 6771721N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Callitris columellaris			
Cephalipterum drummondii			
Comesperma volubile			
Drummondita fulva (P3)			
Ecdeiocolea monostachya			
Eucalyptus kochii subsp. ?*plenissima*			
Hakea minyma			
Melaleuca hamata			
Phebalium ?*megaphyllum*			
Senna artemisioides subsp. *filifolia*			
Thysanotus manglesianus			
Waitzia acuminata			

Site Name: MH-17

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 464472E 6771786N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty clay

Soil Colour: Red/brown

Fire: >5

Comments: Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		1
Acacia sibina	3.5		2
Borya sphaerocephala	0.2		1
Brunonia australis	0.1		0.5
Comesperma volubile			0.5
Ecdeiocolea monostachya	1		15
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.5		0.5
Melaleuca hamata	4		15
Minuria cunninghamii	1		
Pimelea microcephala subsp. *microcephala*	0.3		0.5
Thysanotus manglesianus			

Site Name:	MH-18
Site Type:	AREA
Survey Date:	25/10/2005
GPS Location:	GDA94 Zone 50 463466E 6771854N
Landform Type:	Mid slope
Slope Class:	Gentle
Soil Type:	Light sandy silt
Soil Colour:	Light brown
Fire:	>5
Comments:	Thicket over sedges

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		2.5
Acacia sibina	2.5		0.5
Brunonia australis	0.1		1
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.4		1
Ecdeiocolea monostachya	1		20
Eucalyptus leptopoda subsp. *arctata*	3		1
Hakea invaginata	1		1
Hakea minyma			
Malleostemon tuberculatus	2		0.5
Platysace trachymenioides	0.5		0.5
Thelymitra petrophila			
Thysanotus manglesianus			0.5
?*Verticordia* sp.	0.5		1
Waitzia acuminata	0.1		0.5

Site Name: MH-19

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 462011E 6772016N

Landform Type: Valley Floor

Slope Class: Flat

Soil Type: Silt

Soil Colour: Red

Fire: >5

Comments: Woodland, 10% weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		3
Acacia tetragonophylla	2		1
Austrostipa elegantissima	0.5		0.5
Callitris columellaris	6		3
Cephalipterum drummondii	0.3		0.5
Cryptandra ?*apetala* var. *apetala*	0.3		0.5
Eremophila decipiens subsp. *linearifolia*	0.4		0.5
Eucalyptus kochii subsp. ?*plenissima*	7		3
Eucalyptus loxophleba subsp. *supralaevis*	8		3
Lawrencia ?*rosea*	0.2		0.5
Melaleuca eleuterostachya	5		1
Mirbelia ramulosa	0.5		0.5
Philotheca deserti subsp. *deserti*	1.5		0.5
Pimelea microcephala subsp. *microcephala*	1		0.5
Ptilotus exaltatus var. *exaltatus*			
Rhodanthe maryonii			
Schoenia cassiniana			
Senna artemisioides subsp. *filifolia*	0.2		0.5
Stenopetalum anfractum	0.2		2

Site Name: MH-20

Site Type: AREA

Survey Date: 25/10/2005

GPS Location: GDA94 Zone 50 460471E 6772136N

Landform Type: Lower Slope

Slope Class: Gentle

Soil Type: Silty gravel

Soil Colour: Red/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2.5		12
Acacia sibina	3		0.5
Amphipogon caricinus var. *caricinus*	0.2		0.5
Arthropodium dyeri			
Brunonia australis	0.2		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Malleostemon tuberculatus	1		0.5
Melaleuca hamata	3		5
Monachather paradoxus	0.2		0.5
Philotheca deserti subsp. *deserti*	0.5		0.5
Waitzia acuminata	0.2		0.5

Site Name: MH-21

Site Type: AREA

GPS Location: GDA94 Zone 50 459657E 6772096N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Austrostipa elegantissima			
Austrostipa ?*nitida*			
Enchylaena tomentosa var. *tomentosa*			
Eremophila decipiens subsp. *linearifolia*			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus			
Hakea recurva subsp. *recurva*			
Maireana tomentosa subsp. *tomentosa*			
Mirbelia bursarioides ms			
Olearia dampieri subsp. *eremicola* ms			
Pimelea microcephala subsp. *microcephala*			
Ptilotus exaltatus var. *exaltatus*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Rhodanthe maryonii			
Santalum acuminatum			
Solanum lasiophyllum			

Site Name:	MH-22
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 459010E 6772069N
Landform Type:	Upper Slope
Slope Class:	Gentle
Soil Type:	Sandy silt
Soil Colour:	Light brown/red
Fire:	>5
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3.5		10
Acacia sibina	3.5		2
Acacia tetragonophylla	2.5		0.5
**Aira caryophyllea*	0.1		0.5
Amphipogon caricinus var. *caricinus*	0.3		0.5
Austrostipa elegantissima	1		0.5
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.3		0.5
Comesperma volubile			0.5
Ecdeiocolea monostachya	1		0.5
Eremophila clarkei	1		0.5
Eremophila ?eriocalyx	0.5		0.5
Hakea recurva subsp. *recurva*	1		0.5
Helipterum craspedioides	0.1		3
Hemigenia sp. Yalgoo (A.M. Ashby 2624)	0.5		1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Maireana thesioides	1		0.5
Melaleuca stereophloia	3		5
Philotheca brucei subsp. *brucei*	0.5		0.5
Philotheca deserti subsp. *deserti*	1		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5
Rhyncharrhena linearis			0.5

Site Name:	MH-23
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 458417E 6772003N
Landform Type:	Mid slope
Slope Class:	Gentle
Soil Type:	Silty sand
Soil Colour:	Red
Fire:	>5
Comments:	Woodland - thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1		0.5
Acacia ramulosa var. *ramulosa*	2.5		0.5
Acacia sibina	2.5		0.5
Acacia tetragonophylla	2.5		0.5
Amphipogon caricinus var. *caricinus*	0.2		0.5
Austrostipa elegantissima	0.5		0.5
Austrostipa ?*nitida*	0.3		0.5
Callitris columellaris	7		0.5
Calytrix sp. Paynes Find (F. & J. Hort 1188)	0.4		0.5
Dianella revoluta	0.5		0.5
Eucalyptus horistes	10		1
Eucalyptus kochii subsp. ?*plenissima*	10		3
Exocarpos aphyllus	1		0.5
Gilruthia osbornei	0.01		0.5
Hakea recurva subsp. *recurva*	2.5		0.5
Hyalosperma glutinosum subsp. *venustum*	0.2		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Maireana tomentosa subsp. *tomentosa*	0.3		0.5
Melaleuca eleuterostachya	3		1
Melaleuca hamata	3		0.5
Mirbelia ramulosa	0.3		0.5
Monachather paradoxus	0.3		0.5
Persoonia hexagona	2		0.5

Philotheca brucei subsp. *brucei*	0.4		0.5
Philotheca deserti subsp. *deserti*	1.5		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5
Rhagodia drummondii	0.3		0.5
Rhodanthe maryonii	0.1		0.5
Schoenia cassiniana	0.2		0.5
Senna artemisioides subsp. *filifolia*	0.4		0.5
Solanum lasiophyllum	0.5		0.5
Solanum nummularium	0.3		0.5
Waitzia acuminata	0.3		0.5

Site Name: MH-24

Site Type: AREA

GPS Location: GDA94 Zone 50 456838E 6771794N

Landform Type: Mid to Lower slope

Slope Class: Gentle

Soil Type: Sandy clay silt

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia prainii			
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Acacia tetragonophylla			
Alyxia buxifolia			
Bursaria occidentalis			
Callitris columellaris			
Calocephalus multiflorus			
Cephalipterum drummondii			
Cryptandra ?*apetala* var. *apetala*			
Daviesia benthamii subsp. *benthamii*			
Eremophila decipiens subsp. *linearifolia*			
Eucalyptus horistes			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus			
Gilruthia osbornei			
Hakea recurva subsp. *recurva*			
Hyalosperma glutinosum subsp. *venustum*			
Lawrencia ?*rosea*			
Maireana tomentosa subsp. *tomentosa*			
Microcorys sp. Mt Gibson (S. Patrick 2098)			
Mirbelia bursarioides ms			
Monachather paradoxus			
Philotheca brucei subsp. *brucei*			
Pimelea microcephala subsp. *microcephala*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			

Ptilotus polystachyus			
Rhagodia drummondii			
Samolus repens var. *floribundus*			
Schoenia cassiniana			
Senna artemisioides subsp. *filifolia*			
Solanum lasiophyllum			
Stenopetalum anfractum			

Site Name:	MH-25
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 455626E 6771727N
Landform Type:	Lower Slope
Slope Class:	Gentle
Soil Type:	Sandy silt
Soil Colour:	Brown/red
Fire:	>5
Comments:	Dense thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	4		1
Acacia ramulosa var. *ramulosa*	4		80
Amphipogon caricinus var. *caricinus*	0.2		0.5
Brunonia australis	0.1		0.5
Comesperma volubile			0.5
Eucalyptus kochii subsp. ?*plenissima*	7		1
Eucalyptus leptopoda subsp. *arctata*	4		0.5
Hyalosperma glutinosum subsp. *venustum*	0.2		1
Melaleuca hamata	5		0.5
Monachather paradoxus	0.3		0.5
Plantago debilis	0.01		0.5
Samolus repens var. *floribundus*	0.4		1

Site Name:	MH-26
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 455262E 6771709N
Landform Type:	Valley floor
Slope Class:	Flat
Soil Type:	Silty loam
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia longispinea	2		0.5
Acacia ramulosa var. *ramulosa*	4		1
Acacia tetragonophylla	4		0.5
Austrostipa elegantissima	0.5		0.5
Austrostipa ?*nitida*	0.3		0.5
Austrostipa scabra	0.4		0.5
Bursaria occidentalis	3		1
Calandrinia primuliflora	0.1		0.5
Eucalyptus kochii subsp. ?*plenissima*	10		2
Eucalyptus loxophleba subsp. *supralaevis*	10		5
Exocarpos aphyllus	3		0.5
Hakea recurva subsp. *recurva*	3		0.5
Maireana carnosa	0.1		0.5
Monachather paradoxus	0.2		0.5
Pimelea microcephala subsp. *microcephala*	10		0.5
Ptilotus exaltatus var. *exaltatus*	0.3		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5

Site Name: MH-27

Site Type: AREA

Survey Date: 26/10/2005

GPS Location: GDA94 Zone 50 454370E 6771853N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Sandy silt

Soil Colour: Red/brown

Fire: >5

Comments: Open Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		0.1
Acacia ramulosa var. *ramulosa*	4		4
Acacia sibina	4		3
Acacia sp. Murchison (B.R. Maslin 7331)	7		0.5
Acacia tetragonophylla	2.5		0.5
Aluta aspera subsp. *hesperia*	0.7		0.5
Astroloma serratifolium	0.4		0.5
Austrostipa elegantissima	0.5		0.5
Austrostipa ?nitida	0.4		0.5
Austrostipa scabra	0.4		0.5
Borya sphaerocephala	0.2		30
Calandrinia primuliflora	0.01		0.5
Calocephalus multiflorus	0.1		0.5
Eremophila ?eriocalyx	2		0.5
Eremophila forrestii subsp. *forrestii*	1		0.5
Gilruthia osbornei	0.1		0.5
Gnephosis tenuissima	0.1		0.5
Grevillea pityophylla	1		0.5
Hakea minyma	4		0.5
Hakea recurva subsp. *recurva*	2		0.5
Hyalosperma glutinosum subsp. *venustum*	0.2		3
Lobelia winfridae	0.1		0.5
Melaleuca hamata	5		1
Mirbelia microphylla	0.5		0.5

Persoonia hexagona	2.5		0.5
Philotheca deserti subsp. *deserti*	0.8		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5
Rulingia luteiflora	2		0.5
Samolus repens var. *floribundus*	0.3		0.5
Santalum acuminatum	4		0.5
Solanum lasiophyllum	1		0.5
Waitzia acuminata	0.2		0.5

Site Name: MH-28

Site Type: AREA

GPS Location: GDA94 Zone 50 451358E 6771889N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Sandy silt

Soil Colour: Red/brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*			
Acacia sibina			
Eucalyptus kochii subsp. ?*plenissima*			
Eucalyptus leptopoda subsp. *arctata*			
Hakea minyma			
Hyalosperma glutinosum subsp. *venustum*			
Monachather paradoxus			
Waitzia acuminata			

Site Name: MH-29

Site Type: AREA

GPS Location: GDA94 Zone 50 448828E 6771088N

Landform Type: Lowland

Slope Class: Flat

Soil Type: Sandy silt calcrete

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia ?synchronicia			
Acacia tetragonophylla			
**Aira caryophyllea*			
Atriplex ?cinerea			
Austrostipa elegantissima			
Austrostipa ?nitida			
Calandrinia primuliflora			
Cephalipterum drummondii			
Comesperma volubile			
Enchylaena tomentosa var. *tomentosa*			
Eremophila ?eriocalyx			
Hyalosperma glutinosum subsp. *venustum*			
Maireana carnosa			
Maireana georgei			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Rhodanthe maryonii			
Santalum spicatum			
Solanum lasiophyllum			

Site Name:	MH-30
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 448176E 6771070N
Landform Type:	Lower Slope
Slope Class:	Gentle
Soil Type:	Clay calcrete
Soil Colour:	Red/brown
Fire:	>5
Comments:	Samphire heath, disturbed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Angianthus tomentosus	0.2		0.5
Atriplex ?cinerea	0.5		0.5
Atriplex ?codonocarpa	0.3		0.5
Austrostipa ?nitida	0.3		0.5
**Centaurea melitensis*	0.2		0.5
Cephalipterum drummondii	0.3		0.5
Erodium cygnorum			
Frankenia pauciflora	0.3		0.5
Frankenia setosa	0.3		0.5
Gunniopsis quadrifida	0.4		0.5
Maireana eriosphaera	0.3		0.5
Maireana trichoptera	0.2		0.5
**Mesembryanthemum nodiflorum*	0.1		1
**Rostraria pumila*	0.3		0.5
Sclerolaena diacantha	0.2		0.5
Sclerostegia disarticulata	0.3		10

Site Name: MH-31

Site Type: AREA

GPS Location: GDA94 Zone 50 448175E 6771108N

Landform Type: Lower slope

Soil Type: Silty clay

Soil Colour: Red/brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia quadrimarginea			
Acacia sibina			
Acacia tetragonophylla			
Acacia umbraculiformis			
Atriplex bunburyana			
Austrostipa ?*nitida*			
Bursaria occidentalis			
Calandrinia primuliflora			
Cephalipterum drummondii			
Comesperma integerrimum			
Comesperma volubile			
Dodonaea viscosa subsp. *angustissima*			
Enchylaena tomentosa var. *tomentosa*			
Eremophila ?*eriocalyx*			
Eremophila miniata			
Eremophila oldfieldii subsp. *angustifolia*			
Erymophyllum ?*glossanthus*			
Exocarpos aphyllus			
Frankenia pauciflora			
Frankenia setosa			
Grevillea sarissa subsp. *sarissa*			
Gunniopsis quadrifida			
Maireana carnosa			
Maireana tomentosa subsp. *tomentosa*			
Myriocephalus guerinae			
Pittosporum angustifolium			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			

Rhodanthe maryonii			
Schoenia filifolia subsp. *filifolia*			
Sclerolaena densiflora			
Sclerolaena eriacantha			

Site Name: MH-32

Site Type: AREA

GPS Location: GDA94 Zone 50 447727E 6771061N

Landform Type: Lake edge

Slope Class: Flat

Soil Type: Silt

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Angianthus prostratus (P3)			
Atriplex bunburyana			
Atriplex codonocarpa			
Frankenia pauciflora			
Grevillea sarissa subsp. *sarissa*			
Gunniopsis quadrifida			
Maireana atkinsiana			
Maireana eriosphaera			
Maireana tomentosa subsp. *tomentosa*			
**Mesembryanthemum nodiflorum*			
Mirbelia microphylla			
Sarcozona praecox			
Tecticornia disarticulata			

Site Name: MH-33

Site Type: AREA

GPS Location: GDA94 Zone 50 446145E 6770945N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Sandy silt gravel

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Austrostipa ?*nitida*			
Calandrinia primuliflora			
Comesperma integerrimum			
Eremophila forrestii subsp. *forrestii*			
Hakea recurva subsp. *recurva*			
Hemigenia ?*sp. Yuna (A.C. Burns 95)*			
Hyalosperma glutinosum subsp. *venustum*			
Lobelia winfridae			
Maireana carnosa			
Melaleuca hamata			
Mirbelia microphylla			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Schoenia cassiniana			
Sclerolaena densiflora			
Senna sp. Austin (A. Strid 20210)			
Waitzia acuminata			

Site Name:	MH-34
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 445355E 6770754N
Landform Type:	Mid slope
Slope Class:	Gentle
Soil Type:	Sandy silt
Soil Colour:	Red
Fire:	>5
Comments:	Thicket, grazed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*	4		2
Acacia erinacea	0.3		0.5
Acacia ramulosa var. *ramulosa*	4		10
Bursaria occidentalis	1		0.5
Eucalyptus leptopoda subsp. *arctata*	5		2
Hakea minyma	6		0.5
Hakea recurva subsp. *recurva*			
Maireana tomentosa subsp. *tomentosa*	0.4		0.5
Monachather paradoxus	0.3		0.5
Ptilotus polystachyus	0.3		0.5
Samolus repens var. *floribundus*	0.4		0.5
Waitzia acuminata	0.2		0.5

Site Name: MH-35

Site Type: AREA

GPS Location: GDA94 Zone 50 444574E 6770564N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*			
Acacia ramulosa var. *ramulosa*			
Bursaria occidentalis			
Calocephalus multiflorus			
Eremophila forrestii subsp. *forrestii*			
Gilruthia osbornei			
Grevillea obliquistigma subsp. *obliquistigma*			
Melaleuca hamata			
Monachather paradoxus			

Site Name:	MH-36
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 441988E 6770279N
Landform Type:	Valley floor
Slope Class:	Flat
Soil Type:	Silty loam
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.5
Acacia ramulosa var. *ramulosa*	4		3
Acacia tetragonophylla	2		0.5
Austrostipa ?nitida	0.3		0.5
Calandrinia primuliflora	0.01		0.5
Cephalipterum drummondii	0.2		0.5
Chamaexeros macranthera	0.1		0.5
Eucalyptus loxophleba subsp. *supralaevis*	10		7
Hakea recurva subsp. *recurva*	2		0.5
Mirbelia ramulosa	0.3		0.5
Monachather paradoxus	0.3		0.5
Pimelea microcephala subsp. *microcephala*	1.2		0.5
Ptilotus exaltatus var. *exaltatus*	0.3		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		1
Ptilotus obovatus var. *obovatus*	0.4		1
Ptilotus polystachyus	0.3		0.5
Rhodanthe maryonii	0.2		1
Schoenia cassiniana	0.5		1
Sclerolaena densiflora	0.1		0.5
Senna artemisioides subsp. *filifolia*	2		0.5
Sida ?calyxhymenia	0.3		0.5
Solanum lasiophyllum	0.4		0.5
Stenopetalum anfractum	0.3		

Site Name:	MH-37
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 441478E 6770266N
Landform Type:	Lower slope
Slope Class:	Gentle
Soil Type:	Silty clay
Soil Colour:	Red
Fire:	>5
Comments:	Thicket, grazed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		0.5
Acacia ramulosa var. *ramulosa*	3		30
Amphipogon caricinus var. *caricinus*	0.3		0.5
Austrostipa scabra	0.4		0.5
Chamaexeros macranthera	0.1		0.5
Comesperma integerrimum			0.5
Eremophila ?eriocalyx	0.2		0.5
Gilruthia osbornei	0.01		0.5
Grevillea obliquistigma subsp. *obliquistigma*	3		0.5
Grevillea pityophylla	0.5		0.5
Hemigenia divaricata	0.5		0.5
Lobelia winfridae	0.1		0.5
Maireana tomentosa subsp. *tomentosa*	0.4		0.5
Melaleuca hamata	4		1
Monachather paradoxus	0.3		0.5
Myriocephalus guerinae	0.2		2
Waitzia acuminata	0.2		0.5

Site Name: MH-38

Site Type: AREA

Survey Date: 26/10/2005

GPS Location: GDA94 Zone 50 440772E 6770241N

Landform Type: Crest of rise

Slope Class: Flat

Soil Type: Rocky silty clay

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	6		2
Acacia ramulosa var. *linophylla*	1.5		0.5
Acacia ramulosa var. *ramulosa*	3		2
Acacia tetragonophylla	3		0.5
Allocasuarina acutivalvis subsp. *prinsepiana*	6		2
Aluta aspera subsp. *hesperia*	1.5		0.5
Arthropodium dyeri	0.3		0.5
Austrostipa elegantissima	1		0.5
Austrostipa scabra	0.4		0.5
Borya sphaerocephala	0.1		30
Comesperma integerrimum			0.5
Eremophila clarkei	2		0.5
Hyalosperma glutinosum subsp. *venustum*	0.2		0.5
Lawrencia ?rosea	0.3		0.5
Melaleuca hamata	3		6
Rhodanthe citrina	0.2		0.5
Rhodanthe maryonii	0.2		0.5
Schoenia cassiniana	0.2		0.5

Site Name:	MH-39
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 439116E 6770232N
Landform Type:	Lower slope
Slope Class:	Flat
Soil Type:	Silty clay
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland over Thicket, grazed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.5
Acacia ramulosa var. *ramulosa*	3		6
Acacia tetragonophylla	2		0.5
Arthropodium dyeri	0.3		0.5
Brunonia australis	0.1		0.5
Calocephalus multiflorus	0.1		0.5
Eremophila ?eriocalyx	0.5		0.5
Eucalyptus kochii subsp. *?plenissima*	8		3
Hakea recurva subsp. *recurva*	0.5		0.5
Maireana trichoptera	0.1		0.5
Minuria cunninghamii	0.5		1
Olearia pimeleoides	1		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.3		0.5
Rhagodia drummondii	0.4		0.5
Senna artemisioides subsp. *filifolia*	0.4		0.5

Site Name:	MH-40
Site Type:	AREA
Survey Date:	26/10/2005
GPS Location:	GDA94 Zone 50 435588E 6770246N
Landform Type:	Lower slope
Slope Class:	Gentle
Soil Type:	Silty loam
Soil Colour:	Red
Fire:	>5
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*	4		5
Acacia ramulosa var. *ramulosa*	4		15
Acacia tetragonophylla	3		1
Amphipogon caricinus var. *caricinus*	0.3		0.5
Austrostipa scabra	0.4		0.5
Calocephalus multiflorus	0.1		0.5
Cephalipterum drummondii	0.4		0.5
Chamaexeros macranthera	0.3		0.5
Comesperma integerrimum			0.5
Gilruthia osbornei	0.1		0.5
Hakea recurva subsp. *recurva*	4		1
Hemigenia divaricata	0.3		0.5
Lawrencia ?rosea	0.3		0.5
Melaleuca hamata	5		1
Minuria cunninghamii	0.5		1

Site Name:	MH-41
Site Type:	AREA
Survey Date:	27/10/2005
GPS Location:	GDA94 Zone 50 435239E 6770250N
Landform Type:	Lower slope
Slope Class:	Gentle
Soil Type:	Silty loam
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland over Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*	4		2
Acacia ramulosa var. *ramulosa*	5		15
Acacia tetragonophylla	4		0.5
Austrostipa elegantissima	1		0.5
Austrostipa ?nitida	0.3		0.5
Austrostipa scabra	0.6		0.5
Cephalipterum drummondii	0.3		0.5
Chamaexeros macranthera	0.3		0.5
Eucalyptus kochii subsp. *?plenissima*	10		2
Gilruthia osbornei	0.1		0.5
Hakea recurva subsp. *recurva*	3		0.5
Hyalosperma glutinosum subsp. *venustum*	0.1		0.5
Lawrencia ?rosea	0.2		0.5
Maireana tomentosa subsp. *tomentosa*	0.4		0.5
Melaleuca hamata	4		1
Minuria cunninghamii	0.5		2
Myriocephalus guerinae	0.3		0.5
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		0.5
Schoenia cassiniana	0.2		0.5
Waitzia acuminata	0.2		5

Site Name:	MH-42
Site Type:	AREA
Survey Date:	27/10/2005
GPS Location:	GDA94 Zone 50 434548E 6770252N
Landform Type:	Mid slope
Slope Class:	Gentle
Soil Type:	Silty loam
Soil Colour:	Red
Fire:	>5
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*	4		6
Acacia ramulosa var. *ramulosa*	5		15
Acacia tetragonophylla	2		0.5
Amphipogon caricinus var. *caricinus*	0.3		0.5
Austrostipa elegantissima	0.5		0.5
Cephalipterum drummondii	0.3		0.5
Chamaexeros macranthera	0.3		0.5
Gilruthia osbornei	0.1		0.5
Melaleuca hamata	6		6
Mirbelia microphylla	1.5		0.5
Myriocephalus guerinae	0.2		5
Schoenia cassiniana	0.2		0.5

Site Name:	MH-43
Site Type:	AREA
Survey Date:	27/10/2005
GPS Location:	GDA94 Zone 50 434134E 6770290N
Landform Type:	Upper slope
Slope Class:	Gentle
Soil Type:	Loamy silt
Soil Colour:	Red
Fire:	>5
Comments:	Open Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		0.5
Acacia ramulosa var. *ramulosa*	4		1
Acacia tetragonophylla	2.5		0.5
**Aira caryophyllea*	0.1		0.5
Austrostipa ?nitida	0.3		0.5
Austrostipa scabra	0.5		0.5
Enchylaena tomentosa var. *tomentosa*	0.4		0.5
Eucalyptus loxophleba subsp. *supralaevis*	10		6
Maireana carnosa	0.1		0.5
Maireana georgei	0.2		0.5
Maireana tomentosa subsp. *tomentosa*	0.4		0.5
**Mesembryanthemum nodiflorum*	0.1		0.5
Minuria cunninghamii	0.5		0.5
Monachather paradoxus	0.2		0.5
Ptilotus exaltatus var. *exaltatus*	0.4		2
Ptilotus gaudichaudii var. *parviflorus*	0.2		0.5
Ptilotus obovatus var. *obovatus*	0.4		1
Rhagodia drummondii	0.3		0.5
Rhodanthe maryonii	0.2		0.5
Sclerolaena densiflora	0.1		0.5
Sclerolaena diacantha	0.2		0.5

Site Name: MH-44

Site Type: AREA

GPS Location: GDA94 Zone 50 433726E 6770245N

Landform Type: Upper slope

Slope Class: Gentle

Soil Type: Sandy silt, very rocky

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia tetragonophylla			
Allocasuarina acutivalvis subsp. *prinsepiana*			
Austrostipa scabra			
Borya sphaerocephala			
Calocephalus multiflorus			
Cephalipterum drummondii			
Eremophila clarkei			
Eremophila ?eriocalyx			
Gilruthia osbornei			
Hyalosperma glutinosum subsp. *venustum*			
Melaleuca hamata			
Mirbelia microphylla			
Monachather paradoxus			
Ptilotus obovatus var. *obovatus*			
Schoenia cassiniana			
Thryptomene costata			

Site Name: MH-45

Site Type: AREA

GPS Location: GDA94 Zone 50 433508E 6770278N

Landform Type: Mid slope

Slope Class: Gentle

Soil Type: Silty loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*			
Acacia ramulosa var. *ramulosa*			
Acacia stereophylla var. *stereophylla*			
Allocasuarina acutivalvis subsp. *prinsepiana*			
Aluta aspera subsp. *hesperia*			
Amphipogon caricinus var. *caricinus*			
Austrostipa elegantissima			
Daviesia benthamii			
Dianella revoluta			
Dodonaea viscosa subsp. *angustissima*			
Grevillea obliquistigma subsp. *obliquistigma*			
Lawrencia ?*rosea*			
Melaleuca hamata			
Myriocephalus guerinae			
Schoenia cassiniana			
Sida ?*calyxhymenia*			
Sonchus sp.			

Site Name: MH-46

Site Type: AREA

GPS Location: GDA94 Zone 50 433291E 6770240N

Landform Type: Crest of low hill

Slope Class: Gentle

Soil Type: Silty loam

Soil Colour: Red

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis subsp. *coolgardiensis*			
Acacia exocarpoides			
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Austrostipa elegantissima			
Austrostipa ?*nitida*			
Bursaria occidentalis			
Eucalyptus loxophleba subsp. *supralaevis*			
Exocarpos aphyllus			
Hakea recurva subsp. *recurva*			
Maireana tomentosa subsp. *tomentosa*			
Minuria cunninghamii			
Myriocephalus guerinae			
Pimelea microcephala subsp. *microcephala*			
Ptilotus gaudichaudii var. *parviflorus*			
Ptilotus obovatus var. *obovatus*			
Rhagodia drummondii			
Sclerolaena densiflora			
Sclerolaena fusiformis			

Site Name: MH-47

Site Type: AREA

GPS Location: GDA94 Zone 50 446702E 6771005N

Landform Type: Salt Pan

Slope Class: Flat

Soil Type: Silt

Soil Colour: Brown

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Angianthus cornutus			
Atriplex nana			
Calandrinia eremaea			
Erymophyllum ?glossanthus			
Erymophyllum ramosum subsp. ?*ramosum*			
Gunniopsis quadrifida			
Gunniopsis rodwayi			
Halosarcia pterygosperma subsp. *pterygosperma*			
Maireana eriosphaera			
Maireana oppositifolia			
**Mesembryanthemum nodiflorum*			
Tecticornia calyptrata			
Tecticornia disarticulata			

Site Name:	MLEC10
Site Type:	RELEVE
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 467999.385980574E 6771842.39421987N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	E
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	467999	6771842	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		2
Acacia tetragonophylla	2		2
Allocasuarina acutivalvis subsp. *prinsepiana*	5		5
Amphipogon caricinus var. *caricinus*	0.5		0.5
?*Arthropodium dyeri*	0.2		0.1
Calotis multicaulis	0.1		0.2
Cheilanthes sieberi subsp. *sieberi*	0.1		0.5
Chthonocephalus pseudevax	0.1		0.1
Dianella revoluta var. *divaricata*	0.6		0.1

Eucalyptus loxophleba subsp. *supralaevis*	7.5		1
Goodenia capillosa	0.1		5
Grevillea pityophylla	4		10
Hakea recurva subsp. *recurva*	3		5
Lawrencella rosea	0.1		0.2
Myriocephalus gueriniae	0.1		0.5
Philotheca deserti subsp. *deserti*	0.8		0.2
Pimelea microcephala subsp. *microcephala*	0.5		0.1
Rhodanthe laevis	0.1		3

PHOTOS

Site Name:	MLEC12
Site Type:	RELEVE
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 468666.01E 6771706.06N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
Soil Type:	Sandy Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	> 20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	468666	6771706	
Corner 2	468665	6771705	
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		1
Acacia latior	3		40
Acacia sibina	2		0.5
Aluta aspera subsp. *hesperia*	1.6		1
Amphipogon caricinus var. *caricinus*	0.2		0.5
Bellida graminea	0.01		5
Cheilanthes sieberi subsp. *sieberi*	0.1		1
Dianella revoluta var. *divaricata*	1.1		0.1
Drosera sp. Branched styles (S.C. Coffey 193)			0.1
Erodium cygnorum	0.1		0.2
Eucalyptus arctata	4		1.5
Goodenia capillosa	0.1		0.2

Hakea minyma	2		0.5
Hysterobaeckea setifera subsp. *setifera*	2.2		1
Myriocephalus gueriniae	0.1		0.2
Philotheca glabra	1		2
Prostanthera prostantheroides	0.5		0.5
Stylidium warriedarense	0.1		0.1

PHOTOS

Site Name:	MLEKR1
Site Type:	RELEVE
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472581.94E 6768025.35N
Landform Type:	Mid Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	NE
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	Granite, 10-20% bedrock exposed
CF Abundance:	<2%
CF Sizes:	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	472582	6768025	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia umbraculiformis*
Mid Stratum 2:	*Eremophila serrulata*, *Ptilotus obovatus*
Lower Stratum 1:	*Borya sphaerocephala*, *Myriocephalus gueriniae*, *Rhodanthe chlorocephala* subsp. *splendida*
Lower Stratum 2:	*Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia umbraculiformis	7		5

Austrostipa elegantissima			
Borya sphaerocephala	0.2		2
Chenopodium gaudichaudianum			
Drosera major			
Eremophila serrulata	1.5		1
Erodium cygnorum	0.1		0.3
Goodenia cycnopotamica	0.1		5
Maireana planifolia			
Myriocephalus gueriniae	0.2		3
Ptilotus obovatus	0.4		8
Rhodanthe chlorocephala subsp. *splendida*	0.3		8
**Sisymbrium erysimoides*			
Solanum lasiophyllum	0.3		1

PHOTOS

Site Name:	MLEKR2
Site Type:	RELEVE
Survey Date:	08/08/2024
GPS Location:	GDA2020 Zone 50 472001.52E 6771614.67N
Landform Type:	Plain
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, Clearing
Fire:	10-20 Years
Comments:	Previously cleared?

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	472002	6771615	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1:	*Eucalyptus loxophleba* subsp. *supralaevis*
Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*
Mid Stratum 2:	*Maireana tomentosa* subsp. *tomentosa*, *Ptilotus obovatus*, *Solanum lasiophyllum*
Lower Stratum 1:	*Calotis multicaulis*, *Cephalipterum drummondii*
Lower Stratum 2:	*Menkea australis*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	1.5		1

Acacia tetragonophylla	2		0.5
Calotis multicaulis	0.2		0.3
Cephalipterum drummondii	0.3		20
Chenopodium gaudichaudianum	0.4		0.5
**Echium plantagineum*			
Erodium cygnorum			
Eucalyptus loxophleba subsp. *supralaevis*	9		2
Maireana tomentosa subsp. *tomentosa*	0.4		0.4
**Medicago minima*			
Menkea australis	0.1		6
Ptilotus obovatus	0.4		4
Sclerolaena eurotioides			
**Sisymbrium erysimoides*			
Solanum lasiophyllum	0.4		8

PHOTOS

Site Name:	MLEKR3
Site Type:	RELEVE
Survey Date:	10/08/2024
GPS Location:	GDA2020 Zone 50 470158.85E 6765033.58N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
CF Types:	Ironstone, Laterite
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Fire:	10-20 Years

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	470159	6765034	
Corner 2			
Corner 3			
Corner 4			

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1:	*Acacia ramulosa* var. *ramulosa*, *Melaleuca hamata*
Mid Stratum 2:	*Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*, *Grevillea pityophylla*
Lower Stratum 1:	*Bellida graminea*, *Goodenia cycnopotamica*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		
Acacia ramulosa var. *ramulosa*	2		1.5

Acacia sibina	2		0.5
Acacia tetragonophylla	2		0.5
Aluta aspera subsp. *hesperia*	1.5		8
Amphipogon caricinus var. *caricinus*			
Bellida graminea	0.1		2
Caladenia hirta subsp. *rosea*			
Chthonocephalus pseudevax			
Cyanicula amplexans			
Drosera sp. Branched styles (S.C. Coffey 193)			
Eremophila eriocalyx			
Eremophila forrestii subsp. *forrestii*	0.6		0.8
Goodenia cycnopotamica	0.1		3
Grevillea pityophylla	0.7		2
Hakea recurva subsp. *recurva*			
Melaleuca hamata	2.5		6
Myriocephalus gueriniae			
Senna artemisioides subsp. *filifolia*			
Sida sp. dark green fruits (S. van Leeuwen 2260)			
Wurmbea dilatata			

PHOTOS

Site Name:	MLEM01
Site Type:	RELEVE
Survey Date:	21/08/2024
GPS Location:	GDA94 Zone 50 360415.8E 6755056N
Landform Type:	Mid Slope
Slope Class:	Gently Inclined (3°)
Aspect:	ESE
Soil Type:	Sandy Loam
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - CD – Completely Degraded
Disturbance:	Weeds, Clearing, Animal
Fire:	10-20 Years
Habitat:	Eucalyptus over weeds

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	360416	6755056	
Corner 2	WGS84			
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Arctotheca calendula*	0.3		0.1
**Avena barbata*	0.3		70
Enchylaena tomentosa var. *tomentosa*	0.3		0.1
Eucalyptus camaldulensis subsp. *arida*	10		80
**Hordeum leporinum*	0.2		0.1
**Lamarckia aurea*	0.2		0.1
**Lupinus cosentinii*	0.4		0.1
**Lysimachia arvensis*	0.1		0.1
**Raphanus raphanistrum*	0.3		0.1

**Sonchus oleraceus*	0.2		0.1

PHOTOS

Site Name:	MLEM10
Site Type:	RELEVE
Survey Date:	24/08/2024
GPS Location:	GDA94 Zone 50 454713.9E 6769399.9N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	Weeds, (other)
Fire:	10-20 Years
Habitat:	Mid open woodland over tall open shrubland over low sparse shrubland over low forbland
Comments:	Similar to MLEM05. Nearby track, historical station activity (fences etc.)

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	454714	6769400	
Corner 2	WGS84	454721	6769405	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.5		0.1
Acacia acuminata	2		1
Acacia assimilis subsp. *assimilis*	2		1
Acacia ramulosa var. *ramulosa*	2		1
Acacia tetragonophylla	3		1
Cephalipterum drummondii			
Eucalyptus loxophleba subsp. *supralaevis*	10		4.5

Goodenia rosea			
Hakea recurva subsp. *recurva*	2		0.4
Lawrencella davenportii			
Menkea australis			
Ptilotus obovatus	0.5		0.3
Ptilotus polystachyus			
Rhagodia drummondii	1		0.2
Roepera lobulata			
Senna artemisioides subsp. *filifolia*	1		0.3
Stenopetalum filifolium			

PHOTOS

Site Name:	MLEM12
Site Type:	RELEVE
Survey Date:	24/08/2024
GPS Location:	GDA94 Zone 50 455894.6E 6769660.8N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Clearing, (other)
Fire:	10-20 Years
Habitat:	Tall open shrubland over low isolated clumps of shrubs over low forbland
Comments:	Track/station fence nearby, historical clearing/grazing?

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	455895	6769661	
Corner 2	WGS84	455895	6769662	
Corner 3	WGS84	455892	6769654	
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.9		0.4
Acacia ramulosa var. *ramulosa*	2		4
Acacia sibina	2		1
Bursaria occidentalis	4		3
Calandrinia pumila			
Calandrinia sp. Bungalbin (G.J. Keighery & N. Gibson 1656)			
Cephalipterum drummondii			

Chthonocephalus pseudevax			
Gilruthia osbornei			
Goodenia rosea			
Hakea recurva subsp. *recurva*	2		1
Pimelea microcephala subsp. *microcephala*	1		0.2
Podolepis aristata subsp. *affinis*			
Ptilotus obovatus	0.5		0.9
Scaevola spinescens	0.5		0.2
Solanum lasiophyllum	0.5		0.4

PHOTOS

Site Name:	MLEM14
Site Type:	RELEVE
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 449862E 6771724.5N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Low open woodland over tall sparse shrubland over low isolated clumps of shrubs over low forbland
Comments:	Similar to MLEM05. Between road and rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	449862	6771724	
Corner 2	WGS84	449854	6771697	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		1
Acacia ramulosa var. *ramulosa*	2		5
Acacia tetragonophylla	2		1
Bellida graminea			
Calotis hispidula			
Cephalipterum drummondii			
Comesperma integerrimum			0.1

Crassula colorata var. *acuminata*			
**Cuscuta* ?*planiflora*			
Enchylaena lanata	0.5		0.3
Erodium cygnorum			
Eucalyptus loxophleba subsp. *supralaevis*	9		6
Exocarpos aphyllus	2.5		0.4
Gilberta tenuifolia			
Goodenia rosea			
Hydrocotyle intertexta			
Maireana georgei	0.3		0.4
Myriocephalus gueriniae			
Panaetia lessonii			
Pimelea microcephala subsp. *microcephala*	1		0.3
Podolepis aristata subsp. *affinis*			
Ptilotus ?*gaudichaudii*	0.1		0.3
Ptilotus obovatus	0.5		0.8
Ptilotus polystachyus			
Rhagodia drummondii	0.5		0.5
Roepera lobulata	0.2		0.3
Sclerolaena diacantha	0.1		0.3
Senna artemisioides subsp. *filifolia*	1		0.4
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.1		0.1
Solanum lasiophyllum	0.4		0.2
**Spergula pentandra*	0.1		0.1
Waitzia acuminata var. *acuminata*			
Wurmbea dilatata			

PHOTOS

Site Name:	MLEM17
Site Type:	RELEVE
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 445937.9E 6770842.2N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	<2%
CF Sizes:	6-20mm
CF Types:	Ironstone
Vegetation Condition:	Combined Vegetation Condition - PR - Pristine
Fire:	10-20 Years
Habitat:	Tall open shrubland over low isolated clumps of shrubs over low forbland
Comments:	Similar to MLEM16

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	445938	6770842	
Corner 2	WGS84	445936	6770843	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		6
Acacia incognita	2.5		3
Caesia sp. Wongan (K.F. Kenneally 8820)			
Calandrinia eremaea			
Crassula colorata var. *acuminata*			
Dysphania glandulosa			

Gilruthia osbornei			
Goodenia pusilliflora			
Goodenia rosea			
Gunniopsis rubra	0.1		0.1
Hemigenia sp. aff. botryphylla (Potentially undescribed)	1		0.5
Hyalosperma demissum			
Hyalosperma glutinosum subsp. *venustum*			
Isolepis congrua			
Melaleuca hamata	4.5		3
Menkea draboides (P3)	0.1		0.1
Mirbelia microphylla	1		0.5
Podolepis aristata subsp. *affinis*			
Ptilotus obovatus			
Rhodanthe chlorocephala subsp. *splendida*			
Rhodanthe maryonii			
Roebuckiella cheilocarpa			
Schoenia cassiniana			
Senna artemisioides subsp. *filifolia*	2		1

PHOTOS

Site Name:	MLEM20
Site Type:	RELEVE
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 444602.4E 6770774.7N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall open shrubland over low forbland
Comments:	Similar to MLEM16 but no low shrubs, Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	444602	6770775	
Corner 2	WGS84			
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis	2.5		0.5
Acacia incognita	2.5		1
Acacia ramulosa var. *ramulosa*	2.5		18
Erodium cygnorum	0.1		
Gilruthia osbornei	0.1		
Gnephosis brevifolia	0.1		
Goodenia capillosa	0.1		
Goodenia cycnopotamica	0.1		

Melaleuca hamata	5		7
Myriocephalus gueriniae	0.1		
Waitzia acuminata var. *acuminata*	0.1		

PHOTOS

Site Name:	MLEM21
Site Type:	RELEVE
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 444911.1E 6770613.9N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Mid open woodland over tall shrubland over mid isolated clumps of shrubs over low isolated clumps of shrubs over low forbland
Comments:	Similar to MLEM02, Nearby road and transmission line

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	444911	6770614	
Corner 2	WGS84	444892	6770602	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3		35
Acacia tetragonophylla	3		4
Enchylaena lanata	0.5		0.8
Erodium cygnorum			
Eucalyptus kochii subsp. *borealis*	11		6
Gilruthia osbornei			
Goodenia rosea			

Hakea recurva subsp. *recurva*	1.5		1
Maireana georgei	0.5		0.4
Myriocephalus gueriniae			
Ptilotus obovatus	0.5		1
Ptilotus polystachyus			
Rhagodia drummondii	1.3		1
Solanum lasiophyllum	0.5		0.2

PHOTOS

Site Name:	MLEM22
Site Type:	RELEVE
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 443133.2E 6770476.3N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Low woodland over tall shrubland over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	443133	6770476	
Corner 2	WGS84	443147	6770475	
Corner 3	WGS84	443148	6770476	
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis	3		30
Bellida graminea			
Erodium cygnorum			
Eucalyptus arctata	6		2
Eucalyptus kochii subsp. *borealis*	6		2
Gilruthia osbornei			
Hakea minyma	1.5		0.5
Myriocephalus gueriniae			

Podolepis aristata subsp. *affinis*			
Roebuckiella cheilocarpa			
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEM24
Site Type:	RELEVE
Survey Date:	26/08/2024
GPS Location:	GDA94 Zone 50 446822.1E 6770974.7N
Landform Type:	Open Depression
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	Waterlogged
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	(other), Weeds
Fire:	10-20 Years
Habitat:	Low sparse chenopod shrubland over low forbland
Comments:	Similar to MLEM18, Nearby road

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	446822	6770975	
Corner 2	WGS84	446822	6770975	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Arctotheca calendula*			
Atriplex vesicaria	0.3		0.5
**Avena barbata*			
Cotula cotuloides			
Crassula colorata var. *acuminata*			
Dithyrostegia amplexicaulis			
Frankenia setosa			
Isolepis congrua			

**Juncus bufonius*			
**Lysimachia arvensis*			
Maireana atkinsiana	0.4		1
Maireana eriosphaera			
**Parapholis incurva*	0.1		0.1
**Rostraria pumila*			
Senecio glossanthus			
Senecio lacustrinus	0.2		0.2
Tecticornia disarticulata	0.5		10
Tecticornia peltata	0.5		2
Triglochin mucronata			

PHOTOS

Site Name:	MLEM27
Site Type:	RELEVE
Survey Date:	27/08/2024
GPS Location:	GDA94 Zone 50 442632.7E 6769894.8N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Light Clay
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Grazing, Weeds
Fire:	10-20 Years
Habitat:	Low woodland over tall isolated clumps of shrubs over low isolated clumps of shrubs over low forbland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	442633	6769895	
Corner 2	WGS84	442632	6769895	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		4
Acacia latior	3		1
**Arctotheca calendula*	0.1		0.2
Enchylaena lanata	0.3		0.3
Eucalyptus loxophleba subsp. *supralaevis*	7		18
Gilruthia osbornei	0.1		0.5
Maireana carnosa	0.1		0.2
Maireana tomentosa subsp. *tomentosa*	0.3		0.2

Ptilotus exaltatus	0.2		0.1
Ptilotus ?gaudichaudii	0.1		0.1
Ptilotus obovatus	0.4		1
Ptilotus polystachyus	0.2		0.2
Rhagodia drummondii	0.4		0.4
Rhodanthe chlorocephala subsp. *splendida*	0.1		0.1
Sclerolaena fusiformis	0.1		0.1
Stenopetalum filifolium	0.1		0.1

PHOTOS

Site Name:	MLEM28
Site Type:	RELEVE
Survey Date:	27/08/2024
GPS Location:	GDA94 Zone 50 442544.6E 6770086.6N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay
Soil Colour:	Red
Soil Condition:	Moist
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Disturbance:	Weeds, Grazing
Fire:	10-20 Years
Habitat:	Low isolated clumps of trees over tall open shrubland over low forbland

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	442545	6770087	
Corner 2	WGS84	442555	6770089	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	4		15
Acacia tetragonophylla	2.4		1
**Arctotheca calendula*	0.1		0.2
**Cleretum papulosum* subsp. *papulosum*			
Erodium cygnorum			
Eucalyptus kochii subsp. *borealis*	6		3
Gilruthia osbornei			
Hakea recurva subsp. *recurva*	2.3		1
Menkea australis			

Myriocephalus gueriniae			
Ptilotus polystachyus			
Rhagodia drummondii	0.7		0.5
Roebuckiella cheilocarpa			
Solanum lasiophyllum	0.5		0.2
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEM29
Site Type:	RELEVE
Survey Date:	27/08/2024
GPS Location:	GDA94 Zone 50 441563.6E 6770433.8N
Landform Type:	Flat
Slope Class:	Level (0°)
Aspect:	None
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Disturbance:	(other)
Fire:	10-20 Years
Habitat:	Tall shrubland over low forbland
Comments:	Nearby rail

SITE POINTS

Label	Datum	Easting	Northing	Comments
Corner 1	WGS84	441564	6770434	
Corner 2	WGS84	441563	6770433	
Corner 3	WGS84			
Corner 4	WGS84			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2.5		0.9
Acacia coolgardiensis	2		0.5
Acacia ramulosa var. *ramulosa*	3		45
Acacia tetragonophylla	2		1
Bellida graminea	0.1		1
Cheilanthes sieberi subsp. *sieberi*	0.1		0.1
Drosera eremaea			0.1
Erodium cygnorum	0.1		0.5

Gilruthia osbornei	0.1		0.5
Goodenia rosea	0.1		1.5
Hakea recurva subsp. *recurva*	2.4		1
Lomandra marginata	0.2		0.2
Melaleuca hamata	3		3
Myriocephalus gueriniae	0.1		2

PHOTOS

Site Name:	MLER-001
Site Type:	RELEVE
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490772.85E 6779492.57N
Landform Type:	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:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal
Fire:	> 20 years
Habitat:	Tall open shrubland to 4m of Melaleuca (<5%) over tall shrubland of Acacia species to 2 m at 30 %
Comments:	Lots of old, dead Acacia spp., and many dead annuals. Species depauperate. Same vegetation as MLEQ-002

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	2		20
Acacia sibina	2		10
Amphipogon caricinus var. *caricinus*	0.2		0.1
Dianella revoluta var. *divaricata*	0.5		0.1
Melaleuca hamata	4		5
Philotheca brucei subsp. *brucei*			

PHOTOS

Site Name: MLER-002

Site Type:	RELEVE
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490027.98E 6779366.09N
Landform Type:	Plain
Slope Class:	Gently Inclined (3°)
Aspect:	NNE
Soil Type:	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:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - Animal diggings, (other) - Drought
Fire:	> 20 years
Habitat:	Upper stratum isolated tall trees > 10 m at 1 %. Upper stratum tall shrubland, mixed Acacias 2-4 m at 10 %, LS1 Shrubland 1-2 m of mixed Acacias at 35%
Comments:	Numerous dead annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			25
Acacia sibina	2		1
Dianella revoluta var. *divaricata*	0.5		0.1
Eucalyptus arctata			
Eucalyptus kochii subsp. *amaryssia*			
Grevillea obliquistigma subsp. *obliquistigma*	2		2

PHOTOS

Site Name: MLER-003

Site Type:	RELEVE
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490186.46E 6779264.4N
Landform Type:	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:	10-20%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 3 - Very Good
Disturbance:	Road disturbance in distance (other)
Habitat:	Open shrubland to 3 m, 15 %

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	3		20
Acacia sibina	3		0.5
Acacia tetragonophylla	2		1
Calandrinia primuliflora			
Grevillea obliquistigma subsp. *obliquistigma*	1		0.5
Hakea recurva subsp. *recurva*	1.5		0.5
Melaleuca hamata	3		0.5

PHOTOS

Site Name: MLER-005

Site Type:	RELEVE
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 492531.56E 6779155.27N
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Soil Type:	Sandy Clay
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	0%
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - Animal diggings, (other) - Drought
Fire:	> 20 years
Habitat:	Isolated trees to 4 m over tall shrubland 2-3 m at 60 % cover
Comments:	Numerous dead daisies from last year, at road nearby Amyema sp. on Eucalyptus leptopoda. Upslope from quadrat MLEQ-006

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		2
Acacia latior	3		45
Acacia longispinea	3		
Acacia sibina	3		1
Eucalyptus kochii subsp. *amaryssia*	4		2
Melaleuca leiocarpa	2.5		5

PHOTOS

Site Name:	MLER-006
Site Type:	RELEVE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 494135.77E 6778996.66N
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	NW
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm, 6-20mm, 20-60mm
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal - Animal diggings, (other) - Track very close by
Fire:	> 20 years
Habitat:	Tall shrubland > 2 m at 30 %, low shrubland to 1 m at 40%

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		1
Acacia caesaneura	4		2
Acacia ramulosa var. *ramulosa*	2		15
Acacia sibina	2		2
Amphipogon caricinus var. *caricinus*	0.2		0.1
Calycopeplus paucifolius	3		2
Dianella revoluta var. *divaricata*	1		0.1
Eremophila clarkei	1.7		0.1
Eremophila forrestii subsp. *forrestii*	0.4		0.2
Eremophila latrobei subsp. *latrobei*	0.5		1
Hibbertia arcuata	0.7		0.1
Melaleuca nematophylla	2		0.1
Philotheca sericea	1		8
Prostanthera magnifica	1		0.1
Waitzia acuminata var. *acuminata*	0.5		0.1

PHOTOS

Site Name: MLER-007

Site Type:	RELEVE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 494155.36E 6779507.54N
Landform Type:	Plain
Slope Class:	Very Gently Inclined (1°)
Aspect:	W
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:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - Animal diggings, (other) - Major drought
Fire:	> 20 years
Habitat:	Tall shrubs to 4m at 30% over shrubs to 1m at 5% over scattered grasses
Comments:	Lots of old dead Acacia spp.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.5		1
Acacia latior	3		15
Acacia sibina	2		1
Amphipogon caricinus var. *caricinus*	0.3		0.5
Melaleuca hamata			
Philotheca deserti subsp. *deserti*	0.5		1

PHOTOS

Site Name: MLER-008

Site Type:	RELEVE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 496200.52E 6779393.17N
Landform Type:	Flat
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	2-10%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal - Animal diggings, (other) - Drought, road nearby
Fire:	> 20 years
Habitat:	Open Eucalyptus woodland over tall patchy shrubland to 3m over very sparse understorey

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	1.5		0.5
Acacia exocarpoides	1.5		4
Acacia obtecta	1.5		0.5
Acacia tetragonophylla	1		0.5
Comesperma integerrimum			0.1
Dianella revoluta var. *divaricata*	0.4		0.1
Eremophila clarkei	0.4		0.2
Eremophila oldfieldii subsp. *oldfieldii*	1.5		0.5
Eucalyptus kochii subsp. *amaryssia*	10		3
Eucalyptus loxophleba subsp. *supralaevis*	8		3
Exocarpos aphyllus	2.5		4
Hakea recurva subsp. *recurva*			
Maireana convexa			
Maireana trichoptera	0.1		0.1

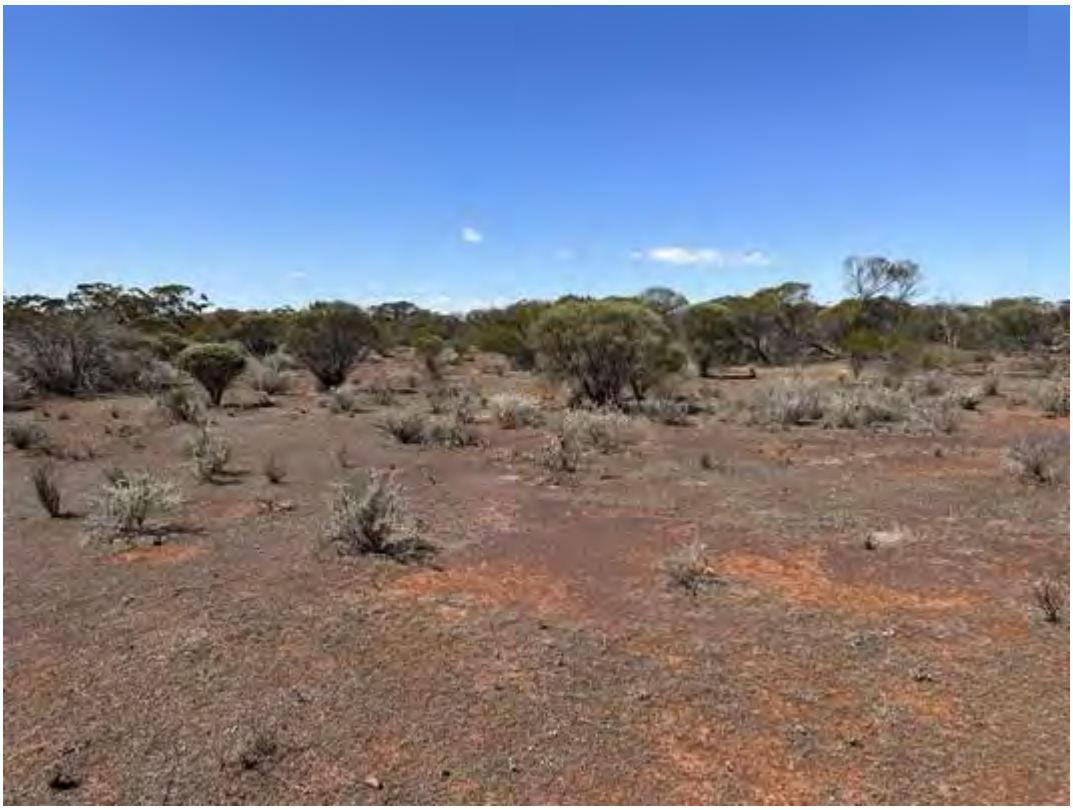
Monachather paradoxus	0.3		0.1
Pimelea microcephala subsp. *microcephala*	1		0.5
Ptilotus obovatus	0.4		0.5
Rhagodia drummondii	0.4		0.2
Sclerolaena fusiformis			
Senna artemisioides subsp. *filifolia*	1		0.5

Site Name:	MLER-009
Site Type:	RELEVE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495588.12E 6779218.79N
Landform Type:	Flat
Slope Class:	Level (0°)
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 2 - Excellent
Disturbance:	Animal - Rabbit activity, (other) - Drought
Comments:	Would have been many more species in a better year/season

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		0.5
Atriplex ?*vesicaria*	0.7		0.2
Cephalipterum drummondii	0.05		0.1
Eremophila pantonii	2		5
Maireana georgei	0.3		0.1
?*Maireana georgei*	0.1		0.1
Maireana trichoptera	0.15		0.2
Pimelea microcephala subsp. *microcephala*			
Ptilotus obovatus	0.4		3
Rhagodia drummondii	0.5		1
Senna charlesiana	1		0.5
Senna sp. Austin (A. Strid 20210)	0.5		1
Solanum lasiophyllum			

PHOTOS



Site Name:	MLER-010
Site Type:	RELEVE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495262.18E 6779505.17N
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	W
Soil Type:	Clay Loam
Soil Colour:	Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	50-90%
CF Sizes:	2-6mm, 6-20mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - Animal diggings, (other) - Drought
Fire:	> 20 years
Habitat:	Tall open shrubland 4m <10% over tall shrubland 2-4 m 30% over low shrubs to 1m 10%
Comments:	Numerous dead annuals and lots of dead Acacia spp.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		0.2
Acacia latior	3		5
Cephalipterum drummondii	0.1		0.1
Hakea invaginata	3		0.2
Hibbertia arcuata	1		1
Hibbertia stenophylla	0.4		1
Hysterobaeckea setifera subsp. *setifera*	3		3
Melaleuca hamata	4		1.5
Melaleuca nematophylla	2.5		2
Olearia pimeleoides	1.5		0.2
Philotheca sericea	1.5		20

PHOTOS

Site Name: MLER-011

Site Type:	RELEVE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495318.96E 6779365.48N
Landform Type:	Upper Slope
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Soil Condition:	Dry
Rock Outcrop:	No bedrock exposed
CF Abundance:	20-50%
CF Sizes:	2-6mm
CF Types:	Ironstone
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	Animal - Lots of rabbit diggings, (other) - Drought
Habitat:	Tall shrubland 3m 45% over very little understorey
Comments:	Lots of dead daisies

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		35
Allocasuarina acutivalvis subsp. *prinsepiana*	3		0.5
Eucalyptus loxophleba subsp. *supralaevis*			
Gastrolobium laytonii	1		0.1
Grevillea obliquistigma subsp. *obliquistigma*	2		4
Hibbertia arcuata	1		0.1
Melaleuca hamata	4		1
Melaleuca nematophylla	2		4
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name: MLER-012

Site Type:	RELEVE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 494733.96E 6779524.44N
Landform Type:	Simple Slope
Slope Class:	Gently Inclined (3°)
Aspect:	N
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
Vegetation Condition:	Southern Vegetation Condition - 1 - Pristine
Disturbance:	(other) - Drought
Habitat:	Shrubland 40% cover

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		1
Acacia latior	2		5
Acacia sibina	2		3
Calycopeplus paucifolius	2.5		1
Grevillea pityophylla	0.4		2
Hibbertia stenophylla	0.2		3
Hysterobaeckea setifera subsp. *setifera*	2		0.5
Melaleuca hamata			
Melaleuca nematophylla	2		3
Philotheca brucei subsp. *brucei*			
Philotheca sericea	1.5		3
Waitzia acuminata var. *acuminata*	0.1		0.1

PHOTOS

Site Name: RC 02

Site Type: AREA

Survey Date: 09/09/2008

GPS Location: GDA94 Zone 50 474055E 6772620N

Landform Type: Plain

Slope Class: flat

Soil Type: Clay loam

Soil Colour: Grey/Caramel

Fire: >5

Comments: Open shrubland over open low shrubland over herbs and annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii	0.5		3
Acacia aulacophylla	2		5
Acacia ?*ramulosa* var. *ramulosa*	3		4
Acacia tetragonophylla	2.5		6
Calandrinia sp.	0.1		0.1
Crassula colorata var. *acuminata*	0.05		0.1
Dichopogon ?*tyleri*	0.1		0.1
Dodonaea inaequifolia			
Eremophila clarkei	1		1
Eremophila latrobei subsp. *latrobei*	1		0.3
Erymophyllum glossanthus	0.1		3
Gilberta tenuifolia	0.1		0.1
Hakea recurva subsp. *arida*	0.4		0.3
Hyalosperma glutinosum subsp. ?*venustum*	0.1		0.1
Maireana carnosa	0.05		0.2
Maireana ?*georgei*	0.3		0.1
Minuria cunninghamii	0.2		0.1
Mirbelia bursarioides ms	1.5		0.5
Philotheca brucei subsp. *brucei*	1		0.3
Ptilotus ?*drummondii*	0.1		0.1
Ptilotus obovatus	0.3		0.1
Scaevola spinescens			
Senna sp. Austin (A. Strid 20210)	2.5		1
Solanum lasiophyllum	0.4		0.2

Wurmbea densiflora			

PHOTOS

Site Name: RC 03

Site Type: AREA

Survey Date: 09/09/2008

GPS Location: GDA94 Zone 50 473698E 6772602N

Landform Type: Plain

Slope Class: flat

Soil Type: Sand

Soil Colour: Red

Fire: >5

Comments: Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	4		25
Acacia tetragonophylla	4		8
Acacia umbraculiformis	6		2
Borya sphaerocephala	0.1		0.1
Caladenia remota			
Calotis multicaulis	0.1		0.2
Cephalipterum drummondii	0.1		0.1
**Cuscuta planiflora*	0.1		0.1
Dichopogon sp.	0.1		0.1
Dodonaea inaequifolia	0.5		0.3
Eremophila forrestii subsp. *forrestii*	1.5		1.5
Erodium cygnorum	0.1		0.1
Goodenia berardiana	0.1		0.1
Goodenia ?occidentalis	0.1		15
Lawrencella davenportii	0.1		0.1
Myriocephalus guerinae	0.2		0.3
Ptilotus obovatus	0.3		0.3
Rhodanthe chlorocephala subsp. *?splendida*	0.1		0.2
Solanum lasiophyllum	0.5		4
Swainsona affinis	0.1		0.1
Velleia rosea	0.1		0.2

PHOTOS

Site Name:	RC 05
Site Type:	AREA
Survey Date:	09/09/2008
GPS Location:	GDA94 Zone 50 471997E 6772606N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Sand
Soil Colour:	Red
Fire:	>5
Comments:	Acacia shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3.5		40
Acacia tetragonophylla	0.1		0.5
Angianthus ?milnei	0.05		0.1
Aristida contorta	0.2		10
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Calotis multicaulis	0.1		0.2
Cephalipterum drummondii	0.2		0.5
Chthonocephalus pseudevax	0.1		0.1
**Echium plantagineum*	0.5		0.3
Erodium cygnorum	0.1		0.2
Lawrencella davenportii	0.2		0.5
Monachather paradoxus	0.3		1.5
Myriocephalus guerinae	0.2		1
Podolepis canescens	0.2		0.1
Podolepis capillaris	0.2		0.2
Ptilotus obovatus	0.2		0.5
Rhodanthe chlorocephala subsp. *?splendida*	0.2		0.5
Solanum lasiophyllum	0.5		0.5
Velleia rosea	0.1		0.7

PHOTOS

Site Name:	RC 06
Site Type:	AREA
Survey Date:	09/09/2008
GPS Location:	GDA94 Zone 50 471070E 6772564N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Open woodland over acacia shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		3
Acacia ramulosa var. *ramulosa*	4		25
Acacia tetragonophylla	5		3
Brachyscome ?*oncocarpa*	0.1		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Cephalipterum drummondii	0.2		0.5
Cheilanthes adiantoides	0.1		0.1
Dianella revoluta	0.5		0.1
Drosera macrantha subsp. *eremaea*			0.1
Erodium cygnorum	0.1		0.1
Eucalyptus loxophleba subsp. *supralaevis*	6		9
Grevillea extorris	0.3		0.3
Hakea recurva subsp. *recurva*	4		5
Lawrencella davenportii	0.1		0.2
Maireana ?*georgei*	0.1		0.1
Minuria cunninghamii	0.4		0.2
Monachather paradoxus	0.2		0.1
Myriocephalus guerinae	0.2		0.1
Persoonia pentasticha (P3)			
Podolepis canescens	0.2		0.1
Ptilotus ?*drummondii*	0.2		0.2
Ptilotus obovatus	0.4		0.2
Schoenia cassiniana	0.2		0.2
Velleia rosea	0.1		0.1

Velleia rosea	0.1		0.1

PHOTOS

Site Name:	RC 07
Site Type:	AREA
Survey Date:	09/09/2008
GPS Location:	GDA94 Zone 50 470742E 6772535N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand with gravel
Soil Colour:	Red
Fire:	>5
Comments:	Acacia shrubland over low scrub, annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1		2
Acacia ?ramulosa var. *ramulosa*	3		3
Amphipogon sp.	0.2		0.2
Angianthus ?milnei	0.05		0.1
Austrostipa flavescens	0.2		0.1
Brachyscome ?oncocarpa	0.1		0.1
Cheilanthes adiantoides	0.1		0.1
Drosera macrantha subsp. *eremaea*			0.1
Eremophila clarkei	1		0.1
Grevillea extorris	0.5		3
Lepidosperma ?sp. Blue Hills (A. Markey & S. Dillon 3468)	0.3		0.2
Maireana carnosa	0.1		0.1
Melaleuca ?hamata	4		2.5
Monachather paradoxus	0.3		0.1
Myriocephalus guerinae	0.1		0.1
Ptilotus obovatus	0.4		0.2
Schoenia cassiniana	0.2		0.2
Velleia rosea	0.1		15
Wurmbea densiflora	0.1		0.2

PHOTOS

Site Name:	RC 08
Site Type:	AREA
Survey Date:	09/09/2008
GPS Location:	GDA94 Zone 50 470552E 6772549N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand with gravel
Soil Colour:	Red
Fire:	>5
Comments:	Acacia shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?ramulosa var. *ramulosa*	3.5		30
Acacia ramulosa var. *ramulosa*	4		2
Amphipogon ?caricinus	0.2		1
Bellida graminea	0.1		0.3
Brachyscome ?oncocarpa	0.4		0.4
Cheilanthes adiantoides	0.1		0.3
Cyanicula amplexans	0.1		0.1
Dianella revoluta	0.7		0.2
Drosera macrantha subsp. *eremaea*			0.2
Gilberta tenuifolia	0.1		0.1
Goodenia ?occidentalis	0.1		1
Hakea recurva subsp. *recurva*	1.5		0.5
Haloragis odontocarpa	0.3		0.3
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	0.5		4
Melaleuca ?hamata	5		3
Myriocephalus guerinae	0.2		0.4
Solanum lasiophyllum	0.5		0.2
Stylidium warriedarense	0.1		0.1
Velleia rosea	0.1		0.1

PHOTOS

Site Name:	RC 09
Site Type:	AREA
Survey Date:	09/09/2008
GPS Location:	GDA94 Zone 50 469993E 6772396N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Sand
Soil Colour:	Red
Fire:	>5
Comments:	E. kochii open woodland over Acacia shrubland over scrub, annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2.5		3
Acacia ramulosa var. *ramulosa*	5		20
Acacia tetragonophylla	2.5		0.5
Angianthus ?*milnei*	0.05		0.1
Bellida graminea	0.05		0.5
Cephalipterum drummondii	0.2		0.1
Cheilanthes adiantoides	0.1		0.1
Chthonocephalus pseudevax	0.05		0.1
Cryptandra imbricata	1.5		1
Erodium cygnorum	0.05		1
Eucalyptus kochii subsp. *plenissima*	7		9
Hakea recurva subsp. *recurva*	2.5		3
Hyalosperma glutinosum subsp. *glutinosum*	0.05		0.2
Lawrencella davenportii	0.2		0.1
Monachather paradoxus	0.3		0.2
Myriocephalus guerinae	0.2		1
Ptilotus obovatus	0.3		0.3
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		0.1

PHOTOS

Site Name: RC 10

Site Type: AREA

Survey Date: 09/09/2008

GPS Location: GDA94 Zone 50 468912E 6772081N

Landform Type: Plain

Slope Class: flat

Soil Type: Clayey sand

Soil Colour: Red

Fire: >5

Comments: Acacia shrubland over mixed scrub over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2.5		3
Acacia ?*ramulosa* var. *ramulosa*	4		15
Acacia umbraculiformis	5		2
Amphipogon sp.	0.2		0.3
Angianthus ?*milnei*	0.1		0.1
Aristida contorta	0.2		0.1
Borya sphaerocephala	0.1		0.3
Cephalipterum drummondii	0.2		0.3
Cheilanthes adiantoides	0.1		0.2
Eremophila clarkei	1		1
Erodium cygnorum	0.1		0.5
Goodenia ?*occidentalis*	0.1		0.3
Lawrencella davenportii	0.2		0.3
Minuria cunninghamii	0.2		0.1
Mirbelia bursarioides ms	0.4		0.3
Myriocephalus guerinae	0.2		0.5
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		0.2
Schoenia cassiniana	0.2		0.1
Solanum lasiophyllum	0.5		0.2
Thryptomene costata	2		5
Velleia rosea	0.1		35

PHOTOS

Site Name:	RC 11
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 467083E 6771744N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Acacia shrubland over Malleostemon tuberculatus shrubland over herbs and annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		2
Acacia burkittii	4		5
Acacia ?*ramulosa* var. *ramulosa*	4.5		6
Acacia sibina	4		12
Aluta aspera subsp. *hesperia*	2		5
Amphipogon ?*caricinus*	0.2		0.3
Bellida graminea	0.1		0.5
Brunonia australis	0.2		3
Cheilanthes adiantoides	0.1		0.2
**Cuscuta planiflora*	0.1		0.1
Dichopogon sp.	0.2		0.1
Drosera macrantha subsp. *eremaea*			0.4
Gilberta tenuifolia	0.1		1
Goodenia ?*occidentalis*	0.1		0.2
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		1.5
Malleostemon tuberculatus	2		13
Melaleuca ?*hamata*	3.5		2
Mirbelia bursarioides ms	0.4		0.3
Schoenia cassiniana	0.1		0.3

PHOTOS

Site Name:	RC 12
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 457391E 6772005N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Open woodland over shrubland of mixed Acacia & Callitris

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		2
Acacia ramulosa var. *ramulosa*	4		20
Allocasuarina acutivalvis	33		1
Alyxia buxifolia	0.3		0.1
Amphipogon sp.	0.2		0.3
Angianthus ?*milnei*	0.1		0.2
Bellida graminea	0.1		0.2
Callitris columellaris	5		10
Cheilanthes adiantoides	0.1		0.2
Dichopogon sp.	0.2		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus horistes	6		4
Hakea recurva subsp. *recurva*	2		1.5
Hemigenia sp. Jibberding (J. D'Alonzo 418)	0.5		0.3
Hyalosperma glutinosum subsp. ?*venustum*	0.2		0.1
Minuria cunninghamii	0.3		0.1
Monachather paradoxus	0.2		0.2
Myriocephalus guerinae	0.2		0.1
Philotheca brucei subsp. *brucei*	0.5		0.3
Pimelea spiculigera var. *thesioides*	0.3		0.2
Ptilotus obovatus	0.3		1
Scaevola spinescens	0.3		0.3
Schoenia cassiniana	0.2		0.1
Senna charlesiana	1.8		1.5

Trachymene ornata	0.1		0.1
Velleia rosea	0.1		0.2

Site Name:	RC 13
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 464479E 6771900N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Orange
Fire:	>5
Comments:	Mixed Acacia - Melaleuca shrubland over scrub (unburnt pocket in burnt area)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		1
Acacia ?*ramulosa* var. *ramulosa*	4		20
Acacia sibina	4		4
Amphipogon sp.	0.2		0.3
Bellida graminea	0.1		0.1
Brunonia australis	0.2		0.3
Cheilanthes adiantoides	0.1		0.1
Drosera macrantha subsp. *eremaea*			0.2
Ecdeiocolea monostachya	0.5		6
Gilberta tenuifolia	0.1		0.1
Goodenia ?*occidentalis*	0.1		0.1
Hibbertia stenophylla	0.3		0.2
Homalocalyx thryptomenoides	0.4		2
Melaleuca ?*hamata*	3		8
Phebalium lepidotum	0.7		0.5
Philotheca glabra	0.5		1.5
Wrixonia prostantheroides	0.2		2

PHOTOS

Site Name:	RC 14
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 453810E 6772091N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Mixed shrubland dominated by Acacia ram ram (T1 like)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		5
Acacia ?*ramulosa* var. *ramulosa*	4		15
Acacia tetragonophylla	3		3
Amphipogon sp.	0.2		0.4
Bellida graminea	0.1		0.2
Brunonia australis	0.2		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Calothamnus gilesii	2		1
Calotis multicaulis	0.1		0.1
Comesperma integerrimum			0.1
Dichopogon sp.	0.3		0.2
Eremophila forrestii subsp. *forrestii*	1.5		1
Goodenia ?*occidentalis*	0.1		0.1
Hakea recurva subsp. *recurva*	3		3
Lawrencella davenportii	0.1		0.1
Melaleuca stereophloia	3		2
Myriocephalus guerinae	0.2		0.3
Ptilotus ?*drummondii*	0.1		0.1
Ptilotus obovatus	0.3		0.4
Solanum lasiophyllum	0.4		0.2
Velleia rosea	0.1		1

PHOTOS

Site Name:	RC 15
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 452656E 6772101N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red-orange
Fire:	>5
Comments:	Mixed Acacia shrubland over herbs and annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	3.5		60
Acacia sibina	4		5
Amphipogon sp.	0.2		0.2
Bellida graminea	0.1		0.3
Brachyscome ?*oncocarpa*	0.1		0.2
Cheilanthes adiantoides	0.1		0.1
Drosera macrantha subsp. *eremaea*			0.1
Erodium cygnorum	0.1		0.1
Goodenia ?*occidentalis*	0.1		0.1
Monachather paradoxus	0.2		0.2
Myriocephalus guerinae	0.2		0.1
Trachymene ornata	0.1		0.1

PHOTOS

Site Name:	RC 16
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 450396E 6772008N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red-orange
Fire:	>5
Comments:	Euc kochii plenissima woodland over mixed shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?ramulosa var. *ramulosa*	4		18
Acacia tetragonophylla	2		1
Angianthus ?milnei	0.1		0.1
Angianthus sp.	0.1		0.1
Aristida contorta	0.2		0.1
Bellida graminea	0.1		0.2
Brachyscome ?oncocarpa	0.1		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Chthonocephalus pseudevax	0.1		0.1
Crassula colorata var. *acuminata*	0.1		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus kochii subsp. *plenissima*	10		12
Hakea recurva subsp. *recurva*	2		2
Maireana ?georgei	0.2		0.3
Minuria cunninghamii	0.3		0.2
Olearia pimeleoides	0.5		0.3
Ptilotus ?drummondii	0.2		0.2
Ptilotus obovatus	0.3		0.4
Ptilotus polystachyus	0.3		0.3
Velleia ?glabrata	0.2		0.2

PHOTOS

Site Name:	RC 17
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 449858E 6771705N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	E. loxo supra Woodland over mixed Acacia shrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		2
Acacia ramulosa var. *ramulosa*	4		15
Acacia tetragonophylla	4		5
Brachyscome ?*oncocarpa*	0.1		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Cephalipterum drummondii	0.2		0.1
Cheilanthes adiantoides	0.1		0.1
Dianella revoluta	0.4		0.2
Eucalyptus loxophleba subsp. *supralaevis*	12		10
Goodenia berardiana	0.1		0.1
Hakea recurva subsp. *recurva*	3		1
Ptilotus ?*drummondii*	0.3		0.2
Ptilotus obovatus	0.3		2
Sclerolaena ?*gardneri*	0.1		0.1
Sida sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1
Solanum lasiophyllum	0.3		0.1
Velleia ?*glabrata*	0.1		0.3
Velleia rosea	0.1		0.1

PHOTOS

Site Name:	RC 18
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 449253E 6771230N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	A. ram ram shrubland over low scrub, annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	2		2
Acacia ramulosa var. *ramulosa*	5		35
Acacia tetragonophylla	2		1
Aristida contorta	0.1		0.1
Brachyscome ?*oncocarpa*	0.1		1
Brunonia australis	0.2		2.5
Cephalipterum drummondii	0.1		0.2
Chthonocephalus pseudevax	0.1		0.1
Erodium cygnorum	0.1		0.1
Euphorbia drummondii	0.1		0.1
Lawrencella davenportii	0.2		8
Monachather paradoxus	0.3		0.2
Myriocephalus guerinae	0.2		1
Podolepis canescens	0.2		1
Podotheca gnaphalioides	0.1		6
Ptilotus ?*drummondii*	0.2		0.2
Ptilotus obovatus	0.5		1
Ptilotus polystachyus	0.3		0.3
Rhagodia drummondii	0.5		2.5
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		0.5
Rhodanthe maryonii	0.2		1
Solanum lasiophyllum	0.5		1
Solanum nummularium	0.4		0.3
Velleia rosea	0.1		2

PHOTOS

Site Name:	RC 19
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 448843E 6771410N
Landform Type:	Plain/drainage basin
Slope Class:	flat
Soil Type:	Loamy silty sand
Soil Colour:	Brown/grey
Fire:	>10
Comments:	Melaleuca woodland over low scrub over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aristida contorta	0.2		0.1
Austrostipa trichophylla	0.2		0.1
Brachyscome ?*oncocarpa*	0.1		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Enchylaena tomentosa	0.4		1
Exocarpos aphyllus	4		3
Maireana carnosa	0.2		0.4
Maireana tomentosa subsp. *tomentosa*	0.4		0.3
Melaleuca lateriflora subsp. *acutifolia*	6		25
Ptilotus ?*drummondii*	0.2		0.1
Ptilotus obovatus	0.3		2
Ptilotus polystachyus	0.3		0.1
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		2
Rhodanthe stricta	0.2		0.1
Schoenia filifolia subsp. *filifolia*	0.1		6
Sclerolaena ?*gardneri*	0.2		0.2
Velleia rosea	0.1		0.1
Wahlenbergia ?*preissii*	0.1		0.1

Site Name:	RC 20
Site Type:	AREA
Survey Date:	10/09/2008
GPS Location:	GDA94 Zone 50 448817E 6771199N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Mixed Acacia shrubland over scrub over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		15
Acacia ramulosa var. *ramulosa*	4		6
Acacia tetragonophylla	2		3
Acacia tysonii	3		7
Austrostipa trichophylla	0.2		0.1
Comesperma integerrimum			0.3
Dichopogon sp.	0.2		0.1
Dodonaea viscosa subsp. *angustissima*	1		0.5
Eremophila oldfieldii subsp. *oldfieldii*	3		1
Euphorbia drummondii	0.1		0.1
Maireana ?georgei	0.2		0.1
Maireana thesioides	0.5		0.2
Monachather paradoxus	0.3		0.3
Ptilotus obovatus	0.3		1
Ptilotus polystachyus	0.4		0.2
Rhodanthe chlorocephala subsp. *?splendida*	0.2		0.2
Rhodanthe maryonii	0.1		0.1
Santalum spicatum	3		1
Sclerolaena ?gardneri	0.1		4
Solanum lasiophyllum	0.3		0.2
Velleia ?glabrata	0.1		0.1

PHOTOS

Site Name:	RC 21
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 448404E 6771203N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Loamy sand
Soil Colour:	Red
Fire:	>5
Comments:	Mixed Acacia shrubland over low scrub , annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	5		21
Acacia ramulosa var. *ramulosa*	6		2
Acacia tetragonophylla	2.5		4
Aristida contorta	0.2		0.1
Calandrinia sp. Blackberry (D.M. Porter 171)	0.1		0.1
Chthonocephalus pseudevax	0.05		0.1
Eremophila eriocalyx	1		0.3
Goodenia ?occidentalis	0.1		0.1
Maireana carnosa	0.1		0.1
Pogonolepis muelleriana	0.05		0.3
Ptilotus obovatus	0.2		0.2
Rhagodia drummondii	0.7		1
Rhodanthe chlorocephala subsp. *?splendida*	0.1		0.1
Rhodanthe maryonii	0.1		0.3
Scaevola spinescens	1		1
Schoenia cassiniana	0.1		0.1
Schoenia filifolia subsp. *filifolia*	0.1		0.1
Sclerolaena ?gardneri	0.1		0.2
Solanum lasiophyllum	0.3		0.3
Solanum nummularium	0.3		0.2
Trachymene ornata	0.1		0.1
Velleia ?glabrata	0.2		0.1

PHOTOS

Site Name:	RC 22
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 447672E 6771343N
Landform Type:	Salt pan
Slope Class:	flat
Soil Type:	Salty clayey sand
Soil Colour:	Orange
Fire:	>5
Comments:	Sclerostegia scrub land

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex ?bunburyana	0.6		3
Atriplex lindleyi subsp. *inflata*	0.2		0.1
Brachyscome ciliaris	0.1		0.1
Brachyscome ?pusilla	0.1		0.3
Calandrinia eremaea	0.4		0.1
Carpobrotus modestus	0.1		0.1
Didymanthus roei	0.2		4
Eragrostis dielsii	0.1		0.2
Frankenia ?pauciflora	0.3		0.1
Gnephosis acicularis	0.1		0.1
Gunniopsis ?rodwayi	0.2		0.1
Hyalochlamys globifera	0.1		0.1
Lawrencia squamata	0.3		1
Maireana atkinsiana	0.4		9
Maireana carnosa	0.2		1.5
Maireana tomentosa subsp. *tomentosa*	0.2		0.2
Nicotiana occidentalis subsp. *hesperis*	0.4		0.1
Ptilotus chamaecladus	0.1		0.1
Ptilotus polystachyus	0.3		0.1
Rhodanthe chlorocephala subsp. *?splendida*	0.2		0.1
Rhodanthe maryonii	0.1		0.2
Sclerolaena eurotioides	0.3		2
Senecio glossanthus	0.4		0.1
Senecio ?lacustrinus	0.3		0.2

Stenopetalum sphaerocarpum	0.3		0.1
Tecticornia indica subsp. *bidens*	0.4		35

PHOTOS

Site Name:	RC 23
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 447117E 6771139N
Landform Type:	Salt pan
Slope Class:	flat
Soil Type:	Salty clayey sand
Soil Colour:	Grey-white
Fire:	>5
Comments:	Sclerostegia/Tecticornia scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
?*Angianthus* sp.	0.1		1.5
Aristida contorta	0.1		0.1
Atriplex holocarpa	0.2		1
Atriplex hymenotheca	0.2		1
Atriplex lindleyi subsp. *inflata*	0.2		0.1
Calandrinia eremaea			
Calandrinia granulifera			
Didymanthus roei	0.2		0.3
Eragrostis dielsii	0.1		30
Gnephosis acicularis	0.1		0.1
Gunniopsis ?rodwayi	0.4		0.2
Gunniopsis ?septifraga			
Hyalosperma glutinosum subsp. ?*venustum*	0.4		1
Lawrencia squamata	0.3		0.2
Ptilotus chamaecladus	0.1		0.2
Rhodanthe maryonii	0.1		0.1
Tecticornia disarticulata	0.4		1
Tecticornia ?halocnemoides	0.4		4
Tecticornia peltata	0.4		25

PHOTOS

Site Name:	RC 24
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 445652E 6770943N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Sand
Soil Colour:	Red
Fire:	>5
Comments:	Mixed acacia shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	5		0.3
Acacia ramulosa var. *ramulosa*	6		3
Acacia ?resinosa	5		20
Bellida graminea	0.1		0.5
Brachyscome ?oncocarpa	0.1		3
Brunonia australis	0.2		0.1
Drosera macrantha subsp. *eremaea*			0.1
Erodium cygnorum	0.1		0.1
Grevillea obliquistigma subsp. *obliquistigma*	5		10
Haloragis odontocarpa	0.2		60
Myriocephalus guerinae	0.2		5
Podolepis canescens	0.2		0.5
Trachymene ornata	0.1		0.1
Velleia ?glabrata	0.2		0.5
Velleia rosea	0.1		20

PHOTOS

Site Name:	RC 25
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 444552E 6770694N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Acacia - melaleuca Shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	2		2
Acacia ?resinosa	5		12
Cheilanthes adiantoides	0.1		0.1
Erodium cygnorum	0.1		20
Grevillea obliquistigma subsp. *obliquistigma*	5		6
Lawrencella davenportii	0.2		0.2
Melaleuca ?hamata	6		12
Monachather paradoxus	0.3		0.3
Myriocephalus guerinae	0.2		2
Velleia ?glabrata	0.1		0.3
Waitzia acuminata	0.1		0.1

PHOTOS

Site Name:	RC 26
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 443649E 6770444N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Mixed Acacia shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	6		8
Acacia ?*resinosa*	5		17
Amphipogon sp.	0.2		1
?*Angianthus* sp.	0.1		0.1
Brachyscome ?*oncocarpa*	0.1		1
Cheilanthes adiantoides	0.1		0.1
Erodium cygnorum	0.1		4
Grevillea obliquistigma subsp. *obliquistigma*	5		4
Lawrencella davenportii	0.1		0.3
Myriocephalus guerinae	0.2		6
Pogonolepis muelleriana	0.1		1
Velleia ?*glabrata*	0.1		1

PHOTOS

Site Name:	RC 27
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 440156E 6770392N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand with gravel
Soil Colour:	Orange
Fire:	>5
Comments:	Acacia - melaleuca shrubland over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?coolgardiensis	4		30
Acacia ?resinosa	5		1
Brachyscome ?oncocarpa	0.1		2
Dichopogon sp.	0.3		2
Drosera macrantha subsp. *eremaea*			0.2
Erodium cygnorum	0.1		1
Maireana ?georgei	0.3		0.8
Melaleuca ?hamata	6		15
Myriocephalus guerinae	0.2		0.3
Pogonolepis muelleriana	0.1		1
Rhodanthe maryonii	0.1		0.1

PHOTOS

Site Name:	RC 28
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 434893E 6770408N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand with ironstone gravel
Soil Colour:	Red
Fire:	>5
Comments:	Open Low woodland of E. ewartiana over A ram ram thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	4		28
Acacia ?resinosa	2		3
Acacia tetragonophylla	3		1.5
Brachyscome ?oncocarpa	0.1		0.1
Chamaexeros macranthera	0.2		0.4
Dichopogon sp.	0.2		0.1
Erodium cygnorum	0.1		0.1
Eucalyptus ewartiana	5		4
Hakea recurva subsp. *recurva*	4		2
Melaleuca ?hamata	5		2
Melaleuca stereophloia	3		2
Minuria cunninghamii	0.4		0.3
Monachather paradoxus	0.2		0.1
Myriocephalus guerinae	0.2		0.1
Pogonolepis muelleriana	0.1		0.1
Rhodanthe maryonii	0.1		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1

PHOTOS

Site Name:	RC 29
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 434444E 6770402N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand with ironstone gravel
Soil Colour:	Red
Fire:	>5
Comments:	Acacia-melaleuca shrubland over scrub over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	5		7
Acacia ?coolgardiensis	3		3
Acacia ramulosa var. *ramulosa*	4		3
Acacia ?resinosa	4		8
Aluta aspera subsp. *hesperia*	1.5		6
Amphipogon sp.	0.3		0.3
Brachyscome ?oncocarpa	0.1		0.1
Caesia ?sp. Wongan (K.F. Kenneally 8820)	0.2		0.1
Dichopogon sp.	0.2		0.2
Erodium cygnorum	0.1		0.3
Malleostemon tuberculatus	2		1
Melaleuca ?hamata	5		3
Myriocephalus guerinae	0.2		2
Pogonolepis muelleriana	0.1		0.2
Velleia ?glabrata	0.1		0.2
Velleia rosea	0.1		15
Waitzia acuminata	0.1		0.1

PHOTOS

Site Name:	RC 30
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 433507E 6770360N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Acacia, Melaleuca, Allo thicket over scrub over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	5		7
Acacia ?resinosa	5		13
Acacia stereophylla var. *stereophylla*	5		4
Allocasuarina acutivalvis subsp. *prinsepiana*	5		16
Amphipogon sp.	0.2		0.1
Bellida graminea	0.1		2
Brachyscome ?oncocarpa	0.1		2
Calandrinia eremaea	0.1		0.1
Cheilanthes adiantoides	0.1		0.1
Daviesia hakeoides subsp. *hakeoides*	3		3
Dianella revoluta	1.5		1
Dichopogon sp.	0.2		0.5
Drosera macrantha subsp. *eremaea*			0.2
Erodium cygnorum	0.1		0.1
Goodenia berardiana	0.2		2
Grevillea paradoxa	2.5		2
Haloragis odontocarpa	0.2		2
Melaleuca ?hamata	8		7
Myriocephalus guerinae	0.2		3
Podolepis canescens	0.2		2
Rhodanthe maryonii	0.1		10
Solanum lasiophyllum	0.2		0.1
Thysanotus manglesianus			0.1
Trachymene ornata	0.1		0.1

Velleia ?glabrata	0.1		0.1
Velleia rosea	0.1		40

PHOTOS

Site Name:	RC 31
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 431938E 6770416N
Landform Type:	Drainage line
Slope Class:	flat
Soil Type:	Clayey sand (very moist)
Soil Colour:	Red
Fire:	>5
Comments:	Mixed acacia shrubland over weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	6		8
Acacia ramulosa var. *ramulosa*	4		35
Acacia tetragonophylla	5		20
**Arctotheca calendula*	0.3		90
**Echium plantagineum*	0.3		0.3
Erodium cygnorum	0.4		10
Hakea recurva subsp. *recurva*	3		1
Haloragis odontocarpa	0.4		15
**Lolium rigidum*	0.4		8
**Medicago polymorpha*	0.2		10
**Raphanus raphanistrum*	0.4		3
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		0.1
Schoenia cassiniana	0.2		0.1

PHOTOS

Site Name:	RC 32
Site Type:	AREA
Survey Date:	11/09/2008
GPS Location:	GDA94 Zone 50 431656E 6770396N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	Clayey sand
Soil Colour:	Red
Fire:	>5
Comments:	Open E. kochii plen woodland over Aca ram ram over annuals and herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*	5		30
?*Angianthus* sp.	0.1		1
Brachyscome ?*oncocarpa*	0.1		1
Drosera macrantha subsp. *eremaea*			0.2
Eucalyptus kochii subsp. *plenissima*	8		9
Goodenia berardiana	0.2		2
Grevillea obliquistigma subsp. *obliquistigma*	3		2
Hakea recurva subsp. *recurva*	2		1
Pogonolepis muelleriana	0.1		0.3
Rhodanthe chlorocephala subsp. ?*splendida*	0.2		0.2
Schoenia cassiniana	0.2		0.3
Velleia rosea	0.1		1

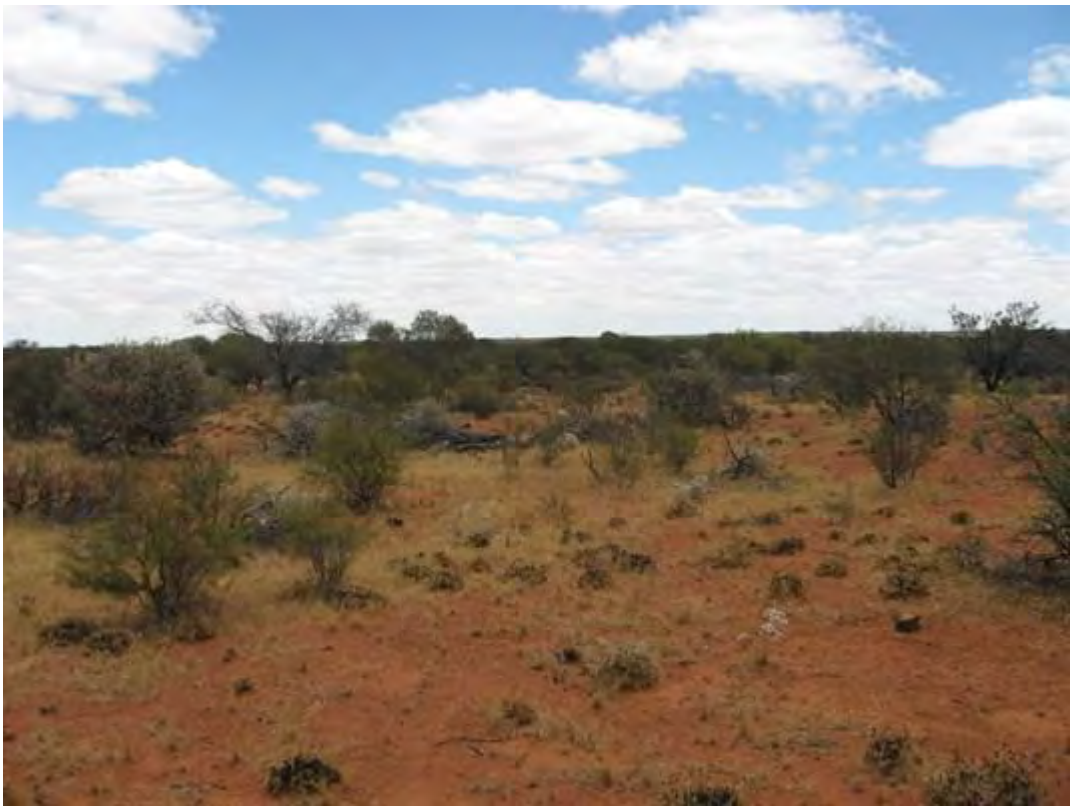
PHOTOS

Site Name:	RC 50
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 473848E 6772005N
Landform Type:	mid-upperslope
Slope Class:	gentle
Soil Type:	silty clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Open Mixed Acacia scrubland over dwarf open scrubland over grasses/herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	1.5		1
Acacia kochii	1.5		0.5
Acacia ramulosa var. *ramulosa*	3		3
Acacia tetragonophylla	3		2
Acacia umbraculiformis	6		1
Aristida contorta	0.1		20
Borya sphaerocephala	0.1		1.5
Eremophila forrestii subsp. *forrestii*	2.5		2
Grevillea levis	0.5		2
Hakea recurva subsp. *recurva*	4		2
Mirbelia microphylla	0.4		0.2
Ptilotus obovatus	0.5		1
Solanum lasiophyllum	1		0.5

PHOTOS



Site Name:	RC 51
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 473506E 6771796N
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red
Fire:	>5
Comments:	Mixed Acacia Scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		3
Acacia ramulosa var. *ramulosa*	5		15
Acacia tetragonophylla	3		3
Amyema gibberula			0.2
Cryptandra imbricata	2		0.2
Eremophila forrestii subsp. *forrestii*	1		0.2
Hakea recurva subsp. *recurva*	4		5
Monachather paradoxus	0.4		0.5
Persoonia manotricha	2		0.2
Ptilotus obovatus	0.5		0.2
Rhagodia drummondii	0.5		0.1
Santalum acuminatum	4		0.5

PHOTOS

Site Name: RC 52

Site Type: AREA

Survey Date: 09/12/2008

GPS Location: GDA94 Zone 50 473553E 6771463N

Landform Type: Plain

Slope Class: flat

Soil Type: silty clay loam

Soil Colour: Brown

Fire: >5

Comments: Aca ram Scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		1
Acacia ramulosa var. *ramulosa*	4		30
Acacia tetragonophylla	3		3
Austrostipa elegantissima	1		0.2
Eremophila clarkei	1.5		0.5
Grevillea extorris	1		2
Monachather paradoxus	0.4		0.2
Philotheca brucei subsp. *brucei*	1		0.5
Ptilotus obovatus	0.3		0.1

PHOTOS

Site Name:	RC 53
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 473765E 6771412N
Landform Type:	small knoll
Slope Class:	gentle
Soil Type:	Decomposing granite
Soil Colour:	caramel/brown
Fire:	>5
Comments:	V Open Scrubland of Acacia over open dwarf scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla	3		3
**Aira caryophyllea*	0.1		0.1
Allocasuarina acutivalvis subsp. *prinsepiana*	4		
Astroloma serratifolium	0.2		0.1
Austrostipa elegantissima	0.5		0.1
Borya sphaerocephala	0.2		0.5
Calytrix ?oldfieldii	0.3		0.2
Hakea recurva subsp. *recurva*	1.5		0.5
Melaleuca nematophylla	0.5		0.2
Petrophile pauciflora (P3)	1		3
Prostanthera patens	0.5		0.5
Thryptomene costata	2		

PHOTOS

Site Name:	RC 54
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 473750E 6771265N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	silty clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Aca umbr and Aca ram over Thry costata (T3)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		2
Acacia ramulosa var. *ramulosa*	3		1
Acacia tetragonophylla	3		0.5
Acacia umbraculiformis	5		5
Aluta aspera subsp. *hesperia*	2		4
Amphipogon caricinus var. *caricinus*	0.3		0.5
Calycopeplus paucifolius	3		2
Eremophila eriocalyx	1.5		0.2
Grevillea extorris	0.5		0.5
Grevillea obliquistigma subsp. *obliquistigma*	4		1
Hibbertia arcuata	1		0.5
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.2
Mirbelia bursarioides ms	1		0.2
Persoonia manotricha	4		0.2
Philotheca brucei subsp. *brucei*	1.5		0.5
Thryptomene costata	2		4

PHOTOS

Site Name:	RC 55
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 474105E 6771079N
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Acacia Scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	4		4
Acacia ramulosa var. *ramulosa*	4		7
Acacia tetragonophylla	4		4
Amphipogon caricinus var. *caricinus*	0.3		0.2
Borya sphaerocephala	0.2		0.5
Eremophila eriocalyx	1.5		0.1
Grevillea extorris	1		3
Melaleuca eleuterostachya	6		
Mirbelia bursarioides ms	1		0.2
Prostanthera althoferi subsp. *althoferi*	1.5		

PHOTOS

Site Name:	RC 56
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 472791E 6771860N
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red
Fire:	>5
Comments:	Open scrubland of Aca ram ram

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		3
Acacia ramulosa var. *ramulosa*	3		5
Amphipogon caricinus var. *caricinus*	0.3		0.1
Aristida contorta	0.1		50
Austrostipa elegantissima	1		0.2
Calandrinia primuliflora	0.1		0.1
Eremophila clarkei	2		0.2
Grevillea extorris	1		0.2
Maireana carnosa	0.1		0.1
Ptilotus obovatus	0.5		0.2
Solanum lasiophyllum	1		0.2

PHOTOS

Site Name:	RC 57
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 472800E 6772180N
Landform Type:	upslope
Slope Class:	gentle
Soil Type:	Decomposing granite
Soil Colour:	Red/brown
Fire:	>5
Comments:	Tall Open Scrubland over open scrubland over grasses/herbs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia kochii	1.5		0.2
Acacia ramulosa var. *ramulosa*	4		3
Acacia tetragonophylla	3		2
Acacia umbraculiformis	8		3
Aristida contorta	0.2		20
Grevillea levis	2		3
Hakea recurva subsp. *recurva*	3		0.5
Ptilotus obovatus	0.5		4
Rhagodia drummondii	1.5		0.5
Senna charlesiana	1.5		0.2
Solanum lasiophyllum	1		2

PHOTOS

Site Name:	RC 58
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 462742E 6771487N
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red
Fire:	>5
Comments:	Open low woodland Euc lox supra over open scrubland mixed over chenopods (W1)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	3		2
Eremophila oppositifolia subsp. *angustifolia*	4		2
Eucalyptus loxophleba subsp. *supralaevis*	10		7
Exocarpos aphyllus	5		0.5
Maireana carnosa	0.1		50
**Mesembryanthemum nodiflorum*	0.2		5
Ptilotus exaltatus	0.3		0.1
Ptilotus obovatus	0.3		0.1
Rhagodia drummondii	0.5		0.5
Sclerolaena diacantha	0.2		0.2
Sclerolaena fusiformis	0.1		0.2
Senna artemisioides subsp. *filifolia*	0.4		0.1

PHOTOS

Site Name:	RC 59
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 462764E 6771103N
Landform Type:	Plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Mixed Acacia scrubland over dwarf scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		20
Acacia sibina	5		10
Allocasuarina acutivalvis subsp. *prinsepiana*	4		0.5
Aluta aspera subsp. *hesperia*	2		15
Amphipogon caricinus var. *caricinus*	0.3		0.1
Baeckea benthamii ms	2		0.5
Enekbatus stowardii	0.5		0.1
Hakea recurva subsp. *recurva*	3		1
Hibbertia stenophylla	0.5		0.2
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Malleostemon tuberculatus	1.5		0.5
Philotheca deserti	1.5		4

PHOTOS

Site Name:	RC 60
Site Type:	AREA
Survey Date:	09/12/2008
GPS Location:	GDA94 Zone 50 462771E 6770870N
Landform Type:	plain
Slope Class:	flat
Soil Type:	silty clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Mixed Scrubland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior	3		25
Acacia sibina	4		2
Amphipogon caricinus var. *caricinus*	0.3		2
Borya sphaerocephala	0.1		0.1
Ecdeiocolea monostachya	1		3
Enekbatus stowardii	0.5		0.1
Hibbertia stenophylla	0.5		0.1
Leucopogon sp. Clyde Hill (M.A. Burgman 1207)	1		0.5
Malleostemon tuberculatus	1		0.2
Melaleuca hamata	3		5
Monachather paradoxus	0.2		0.4
Philotheca deserti	0.5		1.5

PHOTOS

Site Name:	RC 62
Site Type:	AREA
Survey Date:	10/12/2008
GPS Location:	GDA94 Zone 50 443177E 6769535N
Landform Type:	lowerslope
Slope Class:	gentle
Soil Type:	silty clay loam
Soil Colour:	Red
Fire:	>5
Comments:	Mixed Acacia shrubland/thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		0.5
Acacia coolgardiensis	3		35
Acacia ramulosa var. *ramulosa*	3		2
Allocasuarina acutivalvis subsp. *prinsepiana*	4		1
Aluta aspera subsp. *hesperia*	1		0.1
Calothamnus gilesii	2		0.2
Calycopeplus paucifolius	2		0.5
Daviesia hakeoides	1.5		0.5
Dianella revoluta	0.5		0.1
Grevillea obliquistigma subsp. *obliquistigma*	2.5		1
Hakea recurva subsp. *recurva*	0.5		0.1
Philotheca brucei subsp. *brucei*	0.5		0.1

PHOTOS

Site Name:	RC 63
Site Type:	AREA
Survey Date:	10/12/2008
GPS Location:	GDA94 Zone 50 443255E 6769728N
Landform Type:	Lowerslope - midslope
Slope Class:	gentle
Soil Type:	silty clay loam
Soil Colour:	Red
Fire:	>5
Comments:	Acacia ?coolgardiensis thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia coolgardiensis	5		40
Acacia ramulosa var. *ramulosa*			
Allocasuarina acutivalvis subsp. *prinsepiana*	4		1
Aluta aspera subsp. *hesperia*	2		2
Eremophila clarkei	1.5		0.2

PHOTOS

Site Name:	SLU01
Site Type:	AREA
Survey Date:	21/05/2007
GPS Location:	GDA94 Zone 50 433373E 6762525N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy gravel
Soil Colour:	Red/brown
Fire:	>10
Comments:	Degraded woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		0.2
Acacia ?*andrewsii*	1		0.3
Acacia anthochaera	1		0.1
Acacia ?*ramulosa* var. *ramulosa*	3.5		0.2
Acacia tetragonophylla	1.3		0.3
Atriplex semibaccata	0.2		0.2
**Carthamus lanatus*	0.2		0.1
Enchylaena tomentosa	0.2		0.1
Eucalyptus loxophleba subsp. ?*supralaevis*	6		20
Maireana brevifolia	0.3		1
?*Maireana georgei*	0.2		0.2
**Mesembryanthemum nodiflorum*	0.2		0.2
Salsola tragus	0.2		0.1

Site Name:	SLU02
Site Type:	AREA
Survey Date:	21/05/2007
GPS Location:	GDA94 Zone 50 431264E 6762315N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy loam with gravel
Soil Colour:	Orange/brown
Fire:	>10
Comments:	Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?resinosa	3		5
Acacia sibina	4		1
Alyxia buxifolia	0.8		0.1
?*Austrodanthonia* sp.	0.3		1
Austrostipa elegantissima	0.3		1
Dianella revoluta var. *divaricata*	0.5		0.1
Eucalyptus leptopoda subsp. *arctata*	5		10
Hakea minyma	3		3
Keraudrenia velutina subsp. *velutina*	5		0.2
Melaleuca cordata			
Ricinocarpos velutinus	1		0.2

Site Name:	SLU04
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 440956E 6766254N
Landform Type:	Midslope
Slope Class:	Moderate
Soil Type:	Sandy loam with gravel
Soil Colour:	Yellow-brown
Fire:	>5
Comments:	Degraded thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla	3		1
Acacia resinosa	4		25
Calothamnus gilesii	2		0.1
Grevillea obliquistigma subsp. ?*obliquistigma*	3		1

Site Name:	SLU12
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 430885E 6762184N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy loam with gravel
Soil Colour:	Red/brown
Fire:	>10
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia resinosa	3		20
Acacia sibina	2		0.5
Austrostipa elegantissima	0.2		0.1
Eucalyptus ewartiana			
Hakea minyma			
Hakea ?*recurva* subsp. *arida*			
Melaleuca cordata	2		0.5
Persoonia pentasticha (P3)	0.4		0.1
Santalum acuminatum			

Site Name:	SLU13
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 430488E 6762060N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy loam with gravel
Soil Colour:	Red/brown
Fire:	>10
Comments:	Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia resinosa	3.5		20
Allocasuarina acutivalvis subsp. ?*prinsepiana*			
Austrostipa elegantissima	0.4		2
Dianella revoluta var. *divaricata*			
Eucalyptus ebbanoensis subsp. *ebbanoensis*	7		10
Eucalyptus horistes	8		10
Eucalyptus leptopoda subsp. *arctata*	6		
Hakea francisiana	2		1
Hakea minyma	3		1
Melaleuca cordata			
**Mesembryanthemum nodiflorum*	0.3		1
Phebalium tuberculosum	1		1
Ricinocarpos velutinus			
Santalum acuminatum	2		0.2
Waitzia acuminata var. *acuminata*			

Site Name:	SLU14
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 429410E 6761469N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy loam with gravel and occasional granite
Soil Colour:	Red/brown
Fire:	>10
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia neurophylla subsp. ?*erugata*	3		2
Acacia resinosa	4		35
Acacia ?*sphacelata*	1.6		1
Austrostipa elegantissima	0.5		1
Monachather paradoxus			
Ricinocarpos velutinus	1		4

Site Name:	SLU15
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 428874E 6761436N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Clay with gravel and granite
Soil Colour:	Red
Fire:	>10
Comments:	Open woodland over thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aulacophylla			
Acacia resinosa	4.5		4
Acacia ?sphacelata	1.5		1
Acacia tetragonophylla	1.5		0.4
Allocasuarina acutivalvis subsp. *?prinsepiana*	6		15
Astroloma serratifolium			
?Austrodanthonia sp.	0.3		1
Austrostipa elegantissima	0.4		1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	0.6		6
Comesperma drummondii			
Comesperma ?integerrimum			
Dodonaea inaequifolia	1		0.4
Eremophila ?clarkei	2		0.4
Eremophila clarkei			
Eucalyptus leptopoda subsp. *arctata*	7		5
Grevillea ?levis	1.5		0.4
Labichea lanceolata subsp. *brevifolia*	2		0.1
Lepidosperma costale	0.3		0.3
Melaleuca cordata	1.6		1
Mirbelia ?depressa	0.6		0.1
Schoenia cassiniana			
Waitzia acuminata			
?Waitzia sp.	0.2		0.2

Site Name: SLU16

Site Type: AREA

Survey Date: 22/05/2007

GPS Location: GDA94 Zone 50 428640E 6761446N

Landform Type: Midslope

Slope Class: Moderate

Soil Type: Silty clay with granite

Soil Colour: Red

Fire: >5

Comments: Degraded thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		2
Acacia andrewsii			
Acacia kochii	1		0.4
Acacia tetragonophylla	2		20
Allocasuarina acutivalvis subsp. ?*prinsepiana*	4		5
Astroloma serratifolium			
Comesperma ?integerrimum			0.5
Dodonaea inaequifolia	1.5		1
Melaleuca ?atroviridis	4		1

Site Name:	SLU17
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 426154E 6760901N
Landform Type:	Midlsope
Slope Class:	Gentle
Soil Type:	Silty clay
Soil Colour:	Red
Fire:	>10
Comments:	Degraded woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	0.4		0.1
Acacia ?acuminata	3		4
Acacia resinosa	2		3
Acacia tetragonophylla			
Austrostipa elegantissima	0.2		0.4
?*Enchylaena tomentosa*	0.3		4
Eucalyptus ebbanoensis subsp. *ebbanoensis*	5		2
Eucalyptus ewartiana	5		1
Hakea minyma	2		4
?*Maireana tomentosa* subsp. *tomentosa*	0.4		0.1
Monachather paradoxus	0.2		0.2
Ricinocarpos velutinus	1.2		5
Senna artemisioides subsp. *filifolia*	1.5		0.4

Site Name: SLU18

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 422912E 6760541N

Landform Type: Flat

Slope Class: Flat

Soil Type: Sandy loam

Soil Colour: Red/brown

Fire: >10

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Enchylaena tomentosa			
Halosarcia pergranulata subsp. *pergranulata*	0.3		2
Maireana brevifolia	0.6		20
**Mesembryanthemum nodiflorum*	0.2		20

Site Name:	SLU19
Site Type:	AREA
Survey Date:	22/05/2007
GPS Location:	GDA94 Zone 50 421342E 6760339N
Landform Type:	Flat
Slope Class:	Flat
Soil Type:	Sandy loam
Soil Colour:	Red/brown
Fire:	>10
Comments:	Degraded roadside woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera			
Acacia ?*coolgardiensis* subsp. *coolgardiensis*	4.5		2
Austrostipa elegantissima	0.4		1
Eucalyptus loxophleba subsp. ?*supralaevis*	8		3
Eucalyptus subangusta subsp. ?*pusilla*	5		5
?*Maireana georgei*	0.5		1
**Mesembryanthemum nodiflorum*	0.2		1
Monachather paradoxus	0.2		1
Ricinocarpos velutinus	1.2		3

Site Name:	SLU20
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 418584E 6760074N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sandy gravel (lateritic?)
Soil Colour:	Yellow
Fire:	>10
Comments:	Degraded roadside woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?*coolgardiensis* subsp. *coolgardiensis*	3		20
Acacia stereophylla var. *stereophylla*	2		1
Austrostipa elegantissima	0.6		0.1
Eucalyptus eudesmioides	3.5		1
Eucalyptus ?*gittinsii*	9		3
Grevillea obliquistigma subsp. ?*obliquistigma*	0.3		1
Hannafordia bissillii subsp. *latifolia*	0.2		0.1
Melaleuca cordata	2		0.1
Monachather paradoxus	0.3		1

Site Name: SLU21

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 416663E 6759794N

Landform Type: Flat

Slope Class: Flat

Soil Type: Clay loam

Soil Colour: Red/brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*	1.2		0.1
Acacia acuminata	2		0.1
Acacia anthochaera	2.5		0.1
Acacia sp.	1.6		0.1
Atriplex semibaccata	0.1		0.1
Atriplex sp.			
Enchylaena tomentosa	0.2		0.5
Maireana brevifolia	0.5		5
**Mesembryanthemum nodiflorum*	0.3		20
opp 12 prostrate crenulate	0.1		0.1
Salsola tragus	0.2		10

Site Name: SLU22

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 413952E 6759380N

Landform Type: Flat

Slope Class: Flat

Soil Type: Sand

Soil Colour: Yellow

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acanthoclada subsp. *glaucescens*			
Acacia acuminata			
Acacia anthochaera			
Acacia dielsii	1.5		2
Acacia prainii	2		0.5
Acacia sibina	3		14
Acacia sp.	2		0.5
Alyogyne ?*pinoniana*			
Atriplex sp.			
Austrostipa elegantissima	0.3		0.1
?*Chamaexeros macranthera*	0.2		0.2
Cheiranthera filifolia var. *simplicifolia*			
Chrysitrix distigmatosa	0.3		0.1
Dampiera lavandulacea			
Dampiera ?*lavandulacea*			
Darwinia capitellata	0.5		0.1
Daviesia benthamii subsp. *benthamii*	2		0.1
Dianella revoluta var. *divaricata*	1		0.2
Ecdeiocolea monostachya	0.6		3
Eucalyptus leptopoda subsp. *arctata*	3		2
Gahnia drummondii	0.2		0.2
Glischrocaryon ?*flavescens*			
Grevillea extorris	1		0.1
Grevillea ?*levis*	2		0.1
Grevillea obliquistigma subsp.	2		7

?*obliquistigma*			
Hakea minyma			
Hemigenia ?sp. Jibberding (J. D'Alonzo 418)	0.5		0.1
Jacksonia ?acicularis	1.5		0.1
Keraudrenia velutina subsp. *velutina*			
Maireana brevifolia			
?*Maireana georgei*			
Melaleuca ?atroviridis	2		2
Melaleuca eleuterostachya	2		0.1
Monachather paradoxus			
Pityrodia viscida (P4)			
Platysace trachymenioides	0.6		0.3
Rhagodia drummondii			
Solanum lasiophyllum			

Site Name: SLU23

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 412866E 6759203N

Landform Type: Flat

Slope Class: Flat

Soil Type: Sand

Soil Colour: Red

Fire: >10

Comments: Paddock weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.2
Acacia prainii			
Acacia rostellifera			
Enchylaena ?tomentosa	0.3		1
Maireana brevifolia	0.3		5
?Maireana georgei	0.4		0.2
**Mesembryanthemum nodiflorum*	0.1		10
opp 12 prostrate crenulate	0.2		0.1
Salsola tragus			
Solanum lasiophyllum	0.2		0.1

Site Name:	SLU24
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 412476E 6759147N
Landform Type:	Flat
Slope Class:	Flat
Soil Type:	Sand
Soil Colour:	Red
Fire:	>10
Comments:	Also has planted Eucs and paddock weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia prainii			
Acacia rostellifera	3.5		1
Atriplex semibaccata	0.4		0.1
Austrostipa elegantissima	0.5		0.2
?*Enchylaena tomentosa*	0.4		2
Enchylaena tomentosa	0.3		4
Maireana brevifolia	0.6		30
opp 12 prostrate crenulate			
Salsola tragus	0.3		0.1

Site Name:	SLU25
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 412146E 6759112N
Landform Type:	Flat
Slope Class:	Flat
Soil Type:	Clay loam
Soil Colour:	Red
Fire:	>10
Comments:	Euc plantation over salt bushes

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex semibaccata	0.2		2
Atriplex sp.	0.6		1
Enchylaena tomentosa	0.2		10
Halosarcia lepidosperma	0.3		1
Halosarcia ?*pergranulata* subsp. *pergranulata*	0.2		1
Maireana brevifolia	0.6		10
**Mesembryanthemum nodiflorum*	0.2		25
opp 12 prostrate crenulate	0.1		3
Salsola tragus	0.2		0.1

Site Name: SLU26

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 410149E 6758832N

Landform Type: Flat

Slope Class: Flat

Soil Type: Sand

Soil Colour: Red

Comments: With planted eucs

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex ?bunburyana	1		0.3
?Enchylaena tomentosa	0.5		1
Enchylaena tomentosa	0.3		3
Eremophila ?decipiens subsp. *decipiens*	1.4		0.2
Maireana brevifolia	0.6		15
**Mesembryanthemum nodiflorum*	0.2		1
opp 12 prostrate crenulate	0.2		1
Paspalidium basicladium	0.3		0.3
?Ptilotus exaltatus	0.3		
Salsola tragus	0.3		1
Sida ?sp. dark green fruits (S. van Leeuwen 2260)	0.6		0.1

Site Name:	SLU27
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 407865E 6758539N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sand
Soil Colour:	Red
Fire:	>10
Comments:	Degraded roadside woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.1
Acacia ?*coolgardiensis* subsp. *coolgardiensis*	3		0.2
Austrostipa elegantissima	0.4		0.2
Comesperma ?*integerrimum*	0.5		0.1
?*Enchylaena tomentosa*	0.4		1
Enchylaena tomentosa	0.3		1
Eucalyptus ?*kochii* subsp. *plenissima*	10		5
Hakea minyma	2		0.1
Maireana brevifolia	0.5		4
Melaleuca eleuterostachya	1		0.1
**Mesembryanthemum nodiflorum*	0.2		5
opp 12 prostrate crenulate	0.2		0.1
Salsola tragus	0.3		0.1
Senna artemisioides subsp. *filifolia*	0.2		0.1
Sida ?*sp. dark green fruits (S. van Leeuwen 2260)*	0.4		0.1

Site Name:	SLU28
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 405185E 6758301N
Landform Type:	Loweslope
Slope Class:	Gentle
Soil Type:	Sandy loam
Soil Colour:	Red
Fire:	>5
Comments:	Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Frankenia pauciflora	0.2		0.1
?*Haloragis* sp.	0.2		0.1
Halosarcia doleiformis	0.5		1
Halosarcia indica subsp. ?*bidens*	0.6		22
Maireana brevifolia	0.6		0.2
Maireana oppositifolia	0.2		0.1
Maireana sp.	0.4		0.2
**Mesembryanthemum nodiflorum*	0.2		0.1
opp 12 prostrate crenulate	0.2		0.1
Sida ?sp. dark green fruits (S. van Leeuwen 2260)	0.2		0.1

Site Name:	SLU29
Site Type:	AREA
Survey Date:	23/05/2007
GPS Location:	GDA94 Zone 50 405119E 6758231N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus sp.	5		
Halosarcia doleiformis	0.4		10
Halosarcia fimbriata			
Halosarcia indica subsp. ?*bidens*	0.3		5
Halosarcia sp.	0.2		0.5
Maireana oppositifolia	0.2		0.1
**Mesembryanthemum nodiflorum*	0.1		3

Site Name: SLU30

Site Type: AREA

Survey Date: 23/05/2007

GPS Location: GDA94 Zone 50 404893E 6758138N

Landform Type: Lowerslope

Soil Type: Sandy loam

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus sp.	6.5		
Halosarcia fimbriata	0.4		15
Halosarcia indica subsp. ?*bidens*	0.4		4
Halosarcia indica subsp. *bidens*	0.5		2
Melaleuca adnata			
**Mesembryanthemum nodiflorum*	0.2		1
Rhagodia drummondii			

Site Name:	SLU31
Site Type:	AREA
Survey Date:	24/05/2007
GPS Location:	GDA94 Zone 50 403836E 6758091N
Landform Type:	Flat
Slope Class:	Flat
Soil Type:	Sand
Soil Colour:	Red
Fire:	>5
Comments:	Thicket

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		0.3
Acacia anthochaera	3		5
Acacia ?inceana subsp. *conformis*	3.5		1
Acacia rostellifera	1.2		0.3
**Aira ?caryophyllea*	0.2		0.1
Aristida ?contorta	0.2		0.4
Austrostipa elegantissima	0.5		0.2
Austrostipa nodosa	0.7		0.2
?Enchylaena lanata	0.3		3
Enchylaena tomentosa	0.3		3
?Haloragis sp.	0.3		0.2
Maireana brevifolia	0.3		0.2
Melaleuca eleuterostachya	2		0.1
Rhagodia drummondii	0.3		0.2
Salsola tragus	0.4		0.3
Senna artemisioides subsp. *filifolia*	1		0.1

Site Name:	SLU38
Site Type:	AREA
Survey Date:	24/05/2007
GPS Location:	GDA94 Zone 50 399042E 6757720N
Landform Type:	Salt pan
Slope Class:	-
Soil Type:	Sand
Soil Colour:	Brown
Fire:	>10
Comments:	Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?eremaea			
Atriplex sp.	0.6		0.1
Disphyma crassifolium subsp. *clavellatum*	0.1		0.3
Frankenia ?pauciflora	0.3		0.1
Gnephosis acicularis	0.2		0.3
Halosarcia fimbriata			
Halosarcia halocnemoides subsp. *?halocnemoides*	0.6		7
Halosarcia indica subsp. *?bidens*	0.6		15
Halosarcia undulata	0.4		1
Maireana amoena	0.2		0.5

Site Name: SLU39

Site Type: AREA

Survey Date: 24/05/2007

GPS Location: GDA94 Zone 50 398849E 6757713N

Landform Type: Salt pan

Slope Class: -

Soil Type: Silty sand

Soil Colour: Brown

Fire: >5

Comments: Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Carpobrotus modestus	0.2		0.4
Disphyma crassifolium subsp. *clavellatum*	0.1		0.5
Gnephosis acicularis	0.3		0.3
Halosarcia fimbriata	0.3		0.3
Halosarcia halocnemoides subsp. ?*halocnemoides*	1		25
Halosarcia indica subsp. ?*bidens*	0.5		1
Halosarcia undulata	0.7		1
Maireana amoena	0.3		1
**Mesembryanthemum nodiflorum*	0.2		0.4

Site Name:	SLU40
Site Type:	AREA
Survey Date:	24/05/2007
GPS Location:	GDA94 Zone 50 398280E 6757692N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Sandy clay
Soil Colour:	Brown
Fire:	>5
Comments:	Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex sp.	0.6		1
Disphyma crassifolium subsp. *clavellatum*	0.1		0.1
Halosarcia halocnemoides subsp. ?*halocnemoides*	0.6		20
Halosarcia indica subsp. ?*bidens*	0.5		1
Maireana amoena	0.2		0.2
**Mesembryanthemum nodiflorum*	0.1		0.1

Site Name:	SLU41
Site Type:	AREA
Survey Date:	24/05/2007
GPS Location:	GDA94 Zone 50 398105E 6757680N
Landform Type:	Lowerslope
Slope Class:	Moderate
Soil Type:	Sandy clay
Soil Colour:	Red
Fire:	>10
Comments:	Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex sp.	0.4		5
Austrostipa nodosa	0.3		0.1
Eucalyptus loxophleba subsp. ?*supralaevis*	9		8
**Mesembryanthemum nodiflorum*	0.1		0.1
Ptilotus obovatus	0.3		0.1
Sclerolaena diacantha	0.2		3

Site Name: SLU42

Site Type: AREA

Survey Date: 24/05/2007

GPS Location: GDA94 Zone 50 399655E 6757804N

Landform Type: Salt pan

Slope Class: -

Soil Type: Sand

Soil Colour: Grey/brown

Fire: >10

Comments: Halosarcia

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Disphyma crassifolium subsp. *clavellatum*	0.1		0.4
Gnephosis acicularis	0.1		0.1
?*Haloragis* sp.	0.2		0.1
Halosarcia fimbriata	0.3		0.3
Halosarcia halocnemoides subsp. ?*halocnemoides*	1		15
Halosarcia indica subsp. ?*bidens*	0.6		3
Halosarcia undulata	0.6		1
Maireana amoena	0.2		0.2

Site Name: SLU43

Site Type: AREA

Survey Date: 24/05/2007

GPS Location: GDA94 Zone 50 400200E 6757875N

Landform Type: Lowerslope

Slope Class: Gentle

Soil Type: Sand

Soil Colour: Red/brown

Fire: >10

Comments: Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?eremaea			
Aristida ?contorta	0.1		0.1
Atriplex sp.	1		10
Austrostipa elegantissima	0.1		0.2
Enchylaena tomentosa	0.2		0.1
Eucalyptus loxophleba subsp. *?supralaevis*	8		5
Gunniopsis quadrifida	0.3		1
Rhagodia drummondii	0.6		0.1
Sclerolaena diacantha	0.2		6

Site Name: SLU45

Site Type: AREA

Survey Date: 24/05/2007

GPS Location: GDA94 Zone 50 400558E 6757922N

Landform Type: Lowerslope

Slope Class: -

Soil Type: Silty sand

Soil Colour: Brown

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?eremaea			
Atriplex sp.	0.5		3
Gunniopsis quadrifida	0.4		3
Maireana amoena	0.2		0.3
?*Maireana georgei*	0.3		0.4
Melaleuca lateriflora subsp. *acutifolia*	3.5		1
Rhagodia drummondii	0.6		3
Ricinocarpos velutinus	0.3		0.1
Sclerolaena diacantha			

Site Name: SLU47

Site Type: AREA

Survey Date: 24/05/2007

GPS Location: GDA94 Zone 50 401377E 6757882N

Soil Type: Clay loam

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aristida ?*contorta*	0.1		0.1
?*Enchylaena tomentosa*	0.3		2
Eucalyptus loxophleba subsp. ?*supralaevis*			
Gunniopsis quadrifida	0.3		0.4
?*Maireana brevifolia*	0.5		0.1
Melaleuca eleuterostachya	4		15
Sclerolaena diacantha	0.2		1
Solanum nummularium	0.3		0.2

Site Name:	SLU48
Site Type:	AREA
Survey Date:	25/05/2007
GPS Location:	GDA94 Zone 50 394520E 6758188N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Sandy loam
Soil Colour:	Brown
Fire:	>5
Comments:	Open woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia nyssophylla	1.2		0.1
Angianthus preissianus	0.1		4
Atriplex sp.	1		0.5
Austrostipa elegantissima	0.2		0.1
Enchylaena tomentosa	0.3		3
Eremophila glabra	0.3		0.1
Eucalyptus loxophleba subsp. ?*supralaevis*	5		1
Exocarpos aphyllus	1.2		0.1
Gunniopsis quadrifida	0.3		7
Hakea preissii			
Halosarcia halocnemoides subsp. ?*halocnemoides*	0.6		0.2
Halosarcia undulata	0.6		1
Maireana amoena	0.3		0.1
Melaleuca adnata	2		0.1
Melaleuca ?*atroviridis*	6		1
Rhagodia drummondii	0.4		3
Sclerolaena diacantha	0.3		0.1
Solanum nummularium	0.2		0.1

Site Name:	SLU56
Site Type:	AREA
Survey Date:	25/05/2007
GPS Location:	GDA94 Zone 50 394830E 6758500N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Silty sand
Soil Colour:	Orange/brown
Fire:	>10
Comments:	Woodland

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera	1.5		0.1
Acacia nyssophylla	1.5		0.1
Atriplex sp.	1		0.3
Austrostipa elegantissima	0.2		0.1
Dianella revoluta var. *divaricata*	0.4		0.1
Enchylaena tomentosa	0.3		4
Eucalyptus loxophleba subsp. ?*supralaevis*	10		4
Exocarpos aphyllus	1.5		0.2
Halosarcia halocnemoides	0.3		1
Halosarcia halocnemoides subsp. ?*halocnemoides*	0.3		0.2
Halosarcia indica subsp. ?*bidens*	0.6		1
Halosarcia undulata	0.2		0.2
Maireana amoena	0.2		0.1
Maireana brevifolia	0.4		0.1
Maireana oppositifolia	0.3		0.1
Rhagodia drummondii	0.2		4
Sclerolaena diacantha	0.2		1.5
Solanum nummularium	0.3		0.1

Site Name:	SLU57
Site Type:	AREA
Survey Date:	02/07/2007
GPS Location:	GDA94 Zone 50 394744E 6758457N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sand
Soil Colour:	Brown
Fire:	>%
Comments:	Paddocks on west side. Degraded road verge, west side of road ~ 2.3m wide. Small pipeline here

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Chenopodium gaudichaudianum	0.3		0.5
Maireana brevifolia	0.5		25
Poaceae sp.	0.05		0.5
Salsola tragus	0.3		0.5
Solanum nummularium	0.5		1

Site Name:	SLU59
Site Type:	AREA
Survey Date:	02/07/2007
GPS Location:	GDA94 Zone 50 391117E 6758461N
Landform Type:	Mid - Lowerslope
Slope Class:	Very gentle
Soil Type:	Loamy sand
Soil Colour:	Red/brown
Fire:	>5
Comments:	Very degraded road verge. Very weed infested with small weeds appearing

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Abutilon ?*cryptopetalum*	0.4		1
Abutilon oxycarpum subsp. *prostratum* ms	0.1		0.5
Acacia acuminata	4		2
Acacia microbotrya	2.5		5
Chenopodium gaudichaudianum	0.5		0.5
Chenopodium melanocarpum forma *leucocarpum*	0.1		0.2
**Cynodon dactylon*	0.2		60
Enchylaena tomentosa var. *tomentosa*	0.5		3
?*Enchylaena tomentosa* var. *tomentosa*	0.4		0.1
Grevillea levis	1.5		1

Site Name:	SLU60
Site Type:	AREA
Survey Date:	02/07/2007
GPS Location:	GDA94 Zone 50 390542E 6758401N
Landform Type:	Midslope
Slope Class:	Moderate
Soil Type:	Loamy sand with quartz and ironstone
Soil Colour:	Brown
Fire:	>5
Comments:	Isolated patch of trees. Understorey destroyed. Very rocky, only not cleared because of rocks.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia tetragonophylla	2		2
Dioscorea hastifolia			0.1
Eucalyptus loxophleba subsp. *supralaevis*	7		40
?*Hybanthus floribundus* subsp. *floribundus*	0.3		0.1
Ptilotus obovatus	0.3		0.2
Solanum ellipticum	0.1		0.5
Solanum nummularium	0.2		0.1

Site Name:	SLU61
Site Type:	AREA
Survey Date:	02/07/2007
GPS Location:	GDA94 Zone 50 390211E 6758428N
Landform Type:	Lowerslope
Slope Class:	Moderate
Soil Type:	Clay/silt/sand with quartz and ironstone rocks
Soil Colour:	Brown
Fire:	>5
Comments:	LIC goes in cleared track. SLU61 to North of track. Lots of small weeds and annuals, no flowers or fruits.

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		2
Acacia restiacea			
Allocasuarina campestris	2		10
?*Anthericaceae* sp.	0.1		
Austrostipa elegantissima	0.3		0.1
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	1.3		
Cheilanthes ?*sieberi*			
Eucalyptus loxophleba subsp. *supralaevis*	8		6
Melaleuca nematophylla			
Monachather paradoxus	0.3		0.1
Ricinocarpos velutinus			
Solanum ellipticum	0.3		0.1

Site Name:	SLU62
Site Type:	AREA
Survey Date:	02/07/2007
GPS Location:	GDA94 Zone 50 390195E 6758381N
Landform Type:	Midslope
Slope Class:	Moderate
Soil Type:	Clay/silt/sand on lots of heavy quartz
Soil Colour:	Brown
Fire:	>5
Comments:	On side of rocky hill

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		1
Allocasuarina campestris	2		50
Austrostipa elegantissima			
Baeckea sp. Perenjori (J.W. Green 1516) (P2)	1.5		4
Cheilanthes ?sieberi	0.1		0.1
Eucalyptus loxophleba subsp. *supralaevis*			
Hakea scoparia	2.5		
Melaleuca eleuterostachya			
Melaleuca nematophylla	2.5		10
Monachather paradoxus			
Ricinocarpos velutinus			

Site Name:	SLU63
Site Type:	AREA
Survey Date:	03/07/2007
GPS Location:	GDA94 Zone 50 387717E 6758669N
Landform Type:	Upperslope
Slope Class:	Gentle-moderate
Soil Type:	Sandy silty clay with quartz/granite outcropping
Soil Colour:	Brown/red
Comments:	Overstorey, no understorey

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Allocasuarina humilis	4		4
Austrodanthonia sp.	0.1		0.1
Eucalyptus ebbanoensis subsp. *ebbanoensis*	6		35

Site Name:	SLU64
Site Type:	AREA
Survey Date:	03/07/2007
GPS Location:	GDA94 Zone 50 381351E 6758713N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Sandy loam, some clay
Soil Colour:	Brown
Fire:	>5
Comments:	On edge of bushland to north of LIC

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia rostellifera	1.5		0.5
Acanthocarpus canaliculatus	0.3		1
Allocasuarina campestris	1.8		10
Astroloma serratifolium	0.4		
Austrostipa elegantissima	0.4		0.5
Baeckea megaflora ms	0.3		0.5
Cassytha pomiformis			0.1
Dampiera salahae	1.5		0.5
Dianella revoluta	0.5		0.2
Ecdeiocolea monostachya	0.5		5
Eucalyptus ebbanoensis subsp. *ebbanoensis*	6		5
Grevillea petrophiloides subsp. *petrophiloides*	1.7		2
Hakea scoparia			
?*Hemigenia* sp.	0.3		
Melaleuca cordata	1.7		15

Site Name:	SLU65
Site Type:	AREA
Survey Date:	03/07/2007
GPS Location:	GDA94 Zone 50 381358E 6758675N
Landform Type:	Lower- midslope
Slope Class:	Gentle
Soil Type:	Road gravel
Soil Colour:	-
Fire:	>5
Comments:	Degraded road verge. Same both sides, occasional pasture grass

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia daviesioides	1.3		1
Austrostipa elegantissima	0.5		1
Baeckea megaflora ms	0.4		0.5
Chrysitrix distigmatosa	0.3		0.5
Dampiera salahae	0.3		0.5
Eucalyptus ebbanoensis subsp. *ebbanoensis*	4		5
Gastrolobium ?*spinosum*	1.5		8
Glischrocaryon flavescens	0.6		0.3
Grevillea ?*levis*	1		2
Grevillea petrophiloides subsp. *petrophiloides*	1.6		0.5
?*Hemigenia* sp.	0.4		0.5
Hibbertia ?*huegelii*	0.3		
Lepidosperma costale	0.3		
Melaleuca eleuterostachya	1.5		
Melaleuca tinkeri	0.5		
Olearia dampieri subsp. ?*dampieri*	0.4		
Opercularia ?*spermacocea*	0.3		
Rhagodia ?*preissii* subsp. *preissii*	0.3		0.1
Santalum acuminatum			

Site Name:	SLU66
Site Type:	AREA
Survey Date:	03/07/2007
GPS Location:	GDA94 Zone 50 378516E 6759416N
Landform Type:	Midslope
Slope Class:	Very gentle
Soil Type:	Sandy loam
Soil Colour:	Yellow
Fire:	>5
Comments:	Degraded road verge

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia blakelyi			
Acacia rostellifera	6		
Austrostipa elegantissima	0.5		
Baeckea ?*camphorosmae*	0.3		
Chenopodium gaudichaudianum	1		0.5
Cucumis melo	0.1		0.1
Dianella revoluta	0.7		0.1
Eucalyptus jucunda	8		1.5
Grevillea biformis subsp. *biformis*	1.5		
Grevillea petrophiloides subsp. *petrophiloides*			
Scholtzia aff. *capitata*			
Scholtzia sp.	1.3		0.1
?*Verticordia* sp.			

Site Name: W01

Site Type: AREA

Survey Date: 23/03/2010

GPS Location: GDA94 Zone 50 443247E 6769620N

Landform Type: Lowerslope

Soil Type: Sandy loam with some laterite gravel

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		5
Allocasuarina acutivalvis subsp. *prinsepiana*	4		7
Aluta aspera subsp. *hesperia*	1		5
Borya sphaerocephala	0.1		0.3
Calycopeplus paucifolius	2		1
Daviesia hakeoides subsp. *hakeoides*	1.5		1
Melaleuca nematophylla	1		0.5
Monachather paradoxus	0.3		1
Thryptomene costata	1		1

PHOTOS

Site Name: W02

Site Type: AREA

Survey Date: 23/03/2010

GPS Location: GDA94 Zone 50 443314E 6769602N

Landform Type: Lowerslope

Slope Class: Gentle

Soil Type: Sandy loam with gravel

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	3		7
Acacia ?incognita	6		15
Aluta aspera subsp. *hesperia*	1		5
Eremophila ?clarkei	2		0.5
Eucalyptus leptopoda subsp. *?arctata*	8		3
Grevillea obliquistigma subsp. *obliquistigma*	2		2
Hakea minyma	4		1
Melaleuca nematophylla	5		4
Monachather paradoxus	0.4		3

PHOTOS

Site Name: W03

Site Type: AREA

Survey Date: 23/03/2010

GPS Location: GDA94 Zone 50 443449E 6769525N

Landform Type: Lower/midslope

Slope Class: Gentle

Soil Type: Sandy loam with gravel

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*	2		4
Acacia exocarpoides	2		4
Acacia ?incognita	2		3
Acacia ramulosa var. *ramulosa*	4		2
Acacia tetragonophylla	3		2
Aluta aspera subsp. *hesperia*	1		5
Borya sphaerocephala	0.1		10
Eremophila ?clarkei	1		0.5
Hakea recurva subsp. *recurva*	3		1
Melaleuca nematophylla	2		5
Monachather paradoxus	0.3		2
Thryptomene costata	1		5

PHOTOS

Site Name:	W14
Site Type:	AREA
Survey Date:	23/03/2010
GPS Location:	GDA94 Zone 50 443679E 6770340N
Landform Type:	Lowerslope
Slope Class:	Gentle
Soil Type:	Loamy clay with ironstone pebbles
Soil Colour:	Red
Fire:	>5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita	3.5		35
Aluta aspera subsp. *hesperia*	1.5		1.5
Monachather paradoxus	0.4		2

PHOTOS

Site Name: WA2

Site Type: AREA

Survey Date: 23/03/2010

GPS Location: GDA94 Zone 50 443257E 6769761N

Landform Type: Lowerslope

Slope Class: Gentle

Soil Type: Sandy loam

Soil Colour: Red

Fire: >5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ?incognita	5		20
Acacia ramulosa var. *ramulosa*	5		2
Aluta aspera subsp. *hesperia*	1.5		5
Eremophila ?clarkei	2		0.5
Monachather paradoxus	0.4		5

PHOTOS

Site Name:	YAN001
Site Type:	AREA
Survey Date:	15/02/2010
GPS Location:	GDA94 Zone 50 371665E 6759317N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	sandy loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5, very disturbed, highly modified, other weed species present but are beyond identification, road verge is 6m wide, occasional Eucalyptus loxophleba subsp. loxophleba on south side

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	6		3
Acacia rostellifera			
Acacia tetragonophylla			
Amyema fitzgeraldii			0.1
**Avena barbata*	0.5		0.5
**Citrullus lanatus*	0.2		0.5
**Emex australis*			0.3
Hakea recurva subsp. *recurva*	7		2
**Hordeum ?glaucum*	0.3		10
**Lolium ?rigidum*	0.2		0.1
Maireana brevifolia	0.5		0.01
?*Orobanchaceae* sp.	0.3		0.1
Salsola tragus	0.4		4
**Sisymbrium ?orientale*	0.3		0.5

PHOTOS

Site Name: YAN002

Site Type: AREA

Survey Date: 15/02/2010

GPS Location: GDA94 Zone 50 370766E 6759312N

Landform Type: midslope

Slope Class: gentle

Soil Type: sand loam

Soil Colour: red

Fire: >5

Comments: Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Avena barbata*	0.5		15
**Bromus diandrus*	0.5		0.5
Chenopodium gaudichaudianum	0.3		0.1
Eucalyptus camaldulensis subsp. *obtusa*	16		10
**Raphanus raphanistrum*	0.5		0.3

PHOTOS

Site Name:	YAN003
Site Type:	AREA
Survey Date:	15/02/2010
GPS Location:	GDA94 Zone 50 370340E 6759300N
Landform Type:	lowerslope
Slope Class:	gentle
Soil Type:	sandy loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	7		4
Acacia tetragonophylla			
Amyema fitzgeraldii			0.3
**Avena barbata*	0.6		10
**Bromus diandrus*	0.6		0.5
Chenopodium gaudichaudianum	0.5		0.5
**Echium plantagineum*	0.2		0.3
?*Enchylaena lanata*	0.3		0.2
Eucalyptus camaldulensis			
Hakea recurva subsp. *recurva*	4		1
**Lupinus cosentinii*	0.4		0.1
**Pentaschistis airoides*	0.2		0.5
Poaceae sp.	0.3		0.3
Senna ?*glutinosa* subsp. *chatelainiana*			

PHOTOS

Site Name: YAN004

Site Type: AREA

Survey Date: 15/02/2010

GPS Location: GDA94 Zone 50 369878E 6759296N

Landform Type: drainage line/creek line

Slope Class: gentle/creek is moderate

Soil Type: coarse river sand

Soil Colour: red/brown

Fire: >5

Comments: Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia rostellifera	3		2
**Avena barbata*	0.6		8
**Bromus diandrus*	0.4		6
**Echium plantagineum*	0.2		0.5
Eucalyptus camaldulensis subsp. *obtusa*	14		20
Eucalyptus loxophleba subsp. *loxophleba*	10		5
Maireana brevifolia	0.5		3

PHOTOS

Site Name: YAN005

Site Type: AREA

Survey Date: 15/02/2010

GPS Location: GDA94 Zone 50 368699E 6759283N

Landform Type: lowerslope

Slope Class: gentle

Soil Type: loamy sand

Soil Colour: red

Fire: >5

Comments: Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	3		1
Acacia aestivalis	2.5		1
Acacia tetragonophylla	3		1
Austrodanthonia setacea	0.2		2
**Avena barbata*	0.5		15
?*Enchylaena lanata*	0.3		0.3
Eucalyptus loxophleba subsp. *loxophleba*	10		6
Hakea recurva subsp. *recurva*	1		0.3
Maireana brevifolia	0.4		0.5

PHOTOS

Site Name:	YAN006
Site Type:	AREA
Survey Date:	15/02/2010
GPS Location:	GDA94 Zone 50 368290E 6759279N
Landform Type:	lowerslope
Slope Class:	gentle
Soil Type:	clay loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	2		1
Acacia aestivalis	2.5		1
Acacia daphnifolia	2.5		2
Acacia tetragonophylla	2.5		1
**Avena barbata*	0.5		15
Chenopodium gaudichaudianum	0.3		1
**Echium plantagineum*	0.3		0.3
?*Enchylaena lanata*	0.3		0.3
Eucalyptus loxophleba subsp. *loxophleba*	14		7
Hakea recurva subsp. *recurva*	2.5		1
Maireana brevifolia	0.3		2
Pimelea microcephala	0.7		0.2

PHOTOS

Site Name: YAN007

Site Type: AREA

Survey Date: 15/02/2010

GPS Location: GDA94 Zone 50 367403E 6758324N

Landform Type: upperslope

Soil Type: clay loam

Soil Colour: red

Fire: >5

Comments: Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	7		4
Acacia tetragonophylla	4		1
**Avena barbata*	0.5		10
**Bromus diandrus*	0.5		1
Eucalyptus loxophleba subsp. *loxophleba*			
Hakea recurva subsp. *recurva*	3		1
Maireana brevifolia	0.3		0.1
**Pentaschistis airoides*	0.1		0.5
Salsola tragus	0.3		0.1

PHOTOS

Site Name:	YAN008
Site Type:	AREA
Survey Date:	15/02/2010
GPS Location:	GDA94 Zone 50 367079E 6757554N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	sandy loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	8		6
Amyema fitzgeraldii			0.3
**Avena barbata*	0.5		15
**Bromus diandrus*	0.5		5
Hakea recurva subsp. *recurva*	4		0.5
**Lupinus cosentinii*	0.4		0.1
Maireana brevifolia	0.3		0.1

PHOTOS

Site Name: YAN009

Site Type: AREA

Survey Date: 15/02/2010

GPS Location: GDA94 Zone 50 367087E 6757155N

Landform Type: lowerslope

Slope Class: gentle/flat

Soil Type: clay sand

Soil Colour: grey/brown

Fire: >5

Comments: Condition: 6

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Avena barbata*	0.5		50
**Bromus diandrus*	0.5		30
**Carthamus lanatus*	0.2		0.2
**Echium plantagineum*	0.3		0.1
Maireana brevifolia			
Salsola tragus	0.3		0.2

PHOTOS

Site Name:	YAN010
Site Type:	AREA
Survey Date:	16/02/2010
GPS Location:	GDA94 Zone 50 367096E 6756090N
Landform Type:	lowerslope, adjacent to drainage line
Slope Class:	gentle/flat
Soil Type:	loamy clay
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5, east side of the road has Acacia colletioides and planted Eucalyptus camaldulensis

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		2
Acacia colletioides	4		15
Atriplex ?lindleyi subsp. *inflata*	0.2		0.5
Austrostipa ?elegantissima	0.6		0.2
**Avena barbata*	0.5		4
**Avena ?sativa*	0.5		0.1
**Bromus diandrus*	0.5		1
Chenopodium gaudichaudianum	0.2		0.2
**Echium plantagineum*	0.4		0.3
?*Enchylaena lanata*	0.4		2
Eucalyptus loxophleba subsp. *loxophleba*	14		3
**Lolium ?rigidum*	0.4		0.3
Maireana brevifolia	0.5		0.5
**Mesembryanthemum nodiflorum*	0.1		4
**Pentaschistis airoides*	0.1		0.3
**Plantago coronopus* subsp. *commutata*	0.1		0.2
Salsola tragus	0.3		0.5
**Sisymbrium ?orientale*	0.6		0.3
**Sonchus oleraceus*	0.7		0.2

PHOTOS

Site Name:	YAN011
Site Type:	AREA
Survey Date:	16/02/2010
GPS Location:	GDA94 Zone 50 366499E 6755950N
Landform Type:	lowerslope
Slope Class:	gentle/flat
Soil Type:	loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia colletioides	3		3
Atriplex semibaccata	0.2		0.3
Atriplex semilunaris	0.3		0.3
**Avena barbata*	0.6		4
?*Enchylaena lanata*	0.3		0.5
Eucalyptus loxophleba subsp. *loxophleba*	14		7
**Hordeum ?glaucum*	0.2		1
**Lolium ?rigidum*	0.4		7
Maireana brevifolia	0.5		1
**Mesembryanthemum nodiflorum*	0.2		5
**Phalaris ?minor*	0.6		0.3
Rhagodia drummondii	0.3		0.5
**Sisymbrium ?orientale*	0.5		0.5

PHOTOS

Site Name:	YAN012
Site Type:	AREA
Survey Date:	16/02/2010
GPS Location:	GDA94 Zone 50 364358E 6755935N
Landform Type:	midslope
Slope Class:	gentle/moderate
Soil Type:	sandy loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	5		3
Acacia tetragonophylla	4		2
Amyema fitzgeraldii			0.5
Amyema fitzgeraldii			
**Avena barbata*	0.5		15
**Bromus diandrus*	0.5		10
**Echium plantagineum*	0.3		0.2
Hakea recurva subsp. *recurva*			
**Lupinus cosentinii*	0.6		5
**Raphanus raphanistrum*	0.5		1
**Trifolium glomeratum*	0.3		0.3

PHOTOS

Site Name: YAN013

Site Type: AREA

Survey Date: 16/02/2010

GPS Location: GDA94 Zone 50 362837E 6755919N

Landform Type: drainage line

Slope Class: gentle

Soil Type: sandy loam

Soil Colour: pink

Fire: >5

Comments: Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia rostellifera	5		15
**Avena barbata*	0.5		70
**Bromus diandrus*	0.6		1
**Carthamus lanatus*	0.3		0.2
**Echium plantagineum*	0.3		0.5
Eucalyptus camaldulensis subsp. *obtusa*	16		3
**Hordeum ?glaucum*	0.3		1
**Raphanus raphanistrum*	0.6		1
**Sisymbrium ?orientale*	0.5		0.5

PHOTOS

Site Name:	YAN018
Site Type:	AREA
Survey Date:	16/02/2010
GPS Location:	GDA94 Zone 50 373344E 6759364N
Landform Type:	midslope
Slope Class:	gentle
Soil Type:	sandy loam
Soil Colour:	red
Fire:	>5
Comments:	Condition: 6

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Austrodanthonia caespitosa	0.3		5
**Avena barbata*	0.6		50
?*Enchylaena lanata*	0.5		0.5
Eucalyptus loxophleba subsp. *loxophleba*	10		7
Hakea preissii	5		5
Maireana brevifolia	0.5		1
Salsola tragus	0.5		5
**Sisymbrium ?orientale*	0.4		2

PHOTOS

Site Name:	YAN019
Site Type:	AREA
Survey Date:	16/02/2010
GPS Location:	GDA94 Zone 50 357822E 6752637N
Landform Type:	upperslope
Slope Class:	gentle
Soil Type:	sand
Soil Colour:	grey/yellow
Fire:	>5
Comments:	Condition: 6, planted trees spread out over 2kms

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus camaldulensis	6		
Eucalyptus gomphocephala	14		
Eucalyptus ?*loxophleba* subsp. *loxophleba*	3		
Eucalyptus loxophleba subsp. *loxophleba*	5		
Eucalyptus ?*pluricaulis*	3		
Eucalyptus rigidula	5		
Eucalyptus ?*rigidula*	3		
Eucalyptus ?*sargentii*	8		
Eucalyptus sp.	6		
Eucalyptus sp.	6		
Eucalyptus sp.	2		
Eucalyptus todtiana	4		

PHOTOS

Site Name:	YAN055
Site Type:	AREA
Survey Date:	08/03/2010
GPS Location:	GDA94 Zone 50 373420E 6759717N
Landform Type:	drainage line
Slope Class:	gentle
Soil Type:	sandy loam
Soil Colour:	white
Fire:	>5
Comments:	Condition: 5, weeds, highly modified

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	7		6
Acacia ericksoniae	0.4		0.2
Acacia tetragonophylla	3		1
Allocasuarina campestris	4		5
?*Anthocercis genistoides*	1		0.5
Austrostipa elegantissima	0.5		0.2
**Avena barbata*	0.5		25
**Briza maxima*	0.4		2
**Bromus diandrus*	0.4		15
**Echium plantagineum*	0.4		0.5
**Ehrharta calycina*	0.4		10
?*Enchylaena tomentosa*	0.2		0.3
Eucalyptus loxophleba subsp. *loxophleba*	8		7
Hakea preissii	2		0.5
**Hordeum ?glaucum*	0.3		15
Juncus radula	0.5		0.3
Lepidosperma costale	0.6		0.2
**Lupinus cosentinii*	0.4		5
Melaleuca concreta	3		2
Melaleuca coronicarpa	1.5		2
**Mesembryanthemum nodiflorum*	0.1		5
Olearia dampieri ms	0.6		0.3
Sclerolaena diacantha	0.2		0.5

PHOTOS

Site Name:	YAN061
Site Type:	AREA
Survey Date:	09/03/2010
GPS Location:	GDA94 Zone 50 361046E 6756032N
Landform Type:	Lowerslope
Slope Class:	Gentle/undulating
Soil Type:	Sandy loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata	4		5
Acacia sp.	6		4
Acacia tetragonophylla	3		4
Austrostipa elegantissima	0.6		0.3
**Avena barbata*	0.6		50
?*Enchylaena tomentosa*	0.5		1
Eucalyptus loxophleba subsp. ?*loxophleba*	8		8
Hakea preissii	5		7
**Lupinus cosentinii*	0.4		25
Olearia dampieri ms	1		0.5
Rhagodia drummondii	0.6		1

PHOTOS

Site Name: YAN062

Site Type: AREA

Survey Date: 09/03/2010

GPS Location: GDA94 Zone 50 360844E 6756033N

Landform Type: Valley flat next to drainage line

Soil Type: Clay loam

Soil Colour: Brown

Fire: >5

Comments: Condition: 4

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Avena barbata*	0.6		5
**Cynodon dactylon*	0.1		20
Cyperus gymnocaulos	0.5		70
?*Enchylaena lanata*	0.2		0.1
?*Enchylaena tomentosa*	0.2		0.3
Eucalyptus camaldulensis subsp. *obtusa*	18		7
Eucalyptus loxophleba subsp. *loxophleba*	16		7
Hakea preissii	6		1
Maireana brevifolia	0.4		0.5
**Polypogon monspeliensis*	0.4		5
Typha orientalis	3		5

PHOTOS

Site Name:	YAN063
Site Type:	AREA
Survey Date:	09/03/2010
GPS Location:	GDA94 Zone 50 360608E 6756032N
Landform Type:	Drainage line
Slope Class:	Gentle/flat
Soil Type:	Clay loam
Soil Colour:	Red/brown
Fire:	>5
Comments:	Condition: 5

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Avena barbata*	0.4		5
**Carthamus lanatus*	0.2		0.1
?*Enchylaena tomentosa*	0.3		2
Eucalyptus loxophleba subsp. *loxophleba*	14		12
Hakea preissii	8		4
**Hordeum ?glaucum*	0.2		15
Maireana brevifolia	0.6		2

PHOTOS

Site Name:	YAN064b
Site Type:	AREA
Survey Date:	09/03/2010
GPS Location:	GDA94 Zone 50 360394E 6755071N
Landform Type:	Midslope
Slope Class:	Gentle
Soil Type:	Sand
Soil Colour:	Yellow/brown
Fire:	>5
Comments:	Condition: 5, weeds/grazed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia rostellifera	4		6
Acacia saligna subsp. *lindleyi* ms	6		2
**Avena barbata*	0.6		15
**Ehrharta calycina*	0.4		80
Eucalyptus camaldulensis subsp. *obtusa*	18		45
**Raphanus raphanistrum*	0.4		1

Vegetation Mapping Notes

Site Name: CGMN01

Site Type: MAPPING_NOTE

Survey Date: 10/08/2024

GPS Location: GDA2020 Zone 50 469301.527E 6772042.054N

Landform Type: Upper Slope

Slope Class: Very Gently Inclined (1°)

Soil Type: Sandy Loam

Soil Colour: Red-Brown

Rock Outcrop: Granite, <2% bedrock exposed

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	469302	6772042	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia umbraculiformis	6		2
Borya sphaerocephala	0.1		7
Caladenia hirta subsp. *rosea*			
Calotis multicaulis			
Cephalipterum drummondii			
Cheilanthes sieberi subsp. *sieberi*			
Chthonocephalus pseudevax			
Crassula colorata var. *acuminata*			
Lawrencella rosea			
Malleostemon tuberculatus	2		12
Myriocephalus gueriniae			
Pheladenia deformis			
Solanum lasiophyllum			

PHOTOS

Site Name: KMLN14

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 476645.22E 6766404.18N

Comments: Vegetation similar to KML39. Scattered shrubs up to 1.2 m

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476645	6766404	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Acacia sibina			
Eucalyptus arctata			
Eucalyptus kochii subsp. *amaryssia*			
Hakea invaginata			
Melaleuca hamata			

Site Name: KMLN15

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 476480.49E 6768012.72N

Comments: Vegetation similar to KML36

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476480	6768013	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus loxophleba subsp. *supralaevis*			
Pimelea microcephala subsp. *microcephala*			
Senna artemisioides subsp. *filifolia*			

Site Name: KMLN16

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 476699.71E 6768135.26N

Comments: Between KMLN15 and here - Exocarpos aphyllus, Acacia anthochaera

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476700	6768135	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia anthochaera			
Exocarpos aphyllus			

Site Name: KMLN17

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 474553.2E 6768781.38N

Comments: Shallow sandy clay loam over granite

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	474553	6768781	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name: KMLN19

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 474197.37E 6768763.63N

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	474197	6768764	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Eremophila clarkei			
Hakea recurva subsp. *recurva*			
Lawrencella rosea			
Lomandra marginata			
Myriocephalus gueriniae			
Roebuckiella ciliocarpa			

Site Name: KMLN20

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 474442.2E 6768775.26N

Comments: Mosaic of KMLN19 and KMLN21. Sandier than KMLN19, still Acacia latior but more open, Acacia tetragonophylla and Panaetia lessonii appears

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	474442	6768775	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Acacia tetragonophylla			
Panaetia lessonii			

Site Name: KMLN21

Site Type: MAPPING_NOTE

Survey Date: 16/08/2020

GPS Location: GDA94 Zone 50 474540.12E 6768803.85N

Rock Outcrop: Granite

Comments: Vegetation similar to KML24, coming up onto granite

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	474540	6768804	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name:	KMLN22
Site Type:	MAPPING_NOTE
Survey Date:	18/08/2020
GPS Location:	GDA94 Zone 50 476352.81E 6772968.56N
Landform Type:	Flat
Comments:	Flats of Eucalyptus loxophleba subsp. supralaevis with sparse shrubs and chenopods

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476353	6772969	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus loxophleba subsp. *supralaevis*			

Site Name: KMLN23

Site Type: MAPPING_NOTE

Survey Date: 18/08/2020

GPS Location: GDA94 Zone 50 476361.32E 6772850.25N

Comments: Starts to get rocky, upslope, diverse Acacia thicket

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476361	6772850	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name: KMLN24

Site Type: MAPPING_NOTE

Survey Date: 18/08/2020

GPS Location: GDA94 Zone 50 476355.07E 6772676.29N

Comments: Just out of Acacia thicket, steeper rocky upslope, sparse vegetation, mulga/eremophila/acacia

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476355	6772676	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name:	KMLN25
Site Type:	MAPPING_NOTE
Survey Date:	18/08/2020
GPS Location:	GDA94 Zone 50 476354.65E 6772642.28N
Landform Type:	Crest
Comments:	Top of crest. Ironstone plus other rocks. Sparse vegetation

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476355	6772642	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia aneura			
Santalum spicatum			
Scaevola spinescens			

Site Name:	KMLN26
Site Type:	MAPPING_NOTE
Survey Date:	18/08/2020
GPS Location:	GDA94 Zone 50 476356.97E 6773214.76N
Comments:	Out of Eucalyptus loxophleba subsp. supralaevis on drainage areas, going upslope, Acacia thicket

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	476357	6773215	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name:	MLEDN01
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 395185.9E 6758909.45N
Comments:	Unvegetated salt pan, skeletons of Tecticornias, Narrow strip on verge that is similar to MLED04

SPECIES LIST

No species recorded.

PHOTOS

Site Name:	MLEDN02
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 395403.15E 6758883.3N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	(other) - Historical disturbance
Comments:	Lot of bare ground

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Frankenia pauciflora			
**Parapholis incurva*			
Senecio lacustrinus			
Siemssenia capillaris			
Tecticornia indica subsp. *bidens*			
Triglochin mucronata			

PHOTOS

Site Name: MLEDN03

Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 372773.16E 6759349.5N
Landform Type:	Low Rise
Soil Type:	Clay (other)
Soil Colour:	Red-Brown
CF Types:	Basalt (other)
Vegetation Condition:	Combined Vegetation Condition - CD - Completely Degraded
Comments:	Targeted survey not required, Isolated vegetation over agricultural weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Hakea recurva subsp. *recurva*			

PHOTOS

Site Name: MLEDN04

Site Type: MAPPING_NOTE

Survey Date: 17/09/2024

GPS Location: GDA94 Zone 50 372964.138E 6759360.499N

Vegetation Condition: Combined Vegetation Condition - CD - Completely Degraded

Comments: Minor drainage line and slopes. Brown clay loam with basalt (?) stones

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia tetragonophylla			
Atriplex vesicaria			
Cephalipterum drummondii			
Enchylaena tomentosa var. *tomentosa*			
Eucalyptus camaldulensis subsp. *arida*			
Eucalyptus loxophleba subsp. *loxophleba*			
Hakea recurva subsp. *recurva*			
Maireana tomentosa subsp. *tomentosa*			

PHOTOS

Site Name:	MLEDN05
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 373309.34E 6759411.45N
Vegetation Condition:	Combined Vegetation Condition - CD - Completely Degraded
Comments:	Similar to MLEDN04 but everything more isolated

SPECIES LIST

No species recorded.

PHOTOS

Site Name:	MLEDN06
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 373418.85E 6759716N
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	YAN55 list is fairly accurate, although did not see Acacia ericksoniae, Allocasuarina campestris (possible mis-ID of Melaleuca concreta), Anthocercis genistoides, Lepidosperma costale. Confirmed ID of Enchylaena tomentosa. Hakea preissii is actually Hakea recurva subsp. recurva. Agricultural weeds dominate the understorey

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Arthropodium dyeri			
Burchardia congesta			
Calotis hispidula			
Comesperma integerrimum			
Dodonaea inaequifolia			
Drosera glanduligera			
**Ehrharta calycina*			
**Ehrharta longiflora*			
Enchylaena tomentosa var. *tomentosa*			
Eremophila clarkei			
Erodium cygnorum			
Hakea recurva subsp. *recurva*			
Hyalosperma glutinosum subsp. *glutinosum*			
Melaleuca concreta			
Rhagodia drummondii			
Scholtzia uniovulata			
Thryptomene hyporhytis			
Thysanotus manglesianus			
Trachymene cyanopetala			

PHOTOS

Site Name:	MLEDN07
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 373138.93E 6759359.01N
Comments:	Similar to MLEDN03 with Acacia tetragonophylla

SPECIES LIST

No species recorded.

Site Name:	MLEDN08
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 393956.03E 6758333.55N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Disturbance:	Weeds, Salinity, (other) - Historical disturbance
Comments:	Very similar structure and composition to MLED01

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria			
Cotula cotuloides			
Didymanthus roei			
Frankenia pauciflora			
Maireana amoena			
Maireana eriosphaera			
**Mesembryanthemum nodiflorum*			
**Parapholis incurva*			
Pogonolepis muelleriana			
Senecio lacustrinus			
Tecticornia indica subsp. *bidens*			
Tecticornia sp. 'Karara 2' (Potentially undescribed)			
Triglochin mucronata			

PHOTOS

Site Name:	MLEDN09
Site Type:	MAPPING_NOTE
Survey Date:	17/09/2024
GPS Location:	GDA94 Zone 50 394215.2E 6758206.86N
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Primarily a degraded form of MLED01 vegetation, but with fewer Tecticornias and perennials in general. Transitioning to a higher elevation area which was likely historically equivalent to MLED03 but is now degraded. Same species as MLEDN08 but also with Atriplex amnicola and Rhodanthe chlorocephala subsp. splendida. Planted Eucalyptus loxophleba subsp. supralaevis and Melaleuca eleuterostachya

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex amnicola			
Eucalyptus loxophleba subsp. *supralaevis*			
Melaleuca eleuterostachya			
Rhodanthe chlorocephala subsp. *splendida*			

PHOTOS

Site Name:	MLEDN10
Site Type:	MAPPING_NOTE
Survey Date:	18/09/2024
GPS Location:	GDA94 Zone 50 403758.31E 6771551.75N
Landform Type:	Plain
Soil Type:	Sandy Loam
Soil Colour:	Brown
CF Types:	Laterite
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Historical railway. Significant weed cover and historical disturbance. Not sure if Lateritic gravel is from here or not

DOMINANT TAXA IN VEGETATION STRATA

Upper Stratum 1: *Acacia acuminata*, *Acacia coolgardiensis*, *Acacia sibina*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia coolgardiensis			
Acacia sibina			
**Arctotheca calendula*			
Austrostipa elegantissima			
**Avena barbata*			
Blennospora drummondii			
Darwinia capitellata			
Dianella revoluta var. *divaricata*			
Gonocarpus nodulosus			
Goodenia cycnopotamica			
**Hypochaeris glabra*			
**Monoculus monstrosus*			
Schoenia cassiniana			
**Sonchus oleraceus*			
Thysanotus manglesianus			
Trachymene cyanopetala			
Trachymene ornata			
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEDN11
Site Type:	MAPPING_NOTE
Survey Date:	18/09/2024
GPS Location:	GDA94 Zone 50 403998.03E 6771318.96N
Landform Type:	Flat
Soil Type:	Sandy Clay
Soil Colour:	Brown
Soil Condition:	saline
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Saline area that has been ripped and planted with Casuarina obesa, numerous agricultural weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex codonocarpa			
Atriplex vesicaria			
Austrostipa elegantissima			
Casuarina obesa			
Didymanthus roei			
Enchylaena tomentosa var. *tomentosa*			
Maireana carnosa			
Maireana eriosphaera			
Maireana tomentosa subsp. *tomentosa*			
**Mesembryanthemum nodiflorum*			
**Parapholis incurva*			
Rhagodia drummondii			

PHOTOS

Site Name:	MLEDN12
Site Type:	MAPPING_NOTE
Survey Date:	18/09/2024
GPS Location:	GDA94 Zone 50 405810.95E 6771243.85N
Vegetation Condition:	Combined Vegetation Condition - CD - Completely Degraded
Comments:	Possible degraded version of MLED06. Scattered Eucalyptus loxophleba subsp. supralaevis over agricultural weeds with occasional native annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus loxophleba subsp. *supralaevis*			
Maireana tomentosa subsp. *tomentosa*			
Podolepis aristata subsp. *aristata*			

PHOTOS

Site Name:	MLEDN13
Site Type:	MAPPING_NOTE
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 422885.05E 6760526.18N
Soil Type:	Clay (other)
Soil Colour:	Red
Soil Condition:	Saline
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Degraded saline flat; probably once dominated by Tecticornia based on vegetation observed further south but now dominated by introduced species

DOMINANT TAXA IN VEGETATION STRATA

Lower Stratum 1: **Mesembryanthemum nodiflorum*, **Parapholis incurva*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
**Avena barbata*			
**Bromus rubens*			
**Hordeum leporinum*			
**Limonium lobatum*			
**Lolium perenne*			
Maireana brevifolia			
**Mesembryanthemum nodiflorum*			
**Parapholis incurva*			
Senecio lacustrinus			
**Sonchus oleraceus*			
Tecticornia sp. 'Karara 2' (Potentially undescribed)			

PHOTOS

Site Name:	MLEDN14
Site Type:	MAPPING_NOTE
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 431228.43E 6769112.13N
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Historically cleared (?revegetation area)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis			
Acacia longispinea			
Cephalipterum drummondii			
Daviesia hakeoides subsp. *subnuda*			
Myriocephalus gueriniae			
Panaetia lessonii			
Podolepis aristata subsp. *aristata*			
Trachymene ceratocarpa			

PHOTOS

Site Name: MLEDN15

Site Type: MAPPING_NOTE

Survey Date: 19/09/2024

GPS Location: GDA94 Zone 50 431248.3E 6769443.99N

Comments: More or less the same as MLEDN14

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia assimilis subsp. *assimilis*			
Acacia coolgardiensis			
Acacia ramulosa var. *ramulosa*			
Grevillea obliquistigma subsp. *obliquistigma*			

PHOTOS

Site Name: MLEDN16

Site Type: MAPPING_NOTE

Survey Date: 19/09/2024

GPS Location: GDA94 Zone 50 430928.52E 6769448.82N

Comments: More or less the same as MLEDN14 with scattered Ricinocarpos velutinus

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Ricinocarpos velutinus			

PHOTOS

Site Name:	MLEDN17
Site Type:	MAPPING_NOTE
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 431913.46E 6770357.45N
Landform Type:	Flat
Soil Type:	Clay Loam
Soil Colour:	Red-Brown
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Degraded version of MLED15. Tall open shrubland over agricultural weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
**Arctotheca calendula*			
**Echium plantagineum*			
**Lolium perenne*			
**Raphanus raphanistrum*			

PHOTOS

Site Name:	MLEDN18
Site Type:	MAPPING_NOTE
Survey Date:	19/09/2024
GPS Location:	GDA94 Zone 50 431983.7E 6770349.56N
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Equals MLEDN17 but shrubland with some native annuals but still dominated by agricultural weeds (same as MLEDN17)

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia ramulosa var. *ramulosa*			
Acacia tetragonophylla			
Calotis multicaulis			
Cephalipterum drummondii			
Goodenia sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)			
Rhodanthe charsleyae			

PHOTOS

Site Name: MLEDN19

Site Type: MAPPING_NOTE

Survey Date: 20/09/2024

GPS Location: GDA94 Zone 50 433923.42E 6770370.03N

Comments: Equals MLED10

SPECIES LIST

No species recorded.

Site Name: MLEDN20

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 401380.11E 6757938.83N

Vegetation Condition: Combined Vegetation Condition - D - Degraded

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria			
Calotis multicaulis			
Crassula colorata var. *acuminata*			
Eucalyptus loxophleba subsp. *supralaevis*			
Goodenia pusilliflora			
Maireana tomentosa subsp. *tomentosa*			
Melaleuca adnata			
Melaleuca eleuterostachya			
Rhodanthe chlorocephala subsp. *splendida*			
Sclerolaena diacantha			

PHOTOS

Site Name:	MLEDN21
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 401097.34E 6757952.33N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Comments:	Salt lake inland vegetation similar to MLED05. Isolated Melaleucas over low chenopod shrubland over native herbs and agricultural weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria			
**Avena barbata*			
**Bromus rubens*			
Didymanthus roei			
Enchylaena tomentosa var. *tomentosa*			
Frankenia pauciflora			
Hyalochlamys globifera			
**Limonium lobatum*			
**Lolium perenne*			
Maireana eriosphaera			
Maireana tomentosa subsp. *tomentosa*			
**Medicago minima*			
Melaleuca adnata			
Melaleuca eleuterostachya			
**Mesembryanthemum nodiflorum*			
**Pentameris airoides* subsp. *airoides*			
Pogonolepis muelleriana			
Rhodanthe chlorocephala subsp. *splendida*			
**Sonchus oleraceus*			
Tecticornia indica subsp. *bidens*			
Tecticornia sp. 'Karara 1' (Potentially undescribed)			

PHOTOS

Site Name:	MLEDN22
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 400747.05E 6757913.48N
Comments:	Equals MLEDN21 but more low lying. Similar to MLED02

SPECIES LIST

No species recorded.

Site Name: MLEDN23

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 400379.82E 6757933.76N

Vegetation Condition: Combined Vegetation Condition - G - Good

Comments: Similar to MLED16 with occasional Tecticornia indica subsp. bidens

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia eremaea			
Melaleuca acutifolia			
Melaleuca adnata			
Melaleuca hamata			
Tecticornia indica subsp. *bidens*			

PHOTOS

Site Name: MLEDN24

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 400177.94E 6757882.68N

Vegetation Condition: Combined Vegetation Condition - G - Good

Comments: Similar to MLED16 with occasional Eucalyptus loxophleba subsp. supralaevis

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus loxophleba subsp. *supralaevis*			

PHOTOS

Site Name: MLEDN25

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 399973.53E 6757866.36N

Comments: Similar to MLED17, Samphire shrubland in salt pan interspersed with bare areas

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex holocarpa			
Cotula cotuloides			
Gunniopsis septifraga			
**Lolium perenne*			
**Parapholis incurva*			
Senecio lacustrinus			
Tecticornia fimbriata (P3)			
Tecticornia peltata			
Tecticornia sp. 'Karara 2' (Potentially undescribed)			
Triglochin mucronata			

PHOTOS

Site Name: MLEDN26

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 399409.99E 6757811.53N

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Epitriche demissus (P2)			

Site Name:	MLEDN27
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 399304.34E 6757764.6N
Comments:	Same as MLEDN25

SPECIES LIST

No species recorded.

Site Name:	MLEDN28
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 399062.42E 6757706.38N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Comments:	Similar to MLED16

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Epitriche demissus (P2)			
Gnephosis macrocephala			
Tecticornia sp. 'Karara 1' (Potentially undescribed)			

PHOTOS

Site Name:	MLEDN29
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 398142.38E 6757678.45N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Comments:	Very similar to MLED03 to the south but all outside the Survey Area. Vegetation inside Survey Area is a degraded version of the vegetation outside the Survey Area, many agricultural weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex vesicaria			
Calotis multicaulis			
Goodenia rosea			
Lawrencella davenportii			
Podolepis aristata subsp. *aristata*			
Rhodanthe chlorocephala subsp. *splendida*			
Schoenia cassiniana			
Solanum nummularium			

PHOTOS

Site Name: MLEDN31

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 435824.46E 6770349.74N

Vegetation Condition: Combined Vegetation Condition - G - Good

Comments: Similar to MLED10, but no Acacia erinacea

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia andrewsii			

PHOTOS

Site Name:	MLEDN32
Site Type:	MAPPING_NOTE
Survey Date:	21/09/2024
GPS Location:	GDA94 Zone 50 437370.28E 6770180.15N
Vegetation Condition:	Combined Vegetation Condition - VG - Very Good
Comments:	Similar to MLED15

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia ramulosa			
Acacia tetragonophylla			
Exocarpos aphyllus			
Santalum acuminatum			

PHOTOS

Site Name: MLEDN33

Site Type: MAPPING_NOTE

Survey Date: 21/09/2024

GPS Location: GDA94 Zone 50 438596.34E 6770271.24N

Comments: Similar to MLED10

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia erinacea			
Acacia ramulosa var. *ramulosa*			
Eucalyptus kochii subsp. *plenissima*			
Eucalyptus loxophleba subsp. *supralaevis*			
Hakea recurva subsp. *recurva*			
Stenopetalum filifolium			

Site Name:	MLEDN34
Site Type:	MAPPING_NOTE
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 443097.8E 6769379.24N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Comments:	Appears to be historically cleared, very similar to MLED21 but no low shrubland here. Similar composition of annuals as MLED21. Structural change

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia coolgardiensis			
Acacia ramulosa var. *ramulosa*			
Eucalyptus arctata			

Site Name: MLEDN35

Site Type: MAPPING_NOTE

Survey Date: 22/09/2024

GPS Location: GDA94 Zone 50 440509.82E 6763667.85N

Comments: No perennial vegetation, only agricultural weed. Some annuals

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Hyalosperma glutinosum subsp. *glutinosum*			
Pogonolepis muelleriana			

PHOTOS

Site Name:	MLEDN36
Site Type:	MAPPING_NOTE
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 439890.15E 6763067.71N
Vegetation Condition:	Combined Vegetation Condition - D - Degraded
Comments:	Regrowth on pipeline. Tall open shrubland over mid sparse shrubland with some native annuals and weeds

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Dodonaea inaequifolia			
Goodenia berardiana			
Goodenia rosea			
**Monoculus monstrosus*			
**Pentameris airoides* subsp. *airoides*			
Pogonolepis muelleriana			
Roebuckiella halophila (P3)			
**Sonchus oleraceus*			
Trachymene ornata			
**Vulpia myuros* forma *myuros*			
Waitzia acuminata var. *acuminata*			

PHOTOS

Site Name:	MLEDN37
Site Type:	MAPPING_NOTE
Survey Date:	22/09/2024
GPS Location:	GDA94 Zone 50 440416.94E 6763461.49N
Vegetation Condition:	Combined Vegetation Condition - CD - Completely Degraded
Comments:	Occasional regrown Acacia acuminata over agricultural weeds and some natives

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Austrostipa trichophylla			
Pogonolepis muelleriana			
Sclerolaena gardneri			

PHOTOS

Site Name:	MLEJN01
Site Type:	MAPPING_NOTE
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 475139.0587E 6772928.317N
Comments:	No Acacia karinae in vicinity

SPECIES LIST

No species recorded.

Site Name:	MLEKN01
Site Type:	MAPPING_NOTE
Survey Date:	11/08/2024
GPS Location:	GDA94 Zone 50 464400.32E 6770446.81N
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Comments:	Transitional vegetation - mostly same as MLEK19, but has less acacia/overstorey. Transitioning to sandplain vegetation

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	464400	6770447	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name: MLEKN02

Site Type: MAPPING_NOTE

Survey Date: 12/08/2024

GPS Location: GDA94 Zone 50 463825.2E 6770333.09N

Vegetation Condition: Combined Vegetation Condition - VG - Very Good

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	463825	6770333	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Eucalyptus loxophleba subsp. *supralaevis*			

Site Name:	MLEKN03
Site Type:	MAPPING_NOTE
Survey Date:	12/08/2024
GPS Location:	GDA94 Zone 50 462767.58E 6771030.18N
Vegetation Condition:	Combined Vegetation Condition - G - Good
Comments:	Previous gravel pit, has been rehabilitated

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	462768	6771030	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia acuminata			
Acacia assimilis subsp. *assimilis*			
Acacia duriuscula			
Acacia ramulosa			
Androcalva luteiflora			
Calycopeplus paucifolius			
Dodonaea inaequifolia			
Erodium cygnorum			
Goodenia cycnopotamica			
Grevillea granulosa (P3)			
Hysterobaeckea setifera subsp. *setifera*			
Melaleuca cordata			
Myriocephalus gueriniae			
Ptilotus obovatus			

Site Name:	MLEMN01
Site Type:	MAPPING_NOTE
Survey Date:	25/08/2024
GPS Location:	GDA94 Zone 50 448276.27E 6771278.72N
Vegetation Condition:	Combined Vegetation Condition - E - Excellent
Comments:	Start of change from Acacia scrubland to more wet vegetation, with paperbarks to west

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	448276	6771279	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name: MLEMN02

Site Type: MAPPING_NOTE

Survey Date: 26/08/2024

GPS Location: GDA94 Zone 50 447380E 6771252.62N

Comments: Salt lake with standing water. No vegetation apparent

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	447380	6771253	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name: MLEMN03

Site Type: MAPPING_NOTE

Survey Date: 26/08/2024

GPS Location: GDA94 Zone 50 447513.98E 6771262.83N

Comments: Similar to MLEM18

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	447514	6771263	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Atriplex codonocarpa			
Maireana atkinsiana			
Maireana eriosphaera			
Sarcozona praecox			
Senecio lacustrinus			
Tecticornia disarticulata			

Site Name: MLEMN04

Site Type: MAPPING_NOTE

Survey Date: 27/08/2024

GPS Location: GDA94 Zone 50 442554.08E 6770168.91N

Comments: Same as MLEM28

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	442554	6770169	
Corner 2			
Corner 3			
Corner 4			

SPECIES LIST

No species recorded.

Site Name:	MLEN-001
Site Type:	MAPPING_NOTE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 495642.996E 6779218.032N
Comments:	Vegetation change

SPECIES LIST

No species recorded.

Site Name: MLEN-002

Site Type: MAPPING_NOTE

Survey Date: 03/10/2023

GPS Location: GDA94 Zone 50 490148.5329E 6778901.301N

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita			
Acacia sibina			
Eucalyptus kochii subsp. *amaryssia*			
Maireana carnosa			
Sclerolaena fusiformis			

Site Name:	MLEN-003
Site Type:	MAPPING_NOTE
Survey Date:	03/10/2023
GPS Location:	GDA94 Zone 50 489957.3779E 6777882.387N
Comments:	Old 'rehab' track between GIND-23 and GIND-25

SPECIES LIST

No species recorded.

PHOTOS

Site Name:	MLEN-004
Site Type:	MAPPING_NOTE
Survey Date:	03/10/2023
GPS Location:	GDA94 Zone 50 490006.7127E 6777978.267N
Landform Type:	Drainage Line
Comments:	Looked for Rhodanthe collina (P3) in this location (drainage line and surrounds, rocky). Evidence of dead daisies but nothing that can be IDed. Only one plant spreading from base (dead)

SPECIES LIST

No species recorded.

PHOTOS

Site Name: MLEN-005

Site Type: MAPPING_NOTE

Survey Date: 03/10/2023

GPS Location: GDA94 Zone 50 488715.3372E 6777847.328N

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia incognita			
Maireana carnosa			

PHOTOS

Site Name: MLEN-006

Site Type: MAPPING_NOTE

Survey Date: 04/10/2023

GPS Location: GDA94 Zone 50 490587.0028E 6779270.391N

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Dianella revoluta var. *divaricata*			
Eucalyptus kochii subsp. *amaryssia*			

PHOTOS

Site Name: MLEN-007

Site Type: MAPPING_NOTE

Survey Date: 04/10/2023

GPS Location: GDA94 Zone 50 490173.343E 6779466.702N

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia caesaneura			

PHOTOS

Site Name: MLEN-008

Site Type: MAPPING_NOTE

Survey Date: 04/10/2023

GPS Location: GDA94 Zone 50 490046.3363E 6779398.897N

Comments: Slight change in soil from MLEN-007; more ironstone here. Occasional Aluta aspera subsp. hesperia and Grevillea obliquistigma subsp. obliquistigma but otherwise the same vegetation as MLEN-007

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aluta aspera subsp. *hesperia*			
Grevillea obliquistigma subsp. *obliquistigma*			

Site Name: MLEN-009

Site Type: MAPPING_NOTE

Survey Date: 04/10/2023

GPS Location: GDA94 Zone 50 490032.78E 6779323.77N

Comments: Eucalyptus kochii subsp. amaryssia and Melaleuca leiocarpa with species from MLER-002, but slightly stonier. Heads slightly upslope to the south, where it is dominated by Acacia latior

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Eremophila latrobei subsp. *latrobei*			
Eucalyptus kochii subsp. *amaryssia*			
Melaleuca leiocarpa			

PHOTOS

Site Name:	MLEN-010
Site Type:	MAPPING_NOTE
Survey Date:	04/10/2023
GPS Location:	GDA94 Zone 50 490130.3255E 6779256.711N
Landform Type:	Plain
Comments:	East of MLEN-009. Vegetation becomes more open. Dominated by Grevillea obliquistigma subsp. obliquistigma

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Grevillea obliquistigma subsp. *obliquistigma*			

Site Name:	MLEN-011
Site Type:	MAPPING_NOTE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492437.78E 6778993.34N
Slope Class:	Very Gently Inclined (1°)
Aspect:	SW
Soil Type:	Silty Loam (other)
Soil Colour:	Red
CF Abundance:	0%
Comments:	Similar vegetation to MLER-005. Acacia thicket with Eucalyptus kochii subsp. amaryssia, and scattered patches that are more open

DOMINANT TAXA IN VEGETATION STRATA

Mid Stratum 1: *Acacia latior*

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia assimilis subsp. *assimilis*			
Acacia latior	3		30
Aluta aspera subsp. *hesperia*	1		10
Callitris columellaris	3		2
Drummondita fulva (P3)			
Eremophila clarkei	1		0.1
Eremophila forrestii subsp. *forrestii*	1		0.1
Eucalyptus kochii subsp. *amaryssia*			
Melaleuca leiocarpa			
Philotheca deserti subsp. *deserti*			
Pimelea microcephala subsp. *microcephala*	0.7		0.1

PHOTOS

Site Name: MLEN-012

Site Type: MAPPING_NOTE

Survey Date: 05/10/2023

GPS Location: GDA94 Zone 50 492368.9383E 6778930.694N

Comments: Same community as MLEN-011 with a few extra species

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia sibina			
Allocasuarina acutivalvis subsp. *prinsepiana*			

Site Name:	MLEN-013
Site Type:	MAPPING_NOTE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492204.9653E 6778847.71N
Soil Type:	Sandy Clay Loam
Soil Colour:	Red
Comments:	Vegetation change to Melaleuca hamata over Acacia latior, then Eucalyptus kochii subsp. amaryssia over Acacia latior with Melaleuca leiocarpa

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Eucalyptus kochii subsp. *amaryssia*			
Melaleuca hamata			
Melaleuca leiocarpa			

Site Name:	MLEN-014
Site Type:	MAPPING_NOTE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492130.1204E 6778749.828N
Comments:	Change to Eucalyptus woodland to southwest

SPECIES LIST

No species recorded.

Site Name:	MLEN-015
Site Type:	MAPPING_NOTE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492214.79E 6778700.92N
Comments:	Change from Eucalyptus woodland in southwest to Acacia thicket with Eucalyptus kochii subsp. amaryssia in northeast

SPECIES LIST

No species recorded.

Site Name: MLEN-016

Site Type: MAPPING_NOTE

Survey Date: 05/10/2023

GPS Location: GDA94 Zone 50 492310.8417E 6778808.006N

Soil Type: Sandy Silt (other)

Soil Colour: Red

Comments: Pockets of Hysterobaeckea setifera subsp. setifera heath with Eucalyptus kochii subsp. amaryssia

SITE POINTS

Label	Easting	Northing	Comments
Corner 1	488112	6778294	
Corner 2	488132	6778304	
Corner 3	488136	6778281	
Corner 4	488118	6778279	

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Aluta aspera subsp. *hesperia*			
Eucalyptus kochii subsp. *amaryssia*			
Hysterobaeckea setifera subsp. *setifera*			

Site Name: MLEN-017

Site Type: MAPPING_NOTE

Survey Date: 05/10/2023

GPS Location: GDA94 Zone 50 492318.6956E 6778847.454N

Comments: Vegetation change to Acacia scrub to north

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			

Site Name: MLEN-018

Site Type: MAPPING_NOTE

Survey Date: 05/10/2023

GPS Location: GDA94 Zone 50 492567.1287E 6779061.339N

Comments: Heading upslope to north and the road. Vegetation change from MLEQ-008 vegetation back to Acacia latior dominated scrub community, with Eucalyptus kochii subsp. amaryssia, Hysterobaeckea setifera subsp. setifera and Acacia sibina

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia latior			
Acacia sibina			
Eucalyptus kochii subsp. *amaryssia*			
Hysterobaeckea setifera subsp. *setifera*			

Site Name:	MLEN-019
Site Type:	MAPPING_NOTE
Survey Date:	05/10/2023
GPS Location:	GDA94 Zone 50 492991.9447E 6778984.827N
Comments:	Vegetation becoming more open to south. Was Acacia latior and Hysterobaeckea setifera subsp. setifera in the north, but heading downslope it transitions with Melaleuca leiocarpa coming in. Hysterobaeckea setifera subsp. setifera only in small-ish patches. None in the vicinity of MLEQ-009

SPECIES LIST

No species recorded.

Site Name: MLEN-020

Site Type: MAPPING_NOTE

Survey Date: 06/10/2023

GPS Location: GDA94 Zone 50 495604.784E 6779410.355N

Soil Type: Clay Loam

Soil Colour: Red-Brown

Rock Outcrop: Dolerite, 10-20% bedrock exposed

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia burkittii	3		5
Acacia exocarpoides	1		0.1
Acacia incognita	3		5
Acacia latior	3		10
Acacia obtecta	2		3
Acacia tetragonophylla	1.3		1
Eremophila clarkei	1.5		0.5
Hakea recurva subsp. *recurva*	1.5		0.5
Hemigenia yalgensis	0.5		0.1
Scaevola spinescens			

PHOTOS

Site Name: MLEN-021

Site Type: MAPPING_NOTE

Survey Date: 06/10/2023

GPS Location: GDA94 Zone 50 495083.4838E 6779418.674N

Aspect: N

Soil Type: Clay Loam

Soil Colour: Red-Brown

CF Abundance: 50-90%

CF Sizes: 2-6mm

CF Types: Ironstone

Comments: Drainage area

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Acacia tetragonophylla	1.5		0.5
Borya sphaerocephala			
Calandrinia primuliflora	0.05		0.1
Hysterobaeckea setifera subsp. *setifera*	1		15
Ptilotus gaudichaudii			
Ptilotus obovatus	0.3		0.1

PHOTOS

Site Name:	MLEN-022
Site Type:	MAPPING_NOTE
Survey Date:	06/10/2023
GPS Location:	GDA94 Zone 50 494993.276E 6779457.634N
Comments:	Change in vegetation type from drainage area going uphill to west

SPECIES LIST

No species recorded.

Site Name:	MLETN01
Site Type:	MAPPING_NOTE
Survey Date:	23/08/2024
GPS Location:	GDA2020 Zone 50 478717.9928E 6774049.918N
Comments:	Disturbed laterite gravelly area dominated by Allocasuarina acutivalvis subsp. prinsepiana

SPECIES LIST

Taxon Name	Avg. Height	Count Alive	Cover Alive
Allocasuarina acutivalvis subsp. *prinsepiana*			

APPENDIX F

Photos of Significant Flora Taxa Recorded in the Survey Area

***Acacia karinae* (P3)**

Photo source: Umwelt

***Acacia woodmaniorum* (T)**

Photo source: Umwelt (main); B.R. Maslin (inset)

***Allocasuarina tessellata* (P3)**

Photo source: Umwelt

***Baeckea* sp. Perenjori (J.W. Green 1516) (P2)**

Photo source: Umwelt photo of WA Herbarium specimen

***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)**

Photo source: Umwelt (scanned specimen)

***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)**

Photo source: Umwelt

***Crassula* sp. nov (PU)**

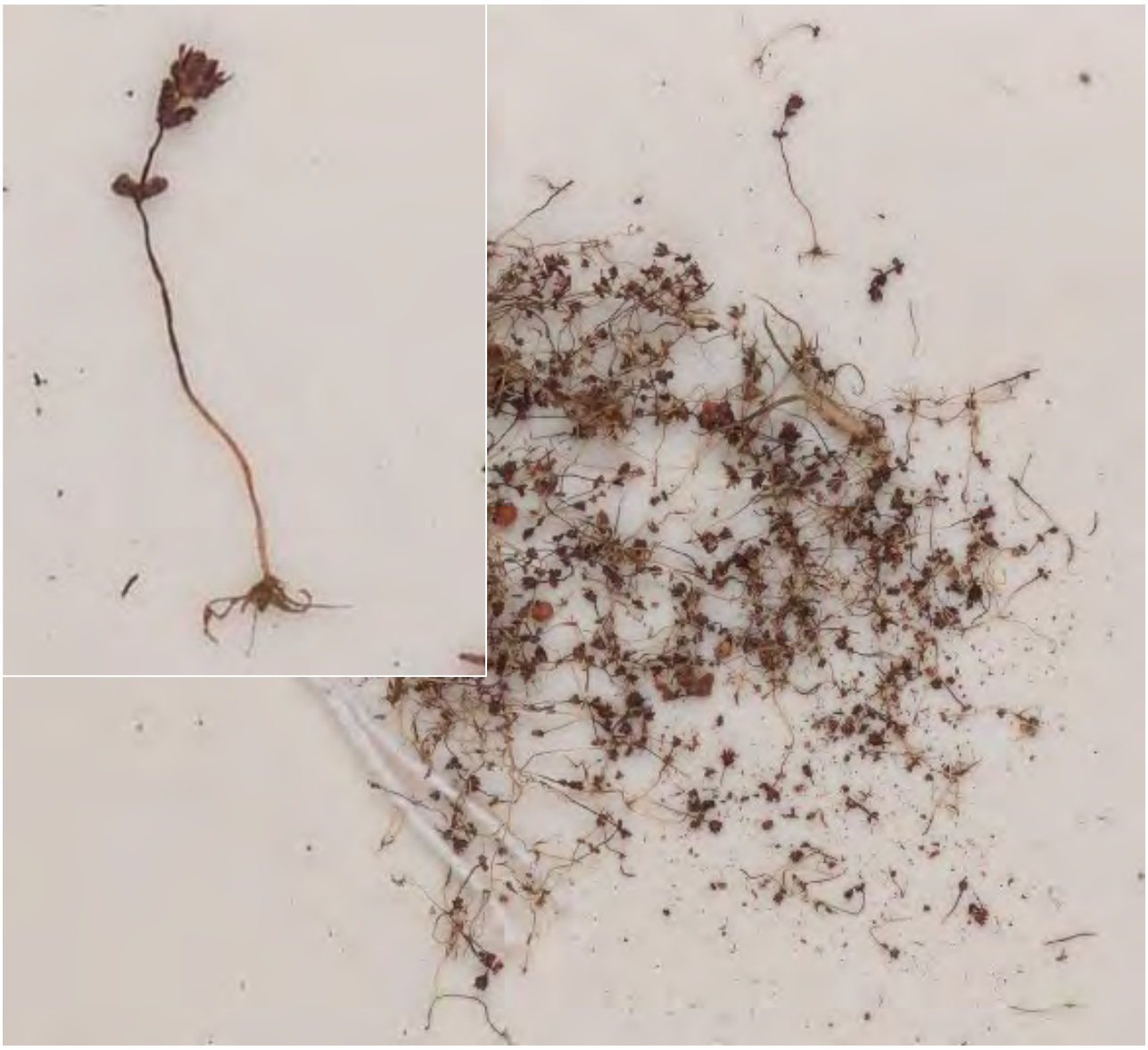


Photo source: WA Herbarium (scan of Umwelt specimen collected in the Survey Area in 2020)

***Drummondita fulva* (P3)**

Photo source: S. Dillon from Meissner and Markey (2007)

***Epitriche demissus* (P2)**

Photo source: Umwelt (scanned specimen)

***Eucalyptus synandra* (T)**

Photo source: Euclid (CANBR, 2020)

***Fitzwillia axilliflora* (P2)**

Photo source: Umwelt (scanned specimen)

***Gnephosis setifera* (P1)**

Photo source: Umwelt (scanned specimen)

***Grevillea globosa* (P3)**

Photo source: Umwelt

***Grevillea granulosa* (P3)**

Photo source: G. Byrne

***Grevillea scabrida* (P3)**

Photo source: Umwelt

***Grevillea subtiliflora* (P3)**

Photo source: M. Fagg (2018)

Gunniopsis divisa **(P3)**

Photo source: Umwelt

***Hemigenia* sp. aff. *botryphylla* (PU)**

Photo source: Umwelt (scanned specimen)

***Hibbertia cockertoniana* (P3)**

Photo source: G. Cockerton from Thiele and Cockerton (2015)

***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)**

Photo source: Umwelt

***Melaleuca barlowii* (P3)**

Photo source: M. Fagg (2014)

Menkea draboides **(P3)**

Photo source: Umwelt (scanned specimen)

***Micromyrtus acuta* (P3)**

Photo source: Umwelt (main); B. L. Rye from Rye (2006) (inset)

***Micromyrtus trudgenii* (P3)**

Photo source: Umwelt

***Millotia dimorpha* (P1)**

Photo source: Umwelt

***Nicotiana salina* (P1)**

Photo source: Umwelt (scanned specimen)

***Persoonia pentasticha* (P3)**

Photo source: Umwelt

***Petrophile pauciflora* (P3)**

Photo source: Umwelt (main); G. Byrne (inset)

***Pityrodia viscida* (P4)**


Photo source: G. Byrne

***Podotheca uniseta* (P3)**

Photo source: Umwelt (scanned specimen)

***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)**

Photo source: Umwelt

***Rhodanthe collina* (P3)**

Photo source: Umwelt

***Roebuckiella halophila* (P3)**

Photo source: Umwelt (scanned specimen)

Seringia exastia **(EPBC: CR)**

Photo source: G. Byrne

***Stenanthemum poicilum* (P3)**

Photo source: Umwelt

***Stylidium scintillans* (T)**

Photo source: Umwelt

***Swainsona picta* (P1)**

Photo source: J. Hruban (2020)

Tecticornia fimbriata **(P3)**

Photo source: Umwelt (scanned specimen)

***Tecticornia* sp. 'Karara 1' (PU)**

Photo source: Umwelt (scanned specimen)

***Tecticornia* sp. 'Karara 2' (PU)**

Photo source: Umwelt (scanned specimen)

***Tricoryne soullierae* (P3)**

Photo source: Umwelt (scanned specimen)

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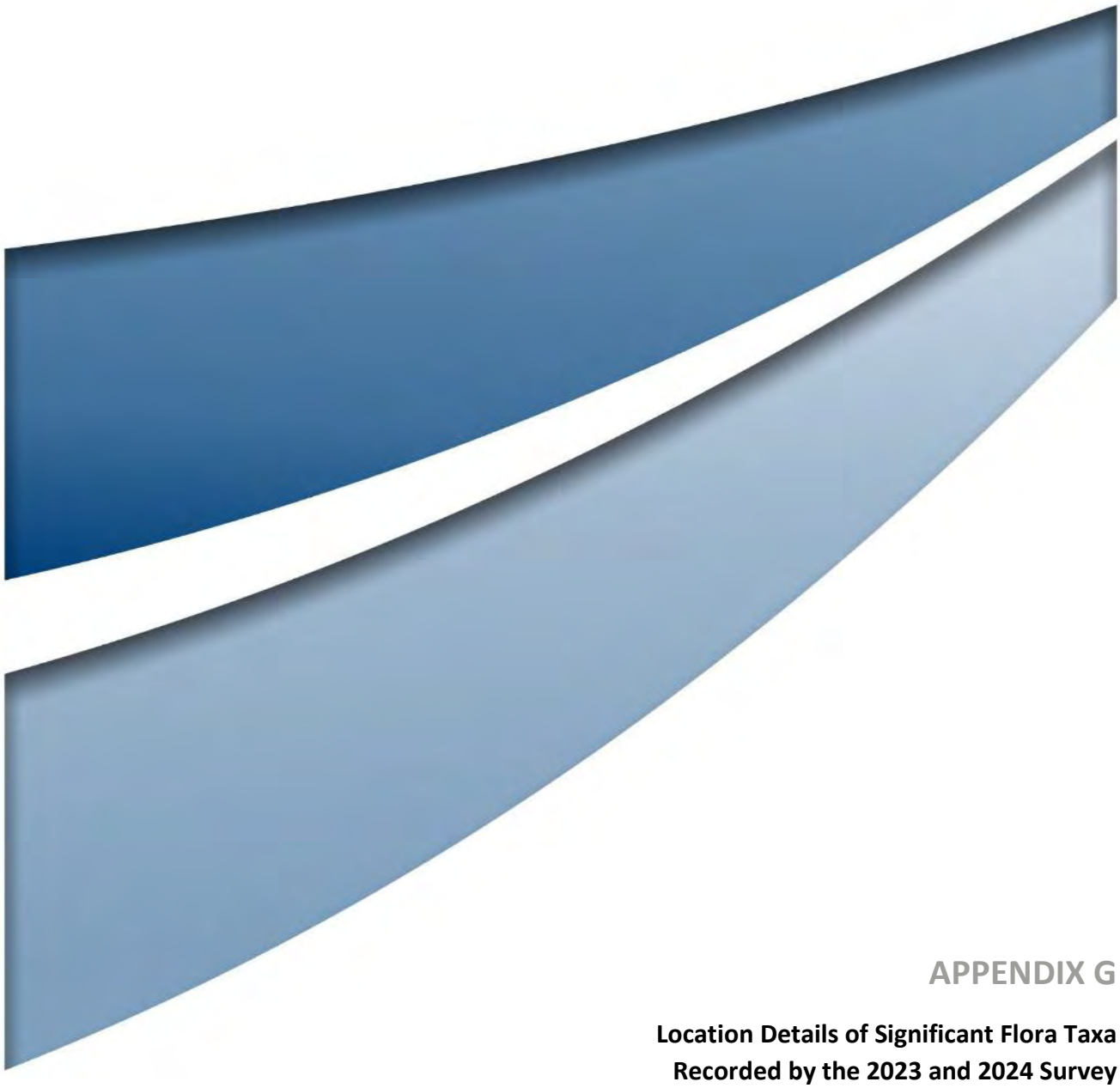


APPENDIX G

Location Details of Significant Flora Taxa Recorded by the 2023 and 2024 Survey

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

All locations are in GDA2020 Zone 50.

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Acacia karinae	P3	473174	6771743		1	Just outside quadrat MLEC08
Acacia karinae	P3	476893	6767127		1	Red-brown clay loam flat beneath *Eucalyptus kochii* subsp. *amaryssia*, *Acacia obtecta, Alyxia buxifolia*, and small dense patch of *Callitris columellaris*
Acacia karinae	P3	476741	6767306		1	
Acacia karinae	P3	477661	6774759		4	
Acacia karinae	P3	477671	6774571		1	
Acacia karinae	P3	477565	6774626		20	
Acacia karinae	P3	477577	6774589		10	
Acacia karinae	P3	477464	6774658		5	
Acacia karinae	P3	477465	6774631		2	
Acacia karinae	P3	477465	6774597		4	
Acacia karinae	P3	477467	6774564		8	
Acacia karinae	P3	477473	6774537		15	
Acacia karinae	P3	477467	6774474		3	
Acacia karinae	P3	477563	6774535		8	
Acacia karinae	P3	477506	6774566		40	
Acacia karinae	P3	477540	6774525		4	
Acacia karinae	P3	477569	6774505		6	
Acacia karinae	P3	477572	6774442		1	
Acacia karinae	P3	477469	6774375		5	
Acacia karinae	P3	478662	6768081		1	
Acacia karinae	P3	475486	6766971		1	
Acacia karinae	P3	475103	6766448		3	
Acacia karinae	P3	475106	6766327		2	
Acacia karinae	P3	476749	6766187		1	
Acacia karinae	P3	476732	6766352		1	
Acacia karinae	P3	476642	6766158		2	
Acacia karinae	P3	476777	6773558		2	
Acacia karinae	P3	476682	6773613		1	
Acacia karinae	P3	476519	6773462		1	
Acacia karinae	P3	476507	6773439		1	
Acacia karinae	P3	476180	6773393		1	
Acacia karinae	P3	476620	6773490		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Acacia karinae	P3	476623	6773453		1	
Acacia karinae	P3	476766	6773469		3	
Acacia karinae	P3	476570	6773482		12	
Acacia karinae	P3	476572	6773544		2	
Acacia karinae	P3	476524	6773477		1	
Acacia karinae	P3	476722	6773502		1	
Acacia karinae	P3	475822	6773100		2	
Acacia karinae	P3	475818	6773132		4	
Acacia karinae	P3	475828	6773184		7	
Acacia karinae	P3	475816	6773209		3	
Acacia karinae	P3	475831	6773244		5	
Acacia karinae	P3	475868	6772974		10	
Acacia karinae	P3	475863	6773099		15	
Acacia karinae	P3	475873	6773233		10	
Acacia karinae	P3	475722	6773079		1	
Acacia karinae	P3	476067	6773142		2	
Acacia karinae	P3	475911	6772940		12	
Acacia karinae	P3	475920	6772987		25	
Acacia karinae	P3	475922	6773038		30	
Acacia karinae	P3	475921	6773088		10	
Acacia karinae	P3	475918	6773168		15	
Acacia karinae	P3	475923	6773212		20	
Acacia karinae	P3	475916	6773238		15	
Acacia karinae	P3	476016	6773207		25	
Acacia karinae	P3	476016	6773174		30	
Acacia karinae	P3	475771	6773148		15	
Acacia karinae	P3	475769	6773054		10	
Acacia karinae	P3	477465	6768088		1	
Acacia karinae	P3	476180	6773190		2	
Acacia karinae	P3	476169	6773287		2	
Acacia karinae	P3	475955	6773368		2	
Acacia karinae	P3	476027	6773237		10	
Acacia karinae	P3	476071	6773255		5	
Acacia karinae	P3	476083	6773293		10	
Acacia karinae	P3	476119	6773306		3	
Acacia karinae	P3	476023	6773285		3	
Acacia karinae	P3	475965	6773027		6	
Acacia karinae	P3	475972	6773068		3	
Allocasuarina tessellata	P3	475082	6767950		1	
Allocasuarina tessellata	P3	477670	6774741		15	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Allocasuarina tessellata	P3	477677	6774806		12	
Allocasuarina tessellata	P3	477923	6774731		10	
Allocasuarina tessellata	P3	477718	6774761		4	
Allocasuarina tessellata	P3	477815	6774783		11	
Allocasuarina tessellata	P3	477620	6774756		50	
Allocasuarina tessellata	P3	477974	6774803		3	
Allocasuarina tessellata	P3	477965	6774787		50	
Allocasuarina tessellata	P3	477966	6774723		6	
Allocasuarina tessellata	P3	477766	6774834		8	
Allocasuarina tessellata	P3	477557	6774796		30	
Allocasuarina tessellata	P3	477575	6774789		50	
Allocasuarina tessellata	P3	477568	6774766		8	
Allocasuarina tessellata	P3	477565	6774626		8	
Allocasuarina tessellata	P3	477577	6774589		50	
Allocasuarina tessellata	P3	477961	6774635		5	
Allocasuarina tessellata	P3	477467	6774564		2	
Allocasuarina tessellata	P3	477471	6774504		25	
Allocasuarina tessellata	P3	477523	6774550		13	
Allocasuarina tessellata	P3	477518	6774490		30	
Allocasuarina tessellata	P3	477517	6774446		50	
Allocasuarina tessellata	P3	477570	6774563		50	
Allocasuarina tessellata	P3	477563	6774535		15	
Allocasuarina tessellata	P3	477540	6774525		15	
Allocasuarina tessellata	P3	477567	6774475		15	
Allocasuarina tessellata	P3	477816	6774109		2	
Allocasuarina tessellata	P3	479075	6774907		1	
Allocasuarina tessellata	P3	474220	6772036		1	
Allocasuarina tessellata	P3	478877	6774258		1	
Allocasuarina tessellata	P3	475143	6766222		1	
Allocasuarina tessellata	P3	475130	6767067		1	
Allocasuarina tessellata	P3	475950	6766217		11	
Allocasuarina tessellata	P3	475791	6767651		1	
Allocasuarina tessellata	P3	475624	6773177		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	471614	6766753	KIOP 226		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	471710	6766580	MLEC01		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	483748	6772417	MLEC06		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	483739	6772142	MLEC07		

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474201	6770823		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475087	6766131		2	Outside SA
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476172	6773471		1	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476720	6773177		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476514	6773074		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	472377	6767599	MLEC02		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	463028	6771869	MLEC16		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	463622	6770396	MLEC18		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	456322	6771936	MLEM03		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	454780	6771989	MLEM05		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	453848	6772145	MLEM07		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	453148	6772184	MLEM08		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	434391	6770379	MLED14		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	473164	6771733	MLEC08		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475217	6773664		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475150	6773669		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478312	6775521		5	Outside SA
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478327	6775525		1	Outside SA
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478350	6775516		5	Outside SA
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478214	6775519		5	Just outside SA
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	454316	6772119	MLEM06		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	453517	6771970	MLEM09		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	455560	6769265	MLEM11		

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	479645	6772993		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476287	6766663		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476040	6766481		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475639	6767864		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475635	6767876		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475078	6767879		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474227	6770466		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474376	6770204		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474274	6770285		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474318	6770144		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474315	6770320		10	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474313	6770417		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474463	6770530		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474464	6770442		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474472	6770399		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474668	6770196		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474658	6770393		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474501	6770492		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474476	6770125		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474471	6770034		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474474	6770019		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474550	6769991		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474621	6770375		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474648	6770399		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474612	6770425		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474270	6770600		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478073	6775373		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478070	6775058		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477921	6775265		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477907	6775085		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477923	6774809		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478016	6774926		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478126	6775291		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478117	6775233		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478120	6775115		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478180	6775469		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478080	6774870		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478072	6774972		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478068	6775057		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478078	6775129		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478074	6775169		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477974	6775294		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477974	6774803		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477965	6774787		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477557	6774796		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477575	6774789		3	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477568	6774766		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477868	6774842		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477565	6774626		6	?Greenstone/dolerite
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477577	6774589		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477757	6774327		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477719	6774338		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477817	6774353		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477626	6774327		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478074	6774451		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477973	6774418		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477972	6774399		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477570	6774563		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477506	6774566		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477569	6774505		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477572	6774442		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477571	6774400		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477574	6774342		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477572	6774308		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478120	6773848		2	*Acacia-Aluta* upland
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478069	6773768		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478061	6773933		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477969	6773897		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477819	6774214		10	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477769	6774144		1	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477516	6774203		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477574	6774272		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478222	6775346		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478219	6775238		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478230	6775173		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478276	6775499		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478283	6775477		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478282	6775464		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478269	6775460		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478247	6775457		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478276	6775392		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478274	6775199		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478272	6775186		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478267	6775112		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478320	6775172		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478318	6775449		1	*Acacia-Allocasuarina* shrubs over *Styphelia*, *Austrostipa*, annuals on stony plain (quartz, ironstone), red-brown clay loam. Co-occurs with more *Caesia* spp.
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478317	6775450		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478312	6775449		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478310	6775453		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478308	6775436		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478291	6775426		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478304	6775424		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478320	6775441		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478333	6775447		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478315	6775460		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478320	6775481		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478315	6775477		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478318	6775496		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478315	6775498		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478320	6775512		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478344	6775514		1	Just in/on SA boundary
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478352	6775503		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478331	6775501		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478172	6775209		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478180	6775177		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478018	6774598		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478121	6774631		2	Low stony rise (quartz/ironstone)
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478127	6774618		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478062	6774548		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478067	6774604		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478268	6774324		25	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478083	6774144		15	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478032	6774160		10	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478017	6773958		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478076	6773979		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478068	6774026		16	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478073	6774069		13	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478061	6774164		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478073	6774210		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	478069	6774258		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474372	6770784		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474326	6770760		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474321	6770991		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474145	6771036		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474171	6770999		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474223	6771029		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474217	6771063		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474664	6770859		3	Flowers white, purple-red outside
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474618	6770876		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474125	6772068		2	Granite area
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474473	6772452		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474519	6772458		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474517	6772416		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474372	6772003		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474667	6772191		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474591	6772415	MLEC05		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477973	6773851		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	477975	6773791		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475639	6767464		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475845	6767304		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475843	6767225		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475445	6766637		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475440	6766257		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475441	6766188		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475500	6766441		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475496	6766184		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475499	6766151		10	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475389	6766354		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475543	6767236		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475537	6767212		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475034	6766233		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475243	6766314		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475242	6766890		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475237	6767087		1	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475439	6767077		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475642	6767227		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475843	6767182		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475841	6767168		2	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475086	6766678		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475103	6766490		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475098	6766349		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475088	6766229		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475294	6766169		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475297	6766233		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475495	6766872		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475945	6767133		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475914	6767165		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475389	6767266		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475845	6766602		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476089	6766892		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475940	6766271		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475839	6766543		3	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475845	6766477		3	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475840	6766231		5	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476033	6766237		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476335	6766302		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476345	6766315		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476333	6766385		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476351	6766433		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476294	6766429		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476306	6766202		10	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476395	6766367		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476383	6766423		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476399	6766522		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476351	6766501		8	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476399	6766495		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476414	6766499		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476389	6766516		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476140	6766757		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475845	6766221		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475440	6767561		1	White flowers
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476724	6773232		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476624	6773539		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476621	6773483		11	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476687	6773445		6	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476564	6773448		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476572	6773544		2	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476823	6773414		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476763	6773525		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476820	6773031		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476861	6773200		7	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476627	6773004		30	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476775	6773029		5	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	476769	6773014		8	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475273	6773515	MLEC03		
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475169	6773619		10	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475264	6773660		10	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474471	6772852		3	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474516	6772624		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474662	6772575		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474321	6772796		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	474364	6772625		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475537	6767809		4	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475438	6767450		1	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1	475919	6773320		1	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	476160	6773490		10	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487642	6777982		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487578	6777925		1,000	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487699	6778047		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487678	6778035		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487852	6778130		2,000	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487800	6778109		600	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487784	6778108		400	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487750	6778079		400	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	487825	6778108		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479939	6774404		200	Just inside SA
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479672	6774224		500	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479822	6774356		300	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479823	6774342		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479816	6774274		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479818	6774138		150	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479821	6774104		5	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479632	6774286		50	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	478461	6775449		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	478065	6774778		100	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	477572	6774308		500	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479874	6774474		1	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479470	6774014		10	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479229	6773876		10	Scattered plants also up the slope
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479441	6774046		200	Co-occurs with *Calotis hispidula*
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479219	6773826		500	Laterised ironstone outcrop; below edge of cap on top of the hill, NW side, continues downslope
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479223	6773846		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	478868	6773515		300	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	478626	6773369		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	476277	6773499		20	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	475916	6772345		200	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	475526	6773202		1,000	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	475927	6772549		500	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	475921	6772509		500	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	476327	6773340		20	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	475778	6772721		50	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3	479928	6773857		150	Just inside SA; on BIF scree
Drummondita fulva	P3	492439	6778995	MLEN-011		
Drummondita fulva	P3	492556	6778974	MLEQ-008		
Drummondita fulva	P3	489863	6777476	GIND-23		
Drummondita fulva	P3	494785	6779433		4	Red-brown clay loam simple slope 3 degrees with <10 % ironstone gravel
Drummondita fulva	P3	492716	6779093		20	
Drummondita fulva	P3	492676	6779113		10	
Drummondita fulva	P3	492648	6779123		5	
Drummondita fulva	P3	492874	6779137		6	
Drummondita fulva	P3	492839	6779140		40	
Drummondita fulva	P3	492823	6779133		6	
Drummondita fulva	P3	487491	6778726		3	
Drummondita fulva	P3	487298	6778557		1	
Drummondita fulva	P3	487153	6778301		3	
Drummondita fulva	P3	487169	6778334		6	
Drummondita fulva	P3	487185	6778371		11	
Drummondita fulva	P3	487214	6778428		1	
Drummondita fulva	P3	487239	6778491		3	
Drummondita fulva	P3	487260	6778552		1	
Drummondita fulva	P3	487067	6778105		11	
Epitriche demissus	P2	399717	6757844			
Epitriche demissus	P2	399411	6757813	MLEDN26		
Epitriche demissus	P2	399063	6757708	MLEDN28		
Epitriche demissus	P2	398828	6757726	MLED17		
Fitzwillia axilliflora	P2	398828	6757726	MLED17		
Gnephosis setifera	P1	446876	6771103	MLEM23		
Gnephosis setifera	P1	399411	6757813			
Grevillea globosa	P3	475645	6766132		1	Outside SA
Grevillea globosa	P3	496050	6779417		1	
Grevillea globosa	P3	492383	6779205		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Grevillea globosa	P3	492499	6779237		9	
Grevillea globosa	P3	492482	6779247		5	
Grevillea globosa	P3	492553	6779221		1	
Grevillea globosa	P3	492542	6779219		8	
Grevillea globosa	P3	492525	6779232		16	
Grevillea globosa	P3	492452	6779238		6	
Grevillea globosa	P3	493043	6779145		1	
Grevillea globosa	P3	477285	6766798		1	
Grevillea globosa	P3	477245	6766714		2	
Grevillea globosa	P3	477252	6766673		5	
Grevillea globosa	P3	477245	6766613		2	
Grevillea globosa	P3	477468	6775301		1	
Grevillea globosa	P3	477774	6775371		5	
Grevillea globosa	P3	477568	6775318		1	
Grevillea globosa	P3	477587	6775312		1	
Grevillea globosa	P3	478370	6774059		1	Acacia shrubland
Grevillea globosa	P3	479164	6774751		2	
Grevillea globosa	P3	478771	6774481		2	
Grevillea globosa	P3	477476	6775116		1	
Grevillea globosa	P3	477526	6775066		2	
Grevillea globosa	P3	475583	6766681		4	
Grevillea globosa	P3	475580	6766670		2	
Grevillea globosa	P3	475545	6766691		3	
Grevillea globosa	P3	475554	6766669		4	
Grevillea globosa	P3	475543	6766372		8	Additional to historical records
Grevillea globosa	P3	475538	6766351		9	
Grevillea globosa	P3	475542	6766313		5	
Grevillea globosa	P3	475738	6766715		3	
Grevillea globosa	P3	475634	6766198		1	
Grevillea globosa	P3	475645	6766663		6	
Grevillea globosa	P3	476735	6766155		2	
Grevillea globosa	P3	476727	6766167		1	
Grevillea globosa	P3	476795	6766165		3	
Grevillea globosa	P3	477294	6766199		1	
Grevillea globosa	P3	477245	6766187		1	
Grevillea granulosa	P3	432542	6770347	MLED11		
Grevillea granulosa	P3	464605	6771649	MLEC14		
Grevillea granulosa	P3	467233	6770541	MLEK14		
Grevillea granulosa	P3	466735	6771616	MLEK15		

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Grevillea granulosa	P3	462913	6770366	MLEC19		
Grevillea granulosa	P3	463622	6770396	MLEC18		
Grevillea granulosa	P3	464765	6770402	MLEK19		
Grevillea granulosa	P3	466095	6770469	MLEK17		
Grevillea granulosa	P3	456322	6771936	MLEM03		
Grevillea granulosa	P3	455787	6771895	MLEM04		
Grevillea granulosa	P3	462769	6771032	MLEKN03		
Grevillea scabrida	P3	477667	6774076		30	
Grevillea scabrida	P3	477240	6773385		1	
Grevillea scabrida	P3	477871	6774802		2	
Grevillea scabrida	P3	478069	6774868		7	
Grevillea scabrida	P3	477924	6774831		8	
Grevillea scabrida	P3	477721	6774797		6	
Grevillea scabrida	P3	477717	6774854		1	
Grevillea scabrida	P3	477711	6774905		6	
Grevillea scabrida	P3	477974	6774803		8	
Grevillea scabrida	P3	477996	6774782		18	
Grevillea scabrida	P3	477966	6774723		3	Known location
Grevillea scabrida	P3	477776	6774882		1	
Grevillea scabrida	P3	477769	6774921		9	
Grevillea scabrida	P3	477575	6774816		10	
Grevillea scabrida	P3	477575	6774789		5	
Grevillea scabrida	P3	477560	6774702		2	
Grevillea scabrida	P3	477572	6775068		1	
Grevillea scabrida	P3	477665	6774638		10	
Grevillea scabrida	P3	477909	6774697		5	
Grevillea scabrida	P3	477717	6774634		3	
Grevillea scabrida	P3	477624	6774589		4	
Grevillea scabrida	P3	477771	6774578		5	
Grevillea scabrida	P3	477770	6774669		18	
Grevillea scabrida	P3	477770	6774719		7	
Grevillea scabrida	P3	477565	6774626		4	
Grevillea scabrida	P3	477577	6774589		20	
Grevillea scabrida	P3	477765	6774421		3	
Grevillea scabrida	P3	477465	6774597		20	
Grevillea scabrida	P3	477471	6774504		10	
Grevillea scabrida	P3	477467	6774474		2	
Grevillea scabrida	P3	477928	6774220		3	
Grevillea scabrida	P3	477711	6774345		5	
Grevillea scabrida	P3	477720	6774516		2	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Grevillea scabrida	P3	477632	6774480		6	
Grevillea scabrida	P3	477632	6774480		5	
Grevillea scabrida	P3	477770	6774239		14	Known location
Grevillea scabrida	P3	477768	6774311		23	
Grevillea scabrida	P3	477570	6774563		12	
Grevillea scabrida	P3	477563	6774535		28	
Grevillea scabrida	P3	477506	6774566		10	
Grevillea scabrida	P3	477540	6774525		8	
Grevillea scabrida	P3	477569	6774505		60	
Grevillea scabrida	P3	477567	6774475		27	
Grevillea scabrida	P3	477768	6774094		7	Known location
Grevillea scabrida	P3	477769	6774144		20	
Grevillea scabrida	P3	477770	6774206		17	Known location
Grevillea scabrida	P3	477478	6774230		4	
Grevillea scabrida	P3	477574	6774272		1	
Grevillea scabrida	P3	477581	6774231		12	
Grevillea scabrida	P3	477579	6774160		3	
Grevillea scabrida	P3	478062	6774548		12	
Grevillea scabrida	P3	478067	6774604		2	
Gunniopsis divisa	P3	400545	6757918	MLED16		
Gunniopsis divisa	P3	398828	6757726	MLED17		
Gunniopsis divisa	P3	478062	6775525		2	Just outside SA
Gunniopsis divisa	P3	477981	6775519		3	Outside SA
Gunniopsis divisa	P3	477627	6775522		25	Outside SA
Gunniopsis divisa	P3	477583	6775519		15	Outside SA
Gunniopsis divisa	P3	395478	6758834	MLED05		
Gunniopsis divisa	P3	477472	6775452		1	
Gunniopsis divisa	P3	478065	6775501		1	
Gunniopsis divisa	P3	478084	6775509		3	
Gunniopsis divisa	P3	477978	6775509		1	
Gunniopsis divisa	P3	477562	6775500		6	
Gunniopsis divisa	P3	478015	6775074		1	
Gunniopsis divisa	P3	479255	6773875		3	
Gunniopsis divisa	P3	479231	6773879		2	
Gunniopsis divisa	P3	479253	6773904		50	
Gunniopsis divisa	P3	479271	6773929		200	Known location
Gunniopsis divisa	P3	479310	6773911		15	
Gunniopsis divisa	P3	479323	6773878		100	
Gunniopsis divisa	P3	479271	6773910		30	
Gunniopsis divisa	P3	479261	6773902		30	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Gunniopsis divisa	P3	479281	6773882		30	Ironstone over calcrete, no *Gunniopsis propinqua* here
Gunniopsis divisa	P3	479295	6773864		100	
Gunniopsis divisa	P3	474545	6770886		1	
Gunniopsis divisa	P3	475741	6772413		30	
Gunniopsis divisa	P3	476020	6770586		1	
Hemigenia* sp. aff. *botryphylla	PU	445829	6770830	MLEM16		
Hemigenia* sp. aff. *botryphylla	PU	445939	6770844	MLEM17		
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476306	6773526		1	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476720	6773177		300	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	454316	6772119	MLEM06		
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	453517	6771970	MLEM09		
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476433	6773375		50	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476620	6773329		3	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476263	6773462		12	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1	476569	6773364		23	
Menkea draboides	P3	445939	6770844	MLEM17		
Menkea draboides	P3	469686	6764316	MLEK12		
Nicotiana salina	P1	400545	6757918	MLED16		
Persoonia pentasticha	P3	480182	6775096		1	
Persoonia pentasticha	P3	480389	6775013		2	Just outside SA
Persoonia pentasticha	P3	478200	6767981		1	Outside SA
Persoonia pentasticha	P3	477722	6767977		1	Outside SA
Persoonia pentasticha	P3	477655	6767981		4	Outside SA
Persoonia pentasticha	P3	478951	6768058		1	Outside SA
Persoonia pentasticha	P3	477680	6775514		1	
Persoonia pentasticha	P3	496098	6779489		3	
Persoonia pentasticha	P3	480623	6774535		2	
Persoonia pentasticha	P3	480821	6774686		1	
Persoonia pentasticha	P3	479523	6774186		1	
Persoonia pentasticha	P3	476693	6767985		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Persoonia pentasticha	P3	476743	6766635		1	
Persoonia pentasticha	P3	476756	6767119		1	
Persoonia pentasticha	P3	476724	6767485		1	
Persoonia pentasticha	P3	476744	6767794		1	
Persoonia pentasticha	P3	476142	6767631		1	
Persoonia pentasticha	P3	477157	6768064		1	
Persoonia pentasticha	P3	476841	6766651		1	
Persoonia pentasticha	P3	479328	6775305		1	
Persoonia pentasticha	P3	480278	6774897		1	
Persoonia pentasticha	P3	480283	6774891		1	
Persoonia pentasticha	P3	480272	6774756		1	
Persoonia pentasticha	P3	480070	6774998		1	
Persoonia pentasticha	P3	480070	6775095		1	
Persoonia pentasticha	P3	479864	6774792		1	
Persoonia pentasticha	P3	479663	6775282		1	
Persoonia pentasticha	P3	479466	6775120		1	
Persoonia pentasticha	P3	479269	6775173		1	
Persoonia pentasticha	P3	480211	6775065		1	
Persoonia pentasticha	P3	480016	6775071		1	
Persoonia pentasticha	P3	480016	6775118		1	
Persoonia pentasticha	P3	479427	6775139		1	
Persoonia pentasticha	P3	479958	6774940		1	
Persoonia pentasticha	P3	480478	6774874		1	
Persoonia pentasticha	P3	480607	6774899		1	
Persoonia pentasticha	P3	479314	6774957		1	
Persoonia pentasticha	P3	479478	6774732		1	
Persoonia pentasticha	P3	479270	6774705		1	
Persoonia pentasticha	P3	478669	6775367		1	
Persoonia pentasticha	P3	479830	6774698		1	
Persoonia pentasticha	P3	479430	6775039		1	
Persoonia pentasticha	P3	479223	6775058		2	
Persoonia pentasticha	P3	479028	6775012		1	
Persoonia pentasticha	P3	478623	6775212		1	
Persoonia pentasticha	P3	477661	6775506		1	
Persoonia pentasticha	P3	478122	6775434		1	
Persoonia pentasticha	P3	478151	6775419		1	
Persoonia pentasticha	P3	477777	6775152		1	
Persoonia pentasticha	P3	478128	6775263		1	
Persoonia pentasticha	P3	478119	6775251		1	
Persoonia pentasticha	P3	478206	6775484		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Persoonia pentasticha	P3	478177	6775287		1	
Persoonia pentasticha	P3	478156	6774940		1	
Persoonia pentasticha	P3	477969	6775233		1	
Persoonia pentasticha	P3	477981	6774913		1	
Persoonia pentasticha	P3	477967	6774288		1	
Persoonia pentasticha	P3	478325	6774213		1	
Persoonia pentasticha	P3	477579	6774160		1	
Persoonia pentasticha	P3	478271	6775377		2	
Persoonia pentasticha	P3	478278	6774889		2	
Persoonia pentasticha	P3	478320	6775220		1	
Persoonia pentasticha	P3	478318	6775449		1	
Persoonia pentasticha	P3	478361	6775174		1	20 m from 2020 records
Persoonia pentasticha	P3	478615	6775325		1	
Persoonia pentasticha	P3	478218	6774692		1	
Persoonia pentasticha	P3	478458	6774953		1	
Persoonia pentasticha	P3	478268	6774784		1	
Persoonia pentasticha	P3	478350	6774451		1	
Persoonia pentasticha	P3	478343	6774763		1	
Persoonia pentasticha	P3	478065	6774576		1	
Persoonia pentasticha	P3	478871	6774451		1	
Persoonia pentasticha	P3	479670	6774430		1	Additional to historical record
Persoonia pentasticha	P3	479467	6774431		1	
Persoonia pentasticha	P3	478989	6774305		1	
Persoonia pentasticha	P3	478363	6774343		1	
Persoonia pentasticha	P3	478367	6774355		1	
Persoonia pentasticha	P3	478724	6773575		1	
Persoonia pentasticha	P3	476150	6770394		1	
Persoonia pentasticha	P3	475696	6770685		1	
Persoonia pentasticha	P3	478897	6768080		2	
Persoonia pentasticha	P3	478889	6768038		1	
Persoonia pentasticha	P3	478854	6768034		1	
Persoonia pentasticha	P3	478814	6768035		1	
Persoonia pentasticha	P3	478612	6768082		1	
Persoonia pentasticha	P3	478662	6768081		1	
Persoonia pentasticha	P3	476346	6767384		1	
Persoonia pentasticha	P3	476296	6766236		1	
Persoonia pentasticha	P3	474666	6772517		2	
Persoonia pentasticha	P3	478614	6767996		1	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Persoonia pentasticha	P3	478456	6768138		1	
Persoonia pentasticha	P3	478303	6768030		1	
Persoonia pentasticha	P3	478288	6768032		1	
Persoonia pentasticha	P3	478271	6768034		1	
Persoonia pentasticha	P3	478251	6768030		2	
Persoonia pentasticha	P3	477659	6768023		1	
Persoonia pentasticha	P3	478382	6774185		1	
Podotheca uniseta	P3	400545	6757918	MLED16		
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	491048	6779368		4	0.8 m, pale orange-brown clay loam
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	490720	6779376		2	
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	487605	6778760		1	
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1	476794	6766445		1	Known location (2020); 1.3m
Rhodanthe collina	P3	478568	6771361		50	
Rhodanthe collina	P3	478562	6771380		20,000	
Rhodanthe collina	P3	477240	6773385		2	
Rhodanthe collina	P3	478819	6773429		30,000	
Rhodanthe collina	P3	478621	6770633		2,000	
Rhodanthe collina	P3	476123	6773453		20,000	Outside SA
Rhodanthe collina	P3	476260	6773509		15,000	Outside SA
Rhodanthe collina	P3	476308	6772600		60,000	Outside SA
Rhodanthe collina	P3	476064	6772391		50,000	Outside SA
Rhodanthe collina	P3	475538	6773255		50,000	Outside SA
Rhodanthe collina	P3	475521	6773231		20,000	Outside SA
Rhodanthe collina	P3	475414	6773208		15,000	Outside SA
Rhodanthe collina	P3	478639	6771315		3,000	
Rhodanthe collina	P3	477122	6773264		50	
Rhodanthe collina	P3	476100	6772416		10,000	Outside SA
Rhodanthe collina	P3	476027	6766107		20,000	Outside SA
Rhodanthe collina	P3	476034	6766127		10,000	Outside SA
Rhodanthe collina	P3	487421	6778687		120,000	
Rhodanthe collina	P3	487469	6778709		1,000	
Rhodanthe collina	P3	487540	6778749		1,000	
Rhodanthe collina	P3	487325	6778590		10,000	
Rhodanthe collina	P3	487343	6778623		20,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	479729	6774294		1	
Rhodanthe collina	P3	479925	6774087		1,000	
Rhodanthe collina	P3	479595	6772811		2,000	
Rhodanthe collina	P3	478659	6771401		50	
Rhodanthe collina	P3	478647	6771399		5,000	
Rhodanthe collina	P3	478621	6771392		3,000	
Rhodanthe collina	P3	476688	6766981		1	
Rhodanthe collina	P3	476944	6766676		1	
Rhodanthe collina	P3	476144	6766263		500	
Rhodanthe collina	P3	476138	6766324		3,500	
Rhodanthe collina	P3	476157	6766398		2	
Rhodanthe collina	P3	476137	6766500		200	
Rhodanthe collina	P3	476040	6766481		20,000	
Rhodanthe collina	P3	476058	6766495		10,000	
Rhodanthe collina	P3	476093	6766453		100	
Rhodanthe collina	P3	476093	6766469		50,000	
Rhodanthe collina	P3	476100	6766488		20,000	
Rhodanthe collina	P3	477874	6775110		30,000	
Rhodanthe collina	P3	477868	6775067		30,000	
Rhodanthe collina	P3	477471	6774769		50,000	
Rhodanthe collina	P3	477933	6775218		1,000	
Rhodanthe collina	P3	477925	6775191		500	
Rhodanthe collina	P3	477922	6775179		10,000	
Rhodanthe collina	P3	477718	6774761		3,000	
Rhodanthe collina	P3	477522	6774781		10,000	
Rhodanthe collina	P3	478023	6774707		5,000	
Rhodanthe collina	P3	478123	6775063		1,500	
Rhodanthe collina	P3	478124	6775040		200	
Rhodanthe collina	P3	478065	6774778		10,000	
Rhodanthe collina	P3	478072	6774808		25,000	
Rhodanthe collina	P3	478075	6774840		20,000	
Rhodanthe collina	P3	478080	6774870		20,000	
Rhodanthe collina	P3	477965	6774611		10,000	
Rhodanthe collina	P3	477967	6774580		2,000	
Rhodanthe collina	P3	477568	6774766		13,000	
Rhodanthe collina	P3	477560	6774702		10,000	
Rhodanthe collina	P3	477868	6774842		3,000	
Rhodanthe collina	P3	477911	6774954		5,000	
Rhodanthe collina	P3	477515	6774815		20,000	
Rhodanthe collina	P3	477909	6774517		30,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	477900	6774502		15,000	
Rhodanthe collina	P3	477910	6774420		3,000	
Rhodanthe collina	P3	477961	6774635		500	
Rhodanthe collina	P3	477465	6774631		20,000	
Rhodanthe collina	P3	477470	6774454		25,000	
Rhodanthe collina	P3	477899	6774405		5,000	
Rhodanthe collina	P3	477902	6774383		2,000	
Rhodanthe collina	P3	477889	6774324		5,000	
Rhodanthe collina	P3	477911	6774298		3,000	
Rhodanthe collina	P3	477928	6774220		2,000	
Rhodanthe collina	P3	477925	6774167		3,000	
Rhodanthe collina	P3	477926	6773996		300	
Rhodanthe collina	P3	477711	6774345		2,000	
Rhodanthe collina	P3	477720	6774516		600	
Rhodanthe collina	P3	477522	6774468		3,000	
Rhodanthe collina	P3	477517	6774446		5,000	
Rhodanthe collina	P3	477530	6774427		5,000	
Rhodanthe collina	P3	477516	6774297		3	
Rhodanthe collina	P3	478025	6774309		10,000	
Rhodanthe collina	P3	477626	6774383		10,000	
Rhodanthe collina	P3	477973	6774418		2,000	
Rhodanthe collina	P3	477972	6774399		20,000	
Rhodanthe collina	P3	477967	6774288		40,000	
Rhodanthe collina	P3	477975	6774237		20,000	
Rhodanthe collina	P3	477770	6774239		3,000	
Rhodanthe collina	P3	477767	6774279		500	
Rhodanthe collina	P3	477569	6774505		20,000	
Rhodanthe collina	P3	477567	6774475		50,000	
Rhodanthe collina	P3	477572	6774442		500,000	
Rhodanthe collina	P3	477571	6774400		500,000	
Rhodanthe collina	P3	477574	6774342		20,000	
Rhodanthe collina	P3	477572	6774308		30,000	
Rhodanthe collina	P3	477977	6774160		5,000	
Rhodanthe collina	P3	477721	6774201		300	
Rhodanthe collina	P3	477781	6774054		500	
Rhodanthe collina	P3	477769	6774144		20,000	
Rhodanthe collina	P3	477770	6774206		1,000	
Rhodanthe collina	P3	477574	6774272		1,000	
Rhodanthe collina	P3	478067	6774604		2,000	
Rhodanthe collina	P3	478061	6774164		5,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	478073	6774210		5,000	
Rhodanthe collina	P3	478069	6774258		2,000	
Rhodanthe collina	P3	477976	6774195		15,000	
Rhodanthe collina	P3	477914	6773916		2,000	
Rhodanthe collina	P3	479441	6774046		500	
Rhodanthe collina	P3	479414	6774043		100,000	All over 20 x 20 m patch
Rhodanthe collina	P3	479674	6773469		1,000	
Rhodanthe collina	P3	478821	6773472		25,000	
Rhodanthe collina	P3	478823	6773515		30,000	
Rhodanthe collina	P3	479160	6773786		1,000	Rocky substrate
Rhodanthe collina	P3	478868	6773515		10,000	
Rhodanthe collina	P3	478867	6773685		30,000	
Rhodanthe collina	P3	478772	6773435		5,000	
Rhodanthe collina	P3	478771	6773821		3,000	
Rhodanthe collina	P3	478472	6770603		15,000	
Rhodanthe collina	P3	478573	6770762		50,000	
Rhodanthe collina	P3	478674	6771230		15,000	
Rhodanthe collina	P3	478617	6770818		50,000	
Rhodanthe collina	P3	478617	6770887		5	
Rhodanthe collina	P3	478696	6771209		20,000	
Rhodanthe collina	P3	478716	6770653		20	
Rhodanthe collina	P3	478768	6770970		50	
Rhodanthe collina	P3	474218	6772360		1	
Rhodanthe collina	P3	475749	6766245		500	
Rhodanthe collina	P3	475746	6766263		500	
Rhodanthe collina	P3	475745	6766312		12,000	
Rhodanthe collina	P3	475736	6766411		15,000	
Rhodanthe collina	P3	475732	6766449		15,000	
Rhodanthe collina	P3	475749	6766498		3,000	
Rhodanthe collina	P3	475946	6766583		2,000	
Rhodanthe collina	P3	475922	6766555		200	
Rhodanthe collina	P3	475930	6766204		16,000	
Rhodanthe collina	P3	475839	6766543		2,000	
Rhodanthe collina	P3	475839	6766533		20,000	
Rhodanthe collina	P3	475841	6766517		7,000	
Rhodanthe collina	P3	475842	6766462		5,000	
Rhodanthe collina	P3	475849	6766444		10,000	
Rhodanthe collina	P3	475839	6766425		3,000	
Rhodanthe collina	P3	475833	6766244		2,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	475840	6766231		2,000	
Rhodanthe collina	P3	476055	6766192		50,000	
Rhodanthe collina	P3	476044	6766206		50,000	
Rhodanthe collina	P3	475899	6766564		500	
Rhodanthe collina	P3	475887	6766374		200	
Rhodanthe collina	P3	476186	6766421		1,000	
Rhodanthe collina	P3	476350	6766382		1,500	
Rhodanthe collina	P3	476333	6766385		10,000	
Rhodanthe collina	P3	476354	6766446		12,000	
Rhodanthe collina	P3	476142	6766237		1,500	
Rhodanthe collina	P3	476242	6766216		10,000	
Rhodanthe collina	P3	476294	6766429		10,000	
Rhodanthe collina	P3	476306	6766202		5,000	
Rhodanthe collina	P3	476395	6766367		15,000	
Rhodanthe collina	P3	476386	6766383		1,500	
Rhodanthe collina	P3	476398	6766380		1,000	
Rhodanthe collina	P3	476043	6766148		10,000	
Rhodanthe collina	P3	476042	6766165		20,000	
Rhodanthe collina	P3	476091	6766155		50,000	
Rhodanthe collina	P3	476098	6766173		50,000	
Rhodanthe collina	P3	476103	6766193		50,000	
Rhodanthe collina	P3	476399	6766495		2,000	
Rhodanthe collina	P3	476414	6766499		40	
Rhodanthe collina	P3	475747	6766228		1,500	
Rhodanthe collina	P3	475845	6766221		6,000	
Rhodanthe collina	P3	476013	6773400		100,000	
Rhodanthe collina	P3	476228	6773458		100,000	
Rhodanthe collina	P3	476185	6773371		50,000	
Rhodanthe collina	P3	476168	6773402		100,000	
Rhodanthe collina	P3	476116	6773345		5,000	
Rhodanthe collina	P3	476116	6773411		8,000	
Rhodanthe collina	P3	476322	6773479		8,000	
Rhodanthe collina	P3	476059	6773367		50,000	
Rhodanthe collina	P3	476067	6773397		50,000	
Rhodanthe collina	P3	476283	6773498		20,000	
Rhodanthe collina	P3	476278	6773466		50,000	
Rhodanthe collina	P3	476283	6773436		50	
Rhodanthe collina	P3	476022	6772385		100,000	
Rhodanthe collina	P3	476023	6772435		25,000	
Rhodanthe collina	P3	476005	6772465		50,000	

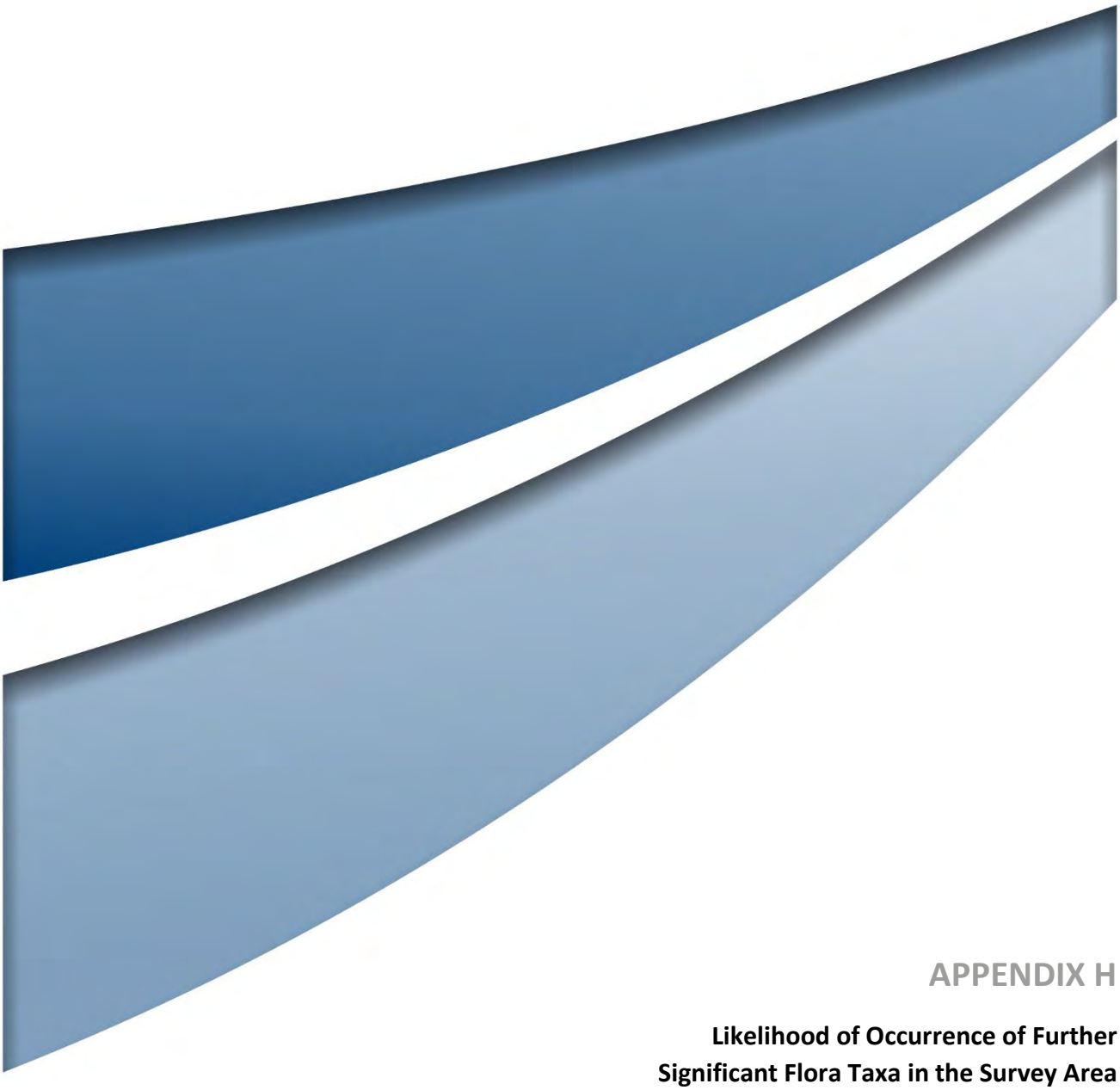
Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	476219	6772687		100,000	
Rhodanthe collina	P3	475979	6772459		40,000	
Rhodanthe collina	P3	475972	6772406		40,000	
Rhodanthe collina	P3	476169	6772507		1,000	
Rhodanthe collina	P3	476173	6772626		100,000	
Rhodanthe collina	P3	476184	6772667		20,000	
Rhodanthe collina	P3	476180	6772715		20,000	
Rhodanthe collina	P3	476370	6772830		5,000	
Rhodanthe collina	P3	476360	6772812		100,000	
Rhodanthe collina	P3	476369	6772775		100,000	
Rhodanthe collina	P3	476377	6772747		100,000	
Rhodanthe collina	P3	476373	6772726		50,000	
Rhodanthe collina	P3	476415	6772707		10,000	
Rhodanthe collina	P3	476466	6772769		100	
Rhodanthe collina	P3	476468	6772777		10,000	
Rhodanthe collina	P3	476473	6772802		300,000	
Rhodanthe collina	P3	476472	6772879		5,000	
Rhodanthe collina	P3	476477	6772912		50,000	
Rhodanthe collina	P3	476515	6772784		60,000	
Rhodanthe collina	P3	476518	6772883		50,000	
Rhodanthe collina	P3	476118	6772520		3,000	
Rhodanthe collina	P3	476120	6772656		20,000	
Rhodanthe collina	P3	476321	6772776		50,000	
Rhodanthe collina	P3	476311	6772723		20,000	
Rhodanthe collina	P3	476058	6772404		50,000	
Rhodanthe collina	P3	476063	6772503		200	
Rhodanthe collina	P3	476264	6772724		10,000	
Rhodanthe collina	P3	476271	6772679		20,000	
Rhodanthe collina	P3	476558	6772818		8,000	
Rhodanthe collina	P3	475630	6772790		10,000	
Rhodanthe collina	P3	475566	6773237		100,000	
Rhodanthe collina	P3	475573	6773188		5,000	
Rhodanthe collina	P3	475558	6773093		15,000	
Rhodanthe collina	P3	475770	6772618		200	
Rhodanthe collina	P3	475536	6773211		50,000	
Rhodanthe collina	P3	475526	6773202		15,000	
Rhodanthe collina	P3	475527	6773184		15,000	
Rhodanthe collina	P3	475524	6772979		10,000	
Rhodanthe collina	P3	475717	6772431		5,000	
Rhodanthe collina	P3	475721	6772707		1,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	476118	6772851		1,000	
Rhodanthe collina	P3	476113	6772878		100,000	
Rhodanthe collina	P3	476329	6773238		10,000	
Rhodanthe collina	P3	475687	6772364		50,000	
Rhodanthe collina	P3	475673	6772702		5,000	
Rhodanthe collina	P3	475674	6772721		5,000	
Rhodanthe collina	P3	476059	6772729		10	
Rhodanthe collina	P3	476473	6772950		200	
Rhodanthe collina	P3	476123	6772695		50,000	
Rhodanthe collina	P3	475274	6772963		20,000	
Rhodanthe collina	P3	475422	6773012		500	
Rhodanthe collina	P3	475616	6772656		25,000	
Rhodanthe collina	P3	475611	6772698		5,000	
Rhodanthe collina	P3	475618	6772757		10,000	
Rhodanthe collina	P3	475378	6772935		1,500	
Rhodanthe collina	P3	475320	6772960		8,000	
Rhodanthe collina	P3	475276	6772978		20,000	
Rhodanthe collina	P3	475267	6772977		10,000	
Rhodanthe collina	P3	475279	6772987		20,000	
Rhodanthe collina	P3	475665	6772678		1,000	
Rhodanthe collina	P3	475620	6772351		10,000	
Rhodanthe collina	P3	475628	6772392		100,000	
Rhodanthe collina	P3	475577	6772404		2,000	
Rhodanthe collina	P3	475584	6772377		8,000	
Rhodanthe collina	P3	475565	6772362		35,000	
Rhodanthe collina	P3	475528	6772363		8,000	
Rhodanthe collina	P3	475686	6772433		100,000	
Rhodanthe collina	P3	476022	6772835		100,000	
Rhodanthe collina	P3	476024	6772877		100,000	
Rhodanthe collina	P3	475777	6773006		50,000	
Rhodanthe collina	P3	475775	6773061		50,000	
Rhodanthe collina	P3	475770	6773159		300	
Rhodanthe collina	P3	475768	6773193		70,000	
Rhodanthe collina	P3	475781	6773289		70,000	
Rhodanthe collina	P3	475963	6773243		20,000	
Rhodanthe collina	P3	475976	6772795		100,000	
Rhodanthe collina	P3	475970	6772772		20,000	
Rhodanthe collina	P3	475715	6773053		8,000	
Rhodanthe collina	P3	475721	6773089		10,000	
Rhodanthe collina	P3	475723	6773127		25,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	475732	6773190		5,000	
Rhodanthe collina	P3	475727	6773225		6,000	
Rhodanthe collina	P3	475918	6773269		15,000	
Rhodanthe collina	P3	475933	6773247		5,000	
Rhodanthe collina	P3	475928	6773178		5,000	
Rhodanthe collina	P3	475922	6772973		5,000	
Rhodanthe collina	P3	475916	6772946		8,000	
Rhodanthe collina	P3	475916	6772850		6,000	
Rhodanthe collina	P3	475922	6772802		100,000	
Rhodanthe collina	P3	475928	6772759		100,000	
Rhodanthe collina	P3	476101	6773023		10,000	
Rhodanthe collina	P3	476109	6773059		25,000	
Rhodanthe collina	P3	475678	6773072		20,000	
Rhodanthe collina	P3	475675	6773095		50,000	
Rhodanthe collina	P3	475673	6773169		10,000	
Rhodanthe collina	P3	475874	6772957		50,000	
Rhodanthe collina	P3	475872	6772908		50,000	
Rhodanthe collina	P3	476081	6772927		50,000	
Rhodanthe collina	P3	476077	6772950		50,000	
Rhodanthe collina	P3	476078	6773031		20,000	
Rhodanthe collina	P3	476079	6773062		50,000	
Rhodanthe collina	P3	476066	6773088		50,000	
Rhodanthe collina	P3	479027	6772124		5,000	
Rhodanthe collina	P3	479077	6772238		50,000	
Rhodanthe collina	P3	479093	6772050		50,000	
Rhodanthe collina	P3	479001	6771971		20,000	
Rhodanthe collina	P3	479068	6772063		50,000	
Rhodanthe collina	P3	479032	6771999		50,000	
Rhodanthe collina	P3	478969	6771977		30,000	
Rhodanthe collina	P3	475626	6772986		100,000	
Rhodanthe collina	P3	475631	6773085		100	
Rhodanthe collina	P3	475776	6772954		15,000	
Rhodanthe collina	P3	475764	6772976		50,000	
Rhodanthe collina	P3	475984	6773366		150	
Rhodanthe collina	P3	475968	6773319		50,000	
Rhodanthe collina	P3	476169	6772887		50,000	
Rhodanthe collina	P3	476163	6773076		200	
Rhodanthe collina	P3	475721	6772900		20,000	
Rhodanthe collina	P3	475921	6773339		25,000	
Rhodanthe collina	P3	475922	6773301		20,000	

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Rhodanthe collina	P3	476120	6772930		50,000	
Rhodanthe collina	P3	476122	6772973		20,000	
Rhodanthe collina	P3	475673	6772944		50,000	
Rhodanthe collina	P3	475678	6772970		10,000	
Rhodanthe collina	P3	475689	6772990		50,000	
Rhodanthe collina	P3	476066	6772827		10	
Rhodanthe collina	P3	476064	6772842		200	
Rhodanthe collina	P3	476063	6772859		10,000	
Rhodanthe collina	P3	475979	6773073		10,000	
Rhodanthe collina	P3	475976	6773038		20,000	
Rhodanthe collina	P3	475962	6773006		100,000	
Rhodanthe collina	P3	475970	6772970		100,000	
Rhodanthe collina	P3	475975	6772927		100,000	
Rhodanthe collina	P3	475965	6772884		100,000	
Rhodanthe collina	P3	475919	6772912		50,000	
Rhodanthe collina	P3	475919	6772880		10,000	
Rhodanthe collina	P3	478722	6770713		2,000	
Rhodanthe collina	P3	478724	6770976		10,000	
Rhodanthe collina	P3	478503	6770551		10	
Rhodanthe collina	P3	478676	6770704		15,000	
Rhodanthe collina	P3	478689	6770920		50,000	
Rhodanthe collina	P3	478676	6770945		10,000	
Rhodanthe collina	P3	478683	6771016		300,000	
Rhodanthe collina	P3	478676	6771049		50,000	
Rhodanthe collina	P3	478580	6770648		50,000	
Rhodanthe collina	P3	478646	6770702		12,000	
Rhodanthe collina	P3	478616	6770727		30,000	
Rhodanthe collina	P3	478620	6770783		30,000	
Rhodanthe collina	P3	478521	6770660		10,000	
Roebuckiella halophila	P3	431739	6770362	MLED15		
Roebuckiella halophila	P3	432146	6770369	MLED10		
Roebuckiella halophila	P3	432542	6770347	MLED11		
Roebuckiella halophila	P3	443392	6769935	MLED21		
Roebuckiella halophila	P3	440656	6770169	MLED20		
Roebuckiella halophila	P3	400545	6757918	MLED16		
Roebuckiella halophila	P3	439774	6770179	MLED18		
Roebuckiella halophila	P3	438025	6770144	MLED22		
Roebuckiella halophila	P3	433427	6770372	MLED12		
Roebuckiella halophila	P3	433822	6770383	MLED13		
Roebuckiella halophila	P3	434391	6770379	MLED14		

Taxon	Status (WA)	Easting	Northing	Site	Count	Comments
Roebuckiella halophila	P3	440708	6770395	MLED19		
Roebuckiella halophila	P3	439891	6763069	MLEDN36		
Roebuckiella halophila	P3	395478	6758834	MLED05		
Roebuckiella halophila	P3	425513	6770458	MLED07		
Roebuckiella halophila	P3	428269	6770243	MLED09		
Seringia exastia	-	474953	6772431		10	Cleared road verge
Swainsona picta	P1	472760	6772268		6	Outside SA
Swainsona picta	P1	472760	6772264		12	
Swainsona picta	P1	472528	6767689		10	
Tecticornia fimbriata	P3	398828	6757726	MLED17		
Tecticornia fimbriata	P3	399975	6757868			
Tecticornia fimbriata	P3	395478	6758834	MLED05		
***Tecticornia* sp. 'Karara 1'**	PU	399063	6757708	MLEDN28		
***Tecticornia* sp. 'Karara 1'**	PU	398828	6757726	MLED17		
***Tecticornia* sp. 'Karara 1'**	PU	395080	6758830	MLED04		
***Tecticornia* sp. 'Karara 1'**	PU	394899	6758647	MLED02		
***Tecticornia* sp. 'Karara 1'**	PU	401098	6757954	MLEDN21		
***Tecticornia* sp. 'Karara 2'**	PU	422886	6760528	MLEDN13		
***Tecticornia* sp. 'Karara 2'**	PU	395080	6758830	MLED04		
***Tecticornia* sp. 'Karara 2'**	PU	394480	6758245	MLED01		
***Tecticornia* sp. 'Karara 2'**	PU	393957	6758335	MLEDN08		
***Tecticornia* sp. 'Karara 2'**	PU	399975	6757868	MLEDN25		
Tricoryne soullierae	P3	465230	6771644	MLEC13		
Tricoryne soullierae	P3	394990	6758774	MLED03		



APPENDIX H

Likelihood of Occurrence of Further Significant Flora Taxa in the Survey Area

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Acacia aprica	T	EN	June to July	Red or gravelly sand, sandy loam. Plains, rocky hills.	Yes	No	49.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia cerastes	P3		January, August to September	Yellow-brown sandy loam over granite or ironstone. Hilltops, outcrops, drainage lines.	Yes	No	47.8 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia chapmanii* subsp. *chapmanii	P2		August to September	Grey, brown loam or yellow sand over laterite. Flats and slopes.	Yes	No, but nearest DBCA record represents northern extent of known range	3.8 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area.	
Acacia cochlocarpa* subsp. *cochlocarpa	T	EN	June to August	Clayey, sandy, often gravelly soils.	Yes	No	87 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia congesta* subsp. *cliftoniana	P1		August to September	Rocky or lateritic loam.	Yes	Yes (Borefield Corridor only)	0.04 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia congesta* subsp. *wonganensis	P2		August to December	Brown-red clay loam over laterite. Hillsides.	Yes	Yes (Borefield Corridor only). One record northwest of Survey Area, the rest of records 190 km south	23.9 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia cylindrica	P3		March, September	Sandplains. Yellow or brown sand.	Yes	No	107.9 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia diallaga	P1		July to September	Red-brown clay loam with basalt. Low hills and slopes.	Yes	No, but eastern part of Karara Area near western edge of known distribution	2.9 km (Karara Area)	Unlikely: the Survey Area is unlikely to provide suitable habitat.	
Acacia flabellifolia	P3		August to September	Low hills and ridges with rocky loam, lateritic gravelly soils.	Yes	Yes (Borefield Corridor only)	0.04 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia formidabilis	P3		July to September	Pale yellow sand. Plains and slopes.	Yes	No	30.8 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia graciliformis	P1		September	Red-brown clay-loam over laterite and ironstone. Hills.	Yes	Yes (western end of Yandanooka Pipeline and eastern end of Borefield Corridor only)	2.4 km (Yandanooka Pipeline)	**Possible:** western end of Yandanooka Pipeline and eastern end of Borefield Corridor only. Suitable habitat potentially present, and known records in proximity to this part of the Survey Area.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Acacia imitans	P4	EN	July to September	Red-brown rocky loam. Hillside and edges of a dry creek.	Yes	No	48.3 km (Karara Area)	Unlikely: suitable habitat possibly present, but nearest DBCA record to south represents most northerly extent of taxon's quite restricted range.	
Acacia isoneura* subsp. *isoneura	P3		August to September	Flats, slopes and low rises on yellow/brown sand.	Yes	Yes (western end of Borefield Corridor only)	12.1 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however is almost entirely cleared in this area. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia isoneura* subsp. *nimia	P3		July to September	Granite outcrops. Deep yellow loamy sand or stony soil.	Yes	Yes (Borefield Corridor only). Nearest DBCA record to south represents northern extent of main distribution, however one record known from 225 km north of Survey Area	17.3 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present (deep yellow sands), and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Acacia karinae	P3		April to August	Red-brown to yellowish red sandy clay loam, basalt and BIF. Plains, slopes and hills.	Yes	Yes (Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon.
Acacia lanceolata	P3		July to August	Lateritic hills and breakaways.	Yes	Yes (western end of Borefield Corridor only)	2.0 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia latipes* subsp. *licina	P3		June to October	White/grey sand, lateritic soils, sandy loam. Sandplains, flats, hills.	Yes	Yes (very western end of Borefield Corridor only)	14.4 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia lineolata* subsp. *multilineata	P1		June to August	Clay loam, red loam, rocky clay. Slopes, hills, and breakaways.	Yes	Yes (western end of Borefield Corridor only)	10.4 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Acacia megacephala	P3		July to September	Yellow or grey pale sands, occasional gravel. Flats or slopes.	Yes	No	6.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia muriculata	P1		September to October	Red clay-loam over laterite and ironstone. Hills.	Yes	Yes (western end of Yandanooka Pipeline and eastern end of Borefield Corridor only)	1.7 km (Borefield Corridor)	**Possible:** western end of Yandanooka Pipeline and eastern end of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area bounds the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
Acacia nigripilosa* subsp. *latifolia	P1		August to September	Sandplains and slopes. Yellow sands.	Yes	Yes (Borefield Corridor). Nearest DBCA record to south represents northern extent of main distribution, however one record 155 km north of Survey Area	32.9 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Acacia nodiflora	P3		September to November	Red-brown clay, loam over granite. Hills.	Yes	Yes (Borefield Corridor only)	0.6 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and known records in proximity to this part of the Survey Area.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Acacia pterocaulon	P1		June to September	Brown rocky soil, yellow sand. Slope and ridges.	Yes	Yes (Borefield Corridor only)	1.8 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and known records in proximity to this part of the Survey Area. Records near Morawa are likely erroneous.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Acacia recurvata	T	EN	July to August	Sandy clay, granitic clay-loam. Creeklines, plains, breakaways, low hills.	Yes	Yes (Borefield Corridor and potentially Tilley Siding only)	24.5 km (Borefield Corridor)	Unlikely: suitable habitat potentially present (central part of Borefield Corridor only), but nearest DBCA record to south represents northerly extent of known range.	
Acacia speckii	P4		March, July	Low hills with basalt, granite or dolerite.	Yes	No	41.2 km (Karara Area)	Unlikely: suitable habitat potentially present (Karara area only), but nearest DBCA location to north represents southerly extent of known range.	
Acacia subrigida	P2		August to October	Sandplains. Yellow or brown sand or loam.	Yes	Yes (eastern half of Survey Area only)	49.2 km (Karara Area)	**Possible:** taxon known from few records over a wide distribution. Suitable habitat potentially present within central to eastern part of Borefield Corridor, Tilley Siding, Yandanooka Pipeline, and Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Acacia subsessilis	P3		August to October	Red-brown sandy clay loam or stony gravel over ironstone or granite Foot slopes and mid slopes.	Yes	No, but eastern part of Karara Area near western edge of known distribution	15.0 km (Karara Area)	Unlikely: suitable habitat potentially present (Karara area only), but nearest DBCA location to east represents westerly extent of known range. Taxon has not been recorded in Survey Area despite significant survey effort within the Karara Area over many years.	
Acacia sulcaticaulis	T		June to July, December	Red or brown loam. Slopes of dolerite, granite and greenstone hills, rocky creeklines.	Yes	No	6.1 km (Karara Area)	Unlikely: habitat not known to be present. Nearest DBCA location to south represents northerly extent of known range, and taxon has a very restricted distribution of only approx. 3 km.	
Acacia telmica	P3		July to September	Low-lying seasonally moist areas on sand, loam or loamy clay.	Yes	No	29.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia tuberculata	P2		May, September	Brown sandy clay over granite slopes.	Yes	No	358 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

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Acacia unguicula	T	CR	August to September	Red-brown rocky, sandy, loam soils over dolerite. Hills.	Yes	No	48.3 km (Karara Area)	Unlikely: habitat not known to be present. Taxon has a very restricted distribution of only approx. 3 km.	
Acacia vittata	P2		June to August, November	Margins of seasonal lakes with grey or brown sand or sandy clay.	Yes	No	32.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia wilsonii	T	EN	November to March	Hilltops, slopes and breakaways with gravelly brown, grey or yellow sand or clay loam over laterite or occasionally sandstone.	Yes	No	48.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Acacia woodmaniorum	T	EN	July to September	Red clay loam, silt over ironstone. Hill slopes, scattered among rocks.	Yes	Yes (eastern Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon present in the Karara Area, but only known in this area from translocation sites and growing on the edge of the Terapod South mine pit. No additional locations known within the Survey Area despite significant survey effort within the Karara Area over many years.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
***Acacia* sp. Goodlands (B.R. Maslin 7761)**	P1		July	Orange-brown or yellow coarse sand or loam. Flats.	Yes	No	45.2 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Allocasuarina grevilleoides	P3		September to November	Slopes, outcrops and plains with rocky or gravelly brown sand or clay loam over laterite or granite.	Yes	No	21.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon. Nearest DBCA location southwest of the western end of Survey Area represents northerly extent of known range. The western end of the Survey Area is unlikely to provide suitable habitat for this taxon.	
Allocasuarina ramosissima	P3		May to September	Breakaways, slopes and plains with gravelly grey, brown or white sand or loam over laterite.	Yes	Yes (Borefield Corridor only)	0.1 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Allocasuarina tessellata	P3		April, August to September	Red sandy loam over laterite and ironstone. Slopes and rocky basalt outcrops.	Yes	Yes (Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Aluta aspera* subsp. *localis	P2		October to December	Undulating plains. Yellow or brown sandy loam over gravel.	Yes	No	195 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Andersonia gracilis	T	EN	August to November	Winter-wet areas, near swamps. White-grey sand, sandy clay and gravelly loam.	Yes	No	130 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Androcalva adenothalia	T	CR	August to November	Orange-brown sandy loam or gravel. Plains.	Yes	No; nearest DBCA record likely erroneous	2.9 km (Tilley Siding)	Unlikely: nearest DBCA record likely erroneous (locality description is 'Morawa' and thus the record has been plotted at Morawa townsite). All other records restricted to a 0.5 km range near Canna (approx. 34 km north of Tilley Siding). The Survey Area is outside this range.	
Angianthus micropodioides	P3		September to November	Saline flats, winter-wet depressions and adjacent dunes. Grey or brown clay loam or sand.	Yes	Yes	5.7 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; suitable habitat unlikely to be present.
Anthocercis intricata	P3		June to September	Consolidated sand dunes on sand or loam over limestone.	Yes	No	34.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Apectospermum exsertum	P3		July to November	Sandplains. Brown or yellow sandy clay, ironstone gravel.	Yes	Yes (central part of Survey Area only)	0.1 km (Yandanooka Pipeline)	**Possible:** western end of Yandanooka Pipeline and central to eastern end of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
Asteridea morawana	P1		September to November	Brown loam over limestone.	Yes	No	8.0 km (Borefield Corridor)	Unlikely: suitable habitat possibly present (central-western part of Borefield Corridor only), but nearest DBCA record to south represents most northerly extent of taxon's restricted range (approx. 2.8 km).	
Atriplex muelleri	P1		Unknown	Claypans, cracking clay.	Yes	Unlikely	37.5 km (Borefield Corridor)	Unlikely: DBCA record on WA South Coast potentially erroneous (locality description states 'Peak Downs', which does not appear to be a named place in WA; however, Peak Downs is a named place in Queensland and is near other known records of this taxon). Therefore, the Survey Area likely does not occur within taxon's known range. Cracking clay not known from the Survey Area.	
Austrostipa nunaginensis	P3		September to November	Yellow or brown sand, occasionally clay. On slopes or low hills.	Yes	No	21.0 km (Borefield Corridor)	Unlikely: suitable habitat potentially present (western end of Borefield corridor only), but nearest DBCA location to west represents easterly extent of known range.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Babingtonia fascifolia	P1		November to December	Yellow to red sandy clay, laterite. Ridges or plains.	Yes	Yes (central-western part of Borefield Corridor only)	0.5 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Babingtonia minutifolia	P1		September to November	Brown sandy-clay loam, laterite gravel. Rocky ground.	Yes	No	29.9 km (Borefield Corridor)	Unlikely: suitable habitat possibly present (central part of Survey Area), but nearest DBCA record to south represents most northerly extent of taxon's relatively restricted range (approx. 28 km).	
Babingtonia peteriana	P2		August to December	E/NE-facing gentle slopes, red/brown, brown or grey clay/clayey loam over lateritic sandstone, sometimes rocky areas and creekline edges.	Yes	Yes (central-western part of Borefield Corridor only)	19.0 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
***Baeckea* sp. Billeranga Hills (M.E. Trudgen 2206)**	P1		September to October	Light coloured loams and sandy loams, pebbly and rocky. On slopes and stony hills.	Yes	Yes (central part of Survey Area only)	2.0 km (Borefield Corridor)	**Possible:** western end of Yandanooka Pipeline, Tilley Siding and central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; on the edge of known range of this taxon, and suitable habitat unlikely to be present. This area was searched in 2024 but this taxon was not recorded.
***Baeckea* sp. Morawa (M.A. Langley MAL4177)**	P1		Unknown	Orange-brown silty fine sand over laterite.	Yes	Yes (central-western part of Borefield Corridor only)	3.2 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; on the edge of known range of this taxon, and suitable habitat unlikely to be present. This area was searched in 2024 but this taxon was not recorded.
***Baeckea* sp. Perenjori (J.W. Green 1516)**	P2		August to September	Red brown sandy loam or clay, or silty sands. Often with granite or ironstone on ridges and hills.	Yes	Yes (central part of Survey Area only)	0.01 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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***Baeckea* sp. Walkaway (A.S. George 11249)**	P3		November to January	Undulating plains, hillslopes on yellow/brown or white sand.	Yes	No	20.1 km (Borefield Corridor)	Unlikely: suitable habitat possibly present (western part of Survey Area), but nearest DBCA record to north represents most southerly extent of taxon's known range.	
Balaustion grande	P3		August to October	Flats. Orange or brown or yellow gravelly or clayey sand, laterite rocks.	Yes	Unlikely	42.4 km (Borefield Corridor)	Unlikely: DBCA record north of Survey Area at Mullewa potentially erroneous (locality description states 'Near Mullewa (South of)', but record has been plotted at Mullewa townsite). With the exception of one disjunct record near Greenough, all other DBCA records occur southeast of Three Springs. Therefore, the Survey Area likely does not occur within taxon's known range.	
Balaustion hemisphaericum	P1		July to October	Yellow, brown gravelly loamy sand over laterite or granite. Breakaways, hillsides and uplands.	Yes	Yes (central-western part of Borefield Corridor only)	0.6 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; on the edge of known range of this taxon, and suitable habitat unlikely to be present.
Banksia benthamiana	P4		November to January	Sandplains. Brown or yellow sand/gravel or loam.	Yes	Yes (central part of Survey Area only)	18.6 km (Borefield Corridor)	**Possible:** Yandanooka Pipeline, Tilley Siding and eastern to central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; on the edge of known range of this taxon, and suitable habitat unlikely to be present.
Banksia borealis* subsp. *elatior	P3		January, July to August	Yellow clay loam, brown gravelly loam, grey or brown sandy loam, lateritic gravel. Flat to undulating plains.	Yes	No, but nearest DBCA record represents northern extent of known range	3.8 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Banksia chamaephyton	P4		October to December	Slopes, breakaways and flats with grey or white sand over laterite.	Yes	No	37.4 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range, and suitable habitat unlikely to be present in the part of the Survey Area nearest to the known distribution.	

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Banksia cypholoba	P3		June to September	Plains, slopes and hills with sand, often with laterite.	Yes	No, but nearest DBCA record represents northern extent of known range	7.6 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range, and suitable habitat unlikely to be present in the part of the Survey Area nearest to the known distribution.	
Banksia elegans	P4		October to November	White sand on slopes, low lateritic hills, brown gravelly loam, grey sandy gravel.	Yes	Unlikely	26.4 km (Borefield Corridor)	Unlikely: DBCA records south of Survey Area at Three Springs townsite likely erroneous (locality description states 'Three Springs, N of the "Diamond of the Desert" Spring', but the Diamond of the Desert spring is near Lesueur National Park). All other DBCA records occur close to the coast. The Survey Area is unlikely to provide suitable habitat.	
Banksia fraseri* var. *crebra	P3		July to August	Lateritic hilltops, slopes, plains and valleys with yellow, grey or brown gravelly sand over laterite.	Yes	No	24.3 km (Borefield Corridor)	Unlikely: nearest DBCA record to west represents most easterly extent of taxon's known range, and suitable habitat unlikely to be present.	
Banksia fraseri* var. *oxycedra	P3		August to September	Yellow-brown sandy loam, laterite. Hillslopes.	Yes	Yes	5.7 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Banksia scabrella	P4		September to January	White, grey or yellow sand, sometimes with lateritic gravel. Sandplains, lateritic ridges.	Yes	No	17.1 km (Borefield Corridor)	Unlikely: nearest DBCA record to west represents most easterly extent of taxon's known range, and suitable habitat unlikely to be present.	
Banksia splendida* subsp. *macrocarpa	P3		July to August	Ridges, slopes and undulating plains with white/grey sand and laterite.	Yes	No	37.5 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range, and suitable habitat unlikely to be present.	
Banksia subulata	P3		September	White/grey or yellow sand over laterite, gravelly laterite.	Yes	No	45.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Banksia trifontinalis	P3		August to October	Brown sandy loam, red-brown laterite. Hillslopes.	Yes	No	14.5 km (Borefield Corridor)	Unlikely: suitable habitat possibly present, but nearest DBCA record to south represents most northerly extent of taxon's quite restricted range (approx. 13 km).	
Beyeria apiculata	P1		September	Orange-brown, red loam, rocky laterite. Flat to undulating plains.	Yes	No	18.2 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range, and suitable habitat unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Beyeria gardneri	P3		August to September	Sandplains and hillsides on yellow sand.	Yes	Yes (western end of Borefield Corridor only)	23.9 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however is almost entirely cleared in this area. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
***Bossiaea* sp. Jackson Range (G. Cockerton & S. McNee LCS 13614)**	P3		March to October	Red-brown clay loam soils, white-grey sandy loam. On outcrops and breakaways.	Yes	No, but nearest DBCA record represents northern extent of known range	3.3 km (Karara Area)	**Possible:** eastern Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)**	P1		September to October	Yellow, red clayey sand over granite or laterite, rocky banded ironstone. Moderately inclined slopes.	Yes	Yes (central and eastern Survey Area only)	0.3 km (Yandanooka Pipeline)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon.
Caladenia denticulata* subsp. *albicans	P1		August to September	Wet flats, moist depression. Sandy soils.	Yes	No	45.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Caladenia hoffmanii	T	EN	August to October	Clay loam or sandy loams. Rocky outcrops and hillsides, ridges, swamps, and gullies.	Yes	No	105 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Caladenia longicauda* subsp. *minima	P2		August	Along creek lines. Red loam with ironstone outcrops, yellow sand.	Yes (August site visits only)	No	45.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Caladenia wanosa	T	VU	August	Yellow sand. Low rocky hills and flats.	Yes (August site visits only)	No	103 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Calandrinia kalanniensis	P2		October to January	Brown, red gritty sandy clay over granite. Shallow rock hollow on large granite rock.	Yes (October site visits only)	No, but nearest DBCA record represents northwestern extent of known range	4.7 km (Karara Area)	**Possible:** Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	**Mine Area: possible**; suitable habitat potentially present, and taxon may not have been observable during the targeted survey in 2024. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
***Calandrinia* sp. Warriedar (F. Obbens 04/09)**	P2		August to September	Red-brown, fine clayey loam. Gently sloping granitic flats.	Yes (September site visits only)	Yes (central and eastern Survey Area only)	0.03 km (Karara Area)	**Likely:** suitable habitat likely to be present in Survey Area (central part of Yandanooka pipeline east to Karara Area). DBCA record in very close proximity to Survey Area, which occurs in vegetation that appears to be contiguous with vegetation inside the Survey Area (based on aerial imagery interpretation).	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Calectasia browneana	P2		June to August	Slopes and plains and creekline edges with white-grey sand over laterite.	Yes	No, but western part of Borefield Corridor near eastern edge of known distribution	14.2 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area.	
Calectasia palustris	P2		September to November	Winter-wet flats and swamps with white sand.	Yes	No	78.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Calothamnus accedens	P4		September to January	Slopes or rises with brown clay loam.	Yes	No	25.1 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range.	
Calothamnus arcuatus	P2		June to September	Shallow loam/clayey loam or sand over sandstone, breakaways.	Yes	Yes (western end of Borefield Corridor only)	0.6 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however is unlikely to provide suitable habitat within the taxon's known distribution.	
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**	P3		August to September	Ridges and slopes with banded ironstone.	Yes	Yes (Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Calytrix chrysantha	P4		November to February	Plains and flats, on yellow or grey sand.	Yes	Yes (western Survey Area only)	5.9 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Calytrix ecalycata* subsp. *ecalycata	P3		August to October	Sandy or stony soils. Hills or slopes.	Yes	Yes (western and central Survey Area only)	2.9 km (Tilley Siding)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution. Note nearest DBCA record likely erroneous (locality description is 'Morawa' and thus the record has been plotted at Morawa townsite).	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Calytrix eneabbensis	P4		July to October	White, grey or yellow sand over laterite. Sandplains.	Yes	No	39.2 km (Borefield Corridor)	Unlikely: nearest DBCA record to west represents most easterly extent of taxon's known range, and suitable habitat unlikely to be present.	
Calytrix plumulosa	P3		October to November	Yellow loamy or clayey sand over laterite gravel. Plain.	Yes	No	43.6 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range.	

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Calytrix purpurea	P2		September to December	Sandplains and sand dunes with white, grey or yellow sand, often over laterite.	Yes	Yes (western end of Borefield Corridor only)	2.0 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however is unlikely to provide suitable habitat within the taxon's known distribution.	
Calytrix superba	P4		December to February	Sand over laterite. Flats.	Yes	No	37.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Centrolepis milleri	P3		September to October	Sandplains with grey-white sand or sandy clay.	Yes	No	42.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Chamelaucium repens	P1		August	Brown, grey clay-loam with granite boulders and rocks.	Yes	No, but western part of Borefield Corridor near southern edge of known distribution	9.6 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area.	
***Chamelaucium* sp. Bunjil (M.E. Ballingall 1970)**	P1		August to October	Lower slopes and plains. Brown or yellow-brown sand or sandy clay, sometimes with ironstone or spongolite.	Yes	No	43.4 km (Borefield Corridor)	Unlikely: suitable habitat possibly present, but nearest DBCA record to south represents most northerly extent of taxon's restricted range (approx. 5 km).	
***Chamelaucium* sp. Warriedar (A.P. Brown & S. Patrick APB 1100)**	P1		August to September	Brown-red rocky clay loam, sandy clay. Slopes.	Yes	No, but eastern part of Karara near western edge of known distribution	2.8 km (Karara Area)	**Possible:** Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
***Chamelaucium* sp. Wongan Hills (B.H. Smith 1140)**	P3		August to December	Sand flats and slopes, near saline watercourses. Yellow, grey-white or cream sand over laterite, brown sandy loam.	Yes	Yes (western end of Borefield Corridor only)	49.6 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however this part of the Survey Area is unlikely to provide suitable habitat.	
***Chamelaucium* sp. Yalgoo (Y. Chadwick 1816)**	P1		August to October	Upper slopes, flats with granite and red-brown clay.	Yes	Yes (central and eastern Survey Area only)	3.4 km (Karara Area)	**Possible:** central and eastern Survey Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Cheyniana rhodella	P2		October	Brown-red loam over calcrete, yellow-brown sandy loam, brown gravel.	Yes	No	20.7 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Chorizema humile	T	EN	August to September	Plains with granite; rock outcrops of granite with red-brown soil.	Yes	Yes (western end of Borefield Corridor only)	28.9 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however suitable habitat is not considered to be present in this part of the Survey Area.	
Comesperma griffinii	P2		August to January	Slopes, plains, open depressions and flats with grey or brown sand or light clay, sometimes with laterite.	Yes	No	20.3 km (Borefield Corridor)	Unlikely: nearest DBCA record to west represents most easterly extent of taxon's known range, and suitable habitat unlikely to be present.	
Comesperma rhadinocarpum	P3		October to November	Undulating plains, valley slopes and flats with grey, brown or yellow sandy loam or sand.	Yes	No, but western part of Borefield Corridor near eastern edge of known distribution	20.4 km (Borefield Corridor)	Unlikely: the western end of the Borefield Corridor extends within the taxon's known range, however is almost entirely cleared in this area. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Conostylis dielsii* subsp. *teres	T	EN	July to August	White, grey or yellow sand, gravel. Low open woodland.	Yes	No	37.0 km (Borefield Corridor)	Unlikely: nearest DBCA record to northwest represents most southeasterly extent of taxon's known range, and suitable habitat unlikely to be present.	
Conostylis micrantha	T	EN	July to August	White or grey sand. Sandplains.	Yes	No	18.0 km (Borefield Corridor)	Unlikely: nearest DBCA record likely erroneous (locality description is 'Mingenew district' but record has been plotted in a paddock just outside Morawa townsite). All other records further northwest near Mount Horner (approx. 35 km northwest of Survey Area). The Survey Area is outside this range.	
Corynotheca acanthoclada	P1		October to December	White, red/orange, yellow sand, brown-grey sand loam, sandplain.	Yes	No, but western part of Borefield Corridor near southern edge of known distribution	2.8 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area. This area was searched in 2024 but this taxon was not recorded.	
***Crassula* sp. nov.**	PU		Unknown; recorded in August and September (Umwelt, 2021)	Granitic areas, granite outcrops (Umwelt, 2021).	Yes	Yes (Karara Area only)	NA	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Cryptandra nola	P3		June to August	Along drainage lines, breakaways and hillsides. Sandy soils over granite or laterite.	Yes	No	11.5 km (Tilley Siding)	**Possible:** western end of Yandanooka Pipeline only. Nearest DBCA location to northwest represents southeasterly extent of known range, but similar habitat potentially present in this part of the Survey Area.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Cryptandra stellulata	P3		September	Pale yellow loamy clay, brown-grey loam over granite. Hills.	Yes	Yes (western end and central Borefield Corridor only)	2.0 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Cyanicula fragrans	P3		September to October	Red-brown sandy clay loam. Slopes and creek lines.	Yes	Yes (central and eastern Survey Area only)	2.8 km (Karara Area)	**Possible:** Yandanooka Pipeline, eastern Borefield Corridor and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Dampiera scaevolina	P1		September to November	Brown, grey sand, loam, gravelly soil.	Yes	Yes (central and eastern Survey Area only)	34.0 km (Tilley Siding)	**Possible:** Yandanooka Pipeline, eastern Borefield Corridor and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Dampiera tephrea	P3		August to October	Flats, riverbanks and slopes with sand or loam, often with limestone.	Yes	No	48.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Darwinia chantiae	P3		August to October	Plains and hillsides. Red-brown or yellow sandy or gritty loam over granite.	Yes	Unlikely	3.8 km (Tilley Siding)	Unlikely: nearest DBCA record likely erroneous (locality description states 'Near Morawa' and thus the record has been plotted at Morawa townsite). All other DBCA records occur near and further northwest of Canna. The Survey Area is outside this range.	
Darwinia chapmaniana	T	EN	September to November	Shallow red or yellow clay-loam over sandstone or calcrete, around the edges of saline lakes in winter damp flats.	Yes	No	44.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Darwinia masonii	T	VU	September to October	Brown loam over banded ironstone, laterite. Hilltops.	Yes	No	60.2 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Darwinia polychroma	T	EN	July to September	Orange-brown sandy loam. Flat to undulating plains.	Yes	No	28.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Darwinia sphaerica	P2		August to October	Tan-brown, orange-brown sandy loam over laterite. Granite outcrops.	Yes	No	34.5 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon considered likely restricted to a range of approx. 2.9 km at Canna.	
***Darwinia* sp. Strawberry (M.G. Corrick 8279)**	P2		September	Cream-beige, grey, yellow sand. Undulating sandplains.	Yes	No	46.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Dasymalla axillaris	T	CR	September to December	Plains and flats. Yellow sand.	Yes	No	18.6 km (Borefield Corridor)	Unlikely: nearest DBCA location to south represents northerly extent of known range. The Survey Area is outside this range, and is unlikely to provide suitable habitat in the vicinity of known records (central Borefield Corridor), as this part of the Survey Area is almost entirely cleared or consists of only remnant or planted trees over weeds.	
Daviesia bursarioides	T	EN	August	Brown sandy loam, yellow clay loam over lateritic gravel.	Yes	No	15.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat in the vicinity of known records unlikely to be present.	
Daviesia speciosa	T	EN	April to December	Breakaways, hilltops, and slopes with gravelly grey, brown or white sand or clay loam over laterite.	Yes	No	6.9 km (Borefield Corridor)	Unlikely: nearest DBCA location to west represents easterly extent of known range. The Survey Area is outside this range, and suitable habitat in the vicinity of known records not considered to be present.	
Desmocladus biformis	P3		September to October	Hills, slopes and undulating plains with white or brown sand or sandy clay over laterite.	Yes	No	68.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Desmocladus elongatus	P4		August to December	Slopes, plains and uplands with white or grey sand over laterite.	Yes	No	44.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Dicrastylis linearifolia	P3		August to January	Red or red brown to yellow sands on flats and sand ridges.	Yes	Yes (central and eastern Survey Area only)	10.6 km (Karara Area)	**Possible:** central and eastern Survey Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within taxon's known range.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Diuris eburnea	T		October to November	Winter wet flats.	Yes (October site visit only)	No	13.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Diuris recurva	P4		July to August	Winter-wet areas and drainage lines with brown sandy clay or loam.	Yes (August site visits only)	No	44.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	

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								Survey Area	Targeted Survey Area
Dodonaea amplisemina	P4		October	Hills and ridges with quartz, chert or banded ironstone.	Yes	Yes (Karara Area only)	6.0 km (Karara Area)	**Possible:** Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known range and in proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Dodonaea scurra	P1		August	Yellow gravelly loamy sand over laterite, brown-red ironstone gravel.	Yes	Yes (western and central Borefield Corridor only)	0.5 km (Borefield Corridor)	**Possible:** western end of Yandanooka Pipeline, and central-western Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known range and in proximity to known records.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; on the edge of known range of this taxon, and suitable habitat unlikely to be present.
Drakaea concolor	T	VU	August	Grey sand.	Yes (August site visits only)	No	48.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Drosera pedicellaris	P1		September to December	Heathland with white/grey sand.	Yes	No	32.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Drummondita fulva	P3		May to November	Orange-brown sandy loam. Hillslopes.	Yes	Yes (central and eastern Survey Area only)	0.1 km (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon.
Drummondita rubriviridis	P1		October	Banded ironstone and laterised banded ironstone and hematite.	Yes	Yes (western end of Yandanooka Pipeline and eastern end of Borefield Corridor only)	2.1 km (Borefield Corridor)	**Possible:** western end of Yandanooka Pipeline and eastern end of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area bounds the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
Elatine macrocalyx	P3		May to August, November	Grey-brown sandy clay, orange-red sand, red sandy loam. Wetlands.	Yes	Yes (central and eastern Survey Area only)	43.2 km (Karara Area)	**Possible:** Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Eleocharis keigheryi	T	VU	August to November	Clay, sandy loam. Emergent in freshwater: creeks, claypans.	Yes	Yes (central and eastern Survey Area only)	64.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

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								Survey Area	Targeted Survey Area
Eleocharis papillosa	P3	VU	March to November	Claypans, saline floodplains.	Yes	Yes (central and eastern Survey Area only)	60.7 km (Tilley Siding)	**Possible:** central to eastern Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Enekbatus dualis	P1		July to October	Plains and slopes. Brown or yellow or orange fine silty to clayey sand, pink loam over granite.	Yes	No	39.9 km (Yandanooka Pipeline)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Enekbatus longistylus	P3		August to September	Sandplains and flats or gentle slopes. Yellow sands, dull brown sand, silty fine sands.	Yes	Yes (central and eastern Survey Area only)	1.4 km (Yandanooka Pipeline)	**Possible:** central to eastern Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Enekbatus planifolius	P1		September to October	Very gentle slopes. Orange-brown to brown silty fine sands.	Yes	No	21.7 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon restricted to a range of approx. 1.0 km at Canna.	
Epitriche demissus	P2		July to December	Edges of saline lakes and depressions. Grey sands, occasionally with clay.	Yes	Yes (central part of Borefield Corridor only)	4.8 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Eremaea acutifolia	P3		August to November	Grey or yellow sand. Proteaceous sandplains.	Yes	No, but nearest DBCA record represents eastern extent of known range	3.8 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat.	
***Eremophila glabra* subsp. Morawa (C.A. Gardner 7521)**	P1		Unknown	Flats and plains. Red, slightly saline sand.	Yes	Yes (central part of Borefield Corridor only)	3.6 km (Tilley Siding)	**Possible:** central part of Borefield Corridor only, within chain of saline playas/clay pans. Habitat potentially present and known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Eremophila grandiflora	P1		August to October	Very gentle and simple slopes. Rocky soils of red or brown clays and clay loams. Various geologies.	Yes	No	15.0 km (Karara Area)	Unlikely: suitable habitat possibly present (Karara Area only), but nearest DBCA record to east represents most westerly extent of taxon's relatively restricted range (approx. 13 km). Taxon has not been recorded in Survey Area despite significant survey effort within the Karara Area over many years.	
Eremophila nivea	T	EN	September to October	Grey-white sand. *Banksia attenuata* and *Eucalyptus marginata* woodland.	Yes	Yes (western half of Survey Area only)	2.2 km (Borefield Corridor)	Unlikely: western half of Survey Area occurs within taxon's known range, but suitable habitat has not been recorded in the Survey Area.	
Eremophila oldfieldii* subsp. *papula	P1		September	Rocky hills and slopes. Red and red-brown clay loams.	Yes	No, but eastern part of Karara Area near western edge of known distribution	4.3 km (Karara Area)	**Possible:** eastern Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Eremophila resinosa	T	EN	January	Brown or red clay loam. Disturbed sites, plains and flats.	Yes	No	162 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Eremophila rostrata* subsp. *trifida	T	CR	June, September to October	Hard brown sandy loam on upland slopes and flats.	Yes	No	20.5 km (Borefield Corridor)	**Possible:** central-eastern Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs in relatively close proximity to known records.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Eremophila sargentii	P2		August to December	Gravelly or sandy soils. Slopes, ridges, disturbed sites.	Yes	No	44.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Eremophila sericea	P1		March, September to October	Rocky red brown clay loam on low slopes.	Yes	No, but nearest DBCA record represents northern extent of known range	4.6 km (Karara Area)	**Possible:** eastern Borefield Corridor, and Yandanooka and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Eremophila viscida	T	EN	August to December	Brown sand or loam. Flats, slopes, around salt lakes.	Yes	Yes (central Borefield Corridor and western Yandanooka Pipeline only)	19.6 km (Borefield Corridor)	**Possible:** central Borefield Corridor and western Yandanooka Pipeline only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
***Eremophila* sp. Thundelarra (B. Buirchell BB 324)**	P1		September	Red to brown sandy loam. Flat saline clay pans.	Yes	No	28.9 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus abdita	P2		February	Laterite, sandy clay with gravel over laterite. Slopes, breakaways.	Yes	No	19.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus arachnaea* subsp. *arrecta	P3		May	Red or brown stony loams. Upper slopes and rises.	Yes	Yes (central-western Borefield Corridor only)	0.1 km (Borefield Corridor)	**Possible:** central Borefield Corridor only. Nearest DBCA record near the western end of the Borefield Corridor is somewhat disjunct from all other records, and is likely erroneous (locality description is 'Farmland E side of Yandanooka, NE road 36 km from Mingenew (near Mingenew - Morawa boundary)', but this would place the record further east near Mount Budd, and closer to the main distribution of the taxon).	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Eucalyptus beardiana	T	VU	May to August	Yellow sand plains and dunes.	Yes	No	87.3 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus blaxellii	P4		January, April to November	Rocky slopes. Red or brown sandy loam over sandstone.	Yes	Yes (central-western Borefield Corridor only)	0.1 km (Borefield Corridor)	**Possible:** central Borefield Corridor only. Nearest DBCA record near the western end of the Borefield Corridor is somewhat disjunct from all other records, and is likely erroneous (description is 'Sandstone breakaway' at 'Yandanooka - E of Geraldton,' but there is no sandstone breakaway at this location). This record likely occurs further east between Yandanooka and Mount Nunn Nature Reserve.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Eucalyptus crispata	T	VU	March to June	Lateritic breakaways and slopes with brown-grey sand or loam with lateritic gravel.	Yes	No	15.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus ebbanoensis* subsp. *photina	P4		September to March	Lateritic breakaways, sandplains with sandy clay or red sand.	Yes	Yes (western and central part of Survey Area only)	25.7 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Eucalyptus* x *impensa	T	EN	June to July	Hills, slopes and plains with grey, yellow or white sand over laterite.	Yes	No	65.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Eucalyptus johnsoniana	T	VU	July to May	Sandplains and lateritic breakaways with white-grey sand with lateritic gravel.	Yes	No	64.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Eucalyptus jutsonii* subsp. *kobela	P1		March	Yellow sand or orange sandy loam or orange sandy clay. Broad slope or rises.	Yes	No	8.2 km (Karara Area)	**Possible:** eastern Yandanooka Pipeline only. Suitable habitat potentially present. Nearest DBCA record closest to the Karara Area, but there does not appear to be suitable habitat within this part of the Survey Area (based on aerial imagery interpretation).	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Eucalyptus leprophloia	T	EN	July to November	Breakaways and slopes with grey or white sand or sandy clay over laterite.	Yes	No	16.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus macrocarpa* subsp. *elachantha	P4		August to December	Hillslopes, ridges, sandplains with white or grey sand over laterite.	Yes	No, but nearest DBCA record represents eastern extent of known range	4.2 km (Borefield Corridor)	Unlikely: known record west of the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area. The Survey Area is unlikely to provide suitable habitat within proximity to the taxon's known distribution.	
Eucalyptus macrocarpa* x *pyriformis	P3		August to October	Sand, lateritic sandy soils. Hills, rocky ironstone ridges, sandplains.	Yes	No, but western end of Borefield Corridor near eastern edge of known distribution	23.8 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Eucalyptus pruiniramis	T	EN	December to February	Skeletal soils over sandstone or laterite. Rocky hillslopes.	Yes	No	15.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus rhodantha* var. *rhodantha	T	VU	July to January	Hillslopes, breakaways and gentle slopes with grey, yellow or brown sand, sometimes over laterite.	Yes	No	17.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus rhodantha* var. x *petiolaris	P4		Unknown	Yellow-brown sandy loam on massive laterite. Upper slopes and edges of creeks.	Yes	No	26.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Eucalyptus synandra	T	VU	June, November to January	Hills, flats and valleys. Yellow or light brown-orange, red sandy gravel, ironstone and laterite.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Eucalyptus zopherophloia	P4		October to January	Slopes and dunes with grey/white sand. Often with limestone. Coastal areas.	Yes	No	35.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Euryomyrtus recurva	P3		April to October	Yellow to red or orange gravelly sandy soils. Across undulating landscapes.	Yes	No, but eastern part of Karara Area near western edge of known distribution	25.7 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
***Eutaxia* sp. Jasper Hill (R.J. Cranfield 8607)**	P1		Unknown	Red-brown clay over ironstone. Only known from one record in 1992.	Yes	No	5.3 km (Karara Area)	**Possible:** eastern Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known record.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Fitzwillia axilliflora	P2		September to November	White saline sandy clay on low gypsum ridges or flats near or on salt lake edges.	Yes	Yes (central Survey Area only)	4.6 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Frankenia conferta	T	EN	September to November	Clay and sand. Edges of salt lakes.	Yes	No	49.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Frankenia glomerata	P4		November	Salt lake edges, watercourses and flats with white sand or grey-brown sandy loam.	Yes	Yes (western and central Survey Area only)	9.2 km (Borefield Corridor)	**Possible:** central Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within taxon's known range.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
Gastrolobium hamulosum	T	EN	August to October	Flats, slopes, ridges with sandy, often gravelly soils or clay.	Yes	No	86.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Gastrolobium rotundifolium	P3		September to October	Hilltops, breakaways. Grey sandy loam.	Yes	Yes (very western end of Borefield Corridor only)	4.7 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Glyceria drummondii	T	EN	July to October	Seasonally flooded clay pans within clay plains, in hollows. Brown or red-brown clay.	Yes	Yes (very western end of Borefield Corridor only)	4.4 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Gnephosis cassiniana	P3		August to November	Drainage lines, saline flats.	Yes	Yes (central and eastern Survey Area only)	22.4 km (Karara Area)	**Possible:** central and eastern part of Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Gnephosis setifera	P1		August to September	White to pale grey/brown sandy soil. Sandy flats or ridges fringing salt lakes.	Yes	Yes (central part of Survey Area only)	4.8 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor and Yandanooka Pipeline.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Gompholobium cinereum	P3		September to November	Plains and slopes, usually above saline areas. Gravelly or clayey yellow sand over laterite.	Yes	Yes (central and eastern Survey Area only)	48.8 km (Borefield Corridor)	**Possible:** central and eastern part of Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Goodenia neogoodenia	P4		August to September	Flood plains, clay pans.	Yes	No	48.4 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Goodenia perryi	P3		November	Yellow sand/clayey sand. Flats or upland hilltops.	Yes	No	42.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Grevillea amplexans* subsp. *adpressa	P1		September	Slopes with yellow or white sand, sometimes over laterite.	Yes	No	11.7 km (Borefield Corridor)	Unlikely: nearest DBCA record to south represents most northerly extent of taxon's known range. The Survey Area is predominately cleared in this area. The Survey Area is unlikely to provide suitable habitat within proximity to the taxon's known distribution.	
Grevillea asparagoides	P3		June to October	Yellow sand or sandy loam. Plains.	Yes	Yes (western Survey Area only)	2.4 km (Borefield Corridor)	**Possible:** central Borefield Corridor and western Yandanooka Pipeline only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Grevillea biformis* subsp. *cymbiformis	P3		October	Flats, slopes and hills with yellow-white sand.	Yes	No	44.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Grevillea bracteosa* subsp. *howatharra	T	CR	June to February	Hillsides and plains. Orange-brown sandy loam over laterite, ironstone or granite gravel.	Yes	Unlikely	2.9 km (Tilley Siding)	Unlikely: nearest DBCA records are from the 1960s, and are likely erroneous (locality descriptions state 'near Morawa' and 'near Mullewa', and thus they have been plotted at these townsites). All other records occur much further northwest near Kojarena and Howatharra. It is not known where the record near Morawa should actually be placed, but it is unlikely that the Survey Area occurs within the taxon's distribution.	
Grevillea christineae	T	EN	July to September	Laterite hills and slopes.	Yes	No, but western end of Borefield Corridor near eastern edge of known distribution	107 km (Borefield Corridor	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Grevillea curviloba	T	EN	August to October	Grey sand, sandy loam. Winter-wet heath.	Yes	No	55.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Grevillea erinacea	P3		July to December	Plains, hills and slopes with white, grey or yellow sand, often with lateritic gravel.	Yes	Yes (very western end of Borefield Corridor only)	26.6 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution. The Survey Area is predominately cleared in this area.	
Grevillea globosa	P3		June, November to January	Ridges, flats and plains. Red-brown sandy soil.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Grevillea granulosa	P3		July to November	Slopes and margins of salt lakes. Yellow sand, red-brown saline clay-loam, lateritic or fluviatile gravel.	Yes	Yes	2.2 km (Borefield Corridor)	**Known:** taxon recorded within Yandanooka Pipeline.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Grevillea hirtella	P3		August to October	Sand or loam over laterite, often with gravel.	Yes	No	19.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Grevillea leptopoda	P3		June to October	Hills and slopes with brown, red or yellow sand or clay loam, sometimes over laterite or occasionally granite.	Yes	Yes	0.01 km (Borefield Corridor)	**Possible:** suitable habitat potentially present, and the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon has not been recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in Wheatbelt Area). This area was searched in 2024 but this taxon was not recorded.
Grevillea makinsonii	P3		July, September to October	Gravelly white, grey or yellow sand, loam or clay over laterite. Rocky hills, sandplains.	Yes	No, but western end of Borefield Corridor near northeastern edge of known distribution	8.6 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area.	
Grevillea murex	T	EN	August to December	Brown sandy loam. Gentle slopes and plains.	Yes	Yes (central-western part of Borefield Corridor only)	0.7 km (Borefield Corridor)	Unlikely: the central-western part of Borefield Corridor intersects the taxon's known range, however this part of the Survey Area is unlikely to provide suitable habitat and is almost entirely cleared.	
Grevillea obliquistigma* subsp. *cullenii	P3		March, August to October	Red sand/sandy loam. Low flats.	Yes	No	46.2 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Grevillea phanerophlebia	T		August to September	Red and yellow sand. On hills and flats.	Yes	No, but western end of Borefield Corridor near eastern edge of known distribution	8.1 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat.	
Grevillea pythara	T	EN	August to October	Slopes. Brown or yellow sandy or gravelly loam.	Yes	No	125 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Grevillea rosieri	P2		June to September	Brown sandy clay/loam and lateritic gravel, typically above saline areas. Potential disturbance opportunist.	Yes	Yes (central and eastern Survey Area only)	21.5 km (Yandanooka Pipeline)	**Possible:** western part of Yandanooka Pipeline only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Grevillea rudis	P4		April to January	Hills and slopes with white, grey, yellow or red sand, often with gravel and laterite.	Yes	No	36.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

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								Survey Area	Targeted Survey Area
Grevillea scabrida	P3		July to September	Shallow red/brown sandy clay loam soils over dolerite and/or ironstone. Moderately inclined low to mid slopes.	Yes	Yes (Karara Area only)	2.0 km (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Grevillea stenogyne	P1		June	Clay plains. Only known from one record in 2011.	Yes	No	72.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Grevillea subtiliflora	P3		August	Shallow red/brown sandy clay loam soils. Moderately inclined low to mid slopes.	Yes	Yes (eastern Karara Area only)	2.8 km (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Grevillea tenuiloba	P3		July to October	Slopes and granite outcrops. Gritty red, brown loam.	Yes	Yes (central part of Survey Area only)	2.9 km (Tilley Siding)	**Possible:** central and eastern part of Borefield Corridor, and Yandanooka Pipeline only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution. Note nearest DBCA record likely erroneous (locality description states 'Near Morawa' and thus the record has been plotted at Morawa townsite).	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Guichenotia alba	P3		July to August	Sandy and gravelly soils. Low-lying flats, depressions.	Yes	No	23.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Guichenotia quasicalva	P2		September to October	Sandy clay over laterite. Drainage lines.	Yes	No	16.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Gunniopsis divisa	P3		August to November	Slopes with banded ironstone and chert, sandy clay loam soil.	Yes	Yes (eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Borefield Corridor and Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Gyrostemon reticulatus	T	CR	September to October	Brown sandy loam. Plains.	Yes	Yes (western and central Survey Area only)	1.3 km (Tilley Siding)	**Possible:** western and central Survey Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in Wheatbelt Area). This area was searched in 2024 but this taxon was not recorded.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Haegiela tatei	P4		September to December	Saline flats.	Yes	No	41.0 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Haemodorum loratum	P3		November	Uplands and sandplains with grey, white or yellow sand and gravel.	Yes	No	21.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Hakea megalosperma	T	VU	April to June	High in landscape; hills, breakaways, slopes and flats with white, grey or brown sand or sandy loam over laterite.	Yes	No	36.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Hemiandra gardneri	T	EN	August to November	Plains with yellow or grey sand or clayey sand.	Yes	No	72.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Hemiandra rutilans	T	EN	October to November	Yellow/grey sand.	Yes	No	69 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
***Hemiandra* sp. Eneabba (H. Demarz 3687)**	P3		February	Sandplains with white, grey or yellow sand.	Yes	No	24.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
***Hemiandra* sp. Watheroo (S. Hancocks 4)**	P4		October to November	Sandplains and hillslopes with grey/white sand, sometimes over laterite.	Yes	No	28.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hemigenia diadela	P2		October	Lower hill slopes.	Yes	No	22.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hemigenia pimeleifolia	P2		August	Sandstone, brown loam. Flats and plains.	Yes	No, but western part of Borefield Corridor near eastern edge of known distribution	26.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hemigenia saligna	P3		July to October	Lateritic and sandy soils.	Yes	No	41.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Hemigenia tichbonii	P1		August to November	Red/brown clay loam over ironstone or granite uplands.	Yes	No, but eastern part of Karara Area near northwestern edge of known distribution	3.3 km (Karara Area)	**Possible:** Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Hemigenia* sp. aff. *botryphylla	PU		Unknown; flowering material collected in late August	Gravelly brown clay loam flats, in reasonable proximity to highly saline areas.	Yes	Yes (Yandanooka Pipeline only)	NA	**Known:** taxon recorded within Yandanooka Pipeline.	Mine Area: unlikely; suitable habitat unlikely to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.

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***Hemigenia* sp. major (C.A. Gardner 2677)**	P1		July to September	Unknown. Only known from three collections in 1931, with no habitat information provided.	Yes	Yes (western end of Yandanooka Pipeline only)	1.2 km (Yandanooka Pipeline)	**Possible:** western end of Yandanooka Pipeline, and eastern Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known range and in close proximity to known records.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
Hensmania chapmanii	T	VU	December to January	Yellow-grey or lateritic sand.	Yes	No	27.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hensmania stoniella	P3		September to November	Flats and slopes with white, grey or lateritic sand, sometimes winter-wet.	Yes	No	21.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hibbertia bistrata	P3		April, August to September	Ridge, flats. Brown loam, yellow sand, lateritic gravel.	Yes	No	20.7 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Hibbertia cockertoniana	P3		July to October	Orange and brown rocky soils. Banded ironstone outcrops.	Yes	Yes (central and eastern Survey Area only)	2.9 km (Tilley Siding)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Hibbertia subvillosa	P3		June to October	Sandy creek beds, heavy soils, often disturbed sites.	Yes	Yes (western and central part of Borefield Corridor only)	0.1 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution).
Homalocalyx chapmanii	P2		September to October	Undulating plains, slopes and riverbanks with sand or loam.	Yes	No, but western part of Borefield Corridor near eastern edge of known distribution	11.5 km (Borefield Corridor)	Unlikely: known record in proximity to the Survey Area, however suitable habitat unlikely to be present in this part of the Survey Area.	
Hopkinsia anoectocolea	P3		September to December	White or grey sand, often saline. Winter-wet depressions, floodplains, salt lakes.	Yes	No	39.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Hyalosperma stoveae	P2		August to October	Plains. Red-brown or orange or brown-yellow sandy loam over laterite.	Yes	Yes (eastern half of Survey Area only)	46.7 km (Karara Area)	**Possible:** taxon known from few records over a wide distribution. Suitable habitat potentially present within Yandanooka Pipeline and Karara Area.	Mine Area: unlikely; suitable habitat unlikely to be present. Wheatbelt Area: unlikely; outside the known range of this taxon.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Hydrocotyle dimorphocarpa	P1		September to October	Shallow red/brown sandy clay loam. Moderately inclined mid slopes to flats.	Yes	No, but eastern part of Karara Area near western edge of known distribution	2.8 km (Karara Area)	**Possible:** eastern Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs in close proximity to known records.	Mine Area: unlikely; suitable habitat potentially present, but taxon not recorded despite intensive systematic survey and historical survey effort. Wheatbelt Area: unlikely; outside the known range of this taxon.
Hydrocotyle spinulifera	P3		September to October	Clay or sandy clay, bentonite clays. Around salt lakes.	Yes	Yes (central Survey Area only)	0.2 km (Yandanooka Pipeline)	**Possible:** central to eastern Borefield Corridor, and Yandanooka Pipeline only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Hypocalymma tetrapterum	P3		August	Grey sand, loam, lateritic gravel. Riverbanks, breakaways.	Yes	No	47.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Isotropis petrensis	P1		July to August	Granite outcrops or sheets, brown loam.	Yes	Yes (eastern end of Yandanooka Pipeline and Karara Area only)	10.6 km (Yandanooka Pipeline)	**Possible:** Central to eastern Yandanooka Pipeline, and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Jacksonia pungens	T	EN	November to December	Yellow sand, gravelly lateritic soils. Undulating areas.	Yes	No	66.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Korthalsella leucothrix	P1		Unknown	Parasitic on *Acacia acuminata*, *A. ramulosa*, *A. tetragonophylla*, *A. quadrimarginea*, *A. incurvaneura*, and *A. craspedocarpa*. Coarse red lateritic sandy loam by run-on areas or creeks.	Yes	No	26.3 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Lasiopetalum decoratum	P2		August to December	Gullies and slopes of breakaways in grey, brown or brown-yellow, loamy sand and lateritic gravel and boulders.	Yes	No	26.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Lasiopetalum ogilvieanum	P1		July to October	Undulating plains, lateritic rises.	Yes	No	8.5 km (Borefield Corridor)	Unlikely: DBCA record south of Survey Area likely erroneous (locality description states 'Three Springs' and thus the record has been plotted at Three Springs townsite). All other DBCA records occur further west. The Survey Area is outside this range.	
Lechenaultia galactites	P3		June, September to October	Yellow or brown sand over laterite, plains.	Yes	No	40.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Lechenaultia juncea	P3		November to December	White, grey or yellow sand, sandy gravel. Banksia woodland.	Yes	Yes (western end of Borefield Corridor only)	2.0 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Lechenaultia longiloba	P4		September to October	Yellow/white to grey sand across undulating landscapes. Recently burned areas.	Yes	No	42.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Lepidium fasciculatum	P3		September to December	Red or brown cracking clay/loam on dried lake beds.	Yes	Yes	18.4 km (Borefield Corridor)	**Possible:** taxon known from few records over a wide distribution. Suitable habitat potentially present within Karara Area.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Lepidium sagittulatum	P1		September	Unknown. Only known from two collections in 1949, with no habitat information provided.	Yes	Unknown	18.4 km (Borefield Corridor)	Unknown, but unlikely: status and range of taxon unknown. Only known from two collections in 1949, with no specific locality information provided; collections state 'Mingenew', and thus the records have been plotted at Mingenew townsite. It is unknown whether this taxon is still extant.	
Lepidobolus densus	P4		August to November	Sandplains, lake edges and slopes with brown or yellow sand.	Yes	Yes (western and central Survey Area only)	6.0 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution).
Lepidosperma gibsonii	T		May to July, October to February	Shallow red to pale brown or pale pink sandy loam with a rocky surface over ironstone or granite. In gullies and on lower slopes of BIF hills.	Yes	No	45.5 km (Karara Area)	Unlikely: suitable habitat possibly present (central and eastern part of Survey Area), but nearest DBCA record to southeast represents most westerly extent of taxon's restricted range (approx. 17 km).	
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)**	P1		July to October	Seasonally wet brown to red sandy loam at the base of granite outcrops or across moderate to steeply inclined hillslopes of rocky magnetite and laterite banded ironstone.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
***Lepidosperma* sp. Koolanooka (K.R. Newbey 9336)**	P1		May to June, October	Pale brown to red clay loam soils or in cracks on moderate to steeply inclined BIF. Occasionally on pale brown clay loam over granite outcrops.	Yes	Yes (central Survey Area only)	0.5 km (Borefield Corridor)	**Possible:** western end of Yandanooka Pipeline and eastern end of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area intersects the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Leucopogon grammatus	P3		August	Slopes, breakaways and ridges with laterite.	Yes	No	22.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Leucopogon stokesii	T		August to September	Rocky loams on sandstone. Breakaways.	Yes	No	0.7 km (Borefield Corridor)	Unlikely: despite the close proximity of known records, suitable habitat is not considered to be present in the Survey Area. Taxon has a very restricted distribution of only approx. 3 km.	
***Leucopogon* sp. Yanneymooning (F. Mollemans 3797)**	P3		May to July	Brown or grey sandy clay loam across granite hills and decomposed granite breakaways.	Yes	No	29.1 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Liparophyllum congestiflorum	P4		September to November	Flats, swamps and drainage lines with grey sandy clay or sand.	Yes	Yes (very western end of Borefield Corridor only)	1.7 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Lyginia excelsa	P2		March to November	Undulating plains, flats and depressions with white/grey sand.	Yes	No	47.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Malleostemon decipiens	P1		August to October	Brown-orange sand or grey loam. Sandplains. Granite breakaways.	Yes	Yes (western end of Borefield Corridor only)	3.4 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
***Malleostemon* sp. Yalgoo Road (Morawa Tree Committee 329)**	P1		September	Sand. Only known from two records collected in 1993.	Yes	No	27.5 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon has a very restricted distribution of only approx. 1.5 km.	
Melaleuca barlowii	P3		August to October	Slopes, flats and roadsides. Hard gravelly yellow or red or brown sandy clay loam, banded ironstone or laterite.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Yandanooka Pipeline, Karara Area)	**Known:** taxon recorded within Yandanooka Pipeline and Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Melaleuca sclerophylla	P3		August to November	Gravelly white or red-brown or orange sand over clay, granite or quartzite slopes and hills.	Yes	Yes (western end of Borefield Corridor only)	15.7 km (Borefield Corridor)	Unlikely: the Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Menkea draboides	P3		August to September	Granitic flats with brown clay loam or red soils.	Yes	Yes (eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Yandanooka Pipeline and Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Mesomelaena stygia* subsp. *deflexa	P3		March to October	Plains, flats and slopes with white, grey or lateritic sand, clay, gravel.	Yes	No	8.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Micromyrtus acuta	P3		June, September to October	Red and red-brown loam and rocky soils. Banded ironstone.	Yes	Yes (eastern Survey Area only)	0.4 km (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Micromyrtus mucronulata	P1		April to September	Rocky brown loam and dolerite (sometimes over greenstone or granite) on upper slopes and summits of rocky hills.	Yes	No	46.1 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon has a very restricted distribution of only approx. 5.5 km.	
Micromyrtus ninghanensis	P1		September to October	Rocky brown clay loam soil over greenstone or granite on slopes and summits of rocky hills.	Yes	No	48.3 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon has a very restricted distribution of only approx. 2.5 km.	
Micromyrtus rogeri	P1		July to October	Breakaways on yellow-brown sandy soils, gravel, laterite.	Yes	No	8.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Micromyrtus trudgenii	P3		July to November	Shallow, rocky red to brown sandy clay loam over moderately inclined hillcrests of banded ironstone or basalt.	Yes	Yes (Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Micromyrtus uniovulum	P2		November	Ridges, hilltops and slopes with grey or brown sand or clay loam over laterite.	Yes	No	0.1 km (Borefield Corridor)	Unlikely: nearest DBCA record likely erroneous; locality description is 'Yandanooka Nature Reserve', but the record provides the identifier and location of Wilson Nature Reserve, where other known records occur. Yandanooka Nature Reserve is not known to exist. Disregarding this erroneous record, the Survey Area occurs outside the range of the taxon.	
Millotia dimorpha	P1		September to October, February	Rocky red to brown clay loam across moderately inclined slopes of banded (often laterised with haematite) ironstone.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon has not been recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Millotia jacksonii	P2		September to October	Valleys. Orange or grey sandy clay over laterite or sandstone or siltstone.	Yes	No	24.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
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Mirbelia ferricola	P3		June to November	Red to brown sandy clay loam across slopes of BIFs or laterite.	Yes	Yes (central and eastern Survey Area only)	2.1 km (Yandanooka Pipeline)	**Possible:** western Yandanooka Pipeline and eastern Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
***Mirbelia* sp. Ternata (M.D. Crisp & L.G. Cook MDC 9267)**	P1		September	Undulating plains and rocky slopes. Pale yellow, dry grey, brown loamy sand, sandstone/laterite.	Yes	Yes (central Survey Area only)	1.1 km (Tilley Siding)	**Possible:** Tilley Siding and central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon.
Nicotiana salina	P1		July to October	Slopes fringing major salt lakes and islands in salt lakes. Red-brown sandy loam to yellow clay.	Yes	Yes (central and eastern Survey Area only)	2.6 km (Yandanooka Pipeline)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Papistylus grandiflorus	P2		July to October	Brown sandy loams. With granite, often on slopes.	Yes	No	42.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Paracaleana dixonii	T	EN	Late October to November	Flats, plains and slopes with grey sand, sometimes with laterite gravel.	No	No	20.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Persoonia chapmaniana	P3		September to November	White sandy clay, yellow sand. Vicinity of salt lakes.	Yes	No	32.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Persoonia filiformis	P3		November to December	Plains and slopes with yellow or white sand over laterite.	Yes	No	21.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Persoonia kararae	P2		October	Gentle rises on sandplains. Red clay loam.	Yes	Yes (Karara Area only)	0.01 km (Karara Area)	**Likely:** suitable habitat likely to be present in Survey Area (Karara Area). DBCA record in very close proximity to Survey Area, which occurs in vegetation that appears to be contiguous with vegetation inside the Survey Area (based on aerial imagery interpretation).	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Persoonia pentasticha	P3		August to November	Slope of low rises, sides of ridges and drainage lines. Rocky basalt outcrops with red-brown or orange shallow sandy clay soils, fragments of granite, haematite, ironstone, quartz or ochre.	Yes	Yes	0.5 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor and Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat not considered to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Persoonia rudis	P3		September to January	Flats and slopes with white, grey or yellow sand, often over laterite.	Yes	No	18.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Petrophile biternata	P3		August to September	Lateritic hills, ridges.	Yes	No	48.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Petrophile conifera* subsp. *divaricata	P2		September to October	Brown to red sand loam or clay across rocky undulating slopes of ironstone or granite. Only known from two records in 2008 and 2011.	Yes	No	47.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Petrophile globifera	P3		September	Yellow or brown sand. Often on slopes.	Yes	Yes (western end of Borefield Corridor only)	2.0 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Petrophile pauciflora	P3		August to September	Breakaways with granite or laterite. Flats or slopes with loam and clay.	Yes	Yes (eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon.
Petrophile septemfida	P3		July to September	Hillsides, uplands and plains with grey-white sand, often over laterite.	Yes	No	34.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Phebalium brachycalyx	P3		June to September	Gravelly brown or red to yellow sandy loam or clay over laterite across slopes.	Yes	No	78.3 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Philotheca nutans	P1		April to September	Red sandy loam or brown to yellow sandy clay, occasionally over ironstone. Across flats or sometimes over gradual slopes.	Yes	No	37.8 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Phlebocarya pilosissima* subsp. *pilosissima	P3		August to October	Slopes with sand over laterite.	Yes	No	46.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Pigea cymulosa	T	CR	January, May to August	Rocky red to brown clay loam over greenstone across hill side slopes or along creekline banks or gullies.	Yes	No	45.5 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

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								Survey Area	Targeted Survey Area
Pityrodia viscida	P4		September to February	Upper slopes and mid slopes with white or grey sand, sometimes over laterite.	Yes	Yes (western end of Borefield Corridor only)	0.5 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present within the taxon's known distribution. This area was searched in 2024 but this taxon was not recorded.
Podotheca pritzelii	P3		September to October	Salt lakes and saline habitats.	Yes	Yes	0.5 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Podotheca uniseta	P3		August to December	White/grey sand, sandy loam. Samphire flats.	Yes	Yes	5.5 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Polianthion collinum	P3		July	Red to brown loamy or clay loam soils across moderate to steeply inclined slopes of banded ironstone.	Yes	Yes (eastern Karara Area only)	0.1 km (Karara Area)	**Likely:** suitable habitat likely to be present in Survey Area (eastern Karara Area). Known records in very close proximity to Survey Area, which occur in vegetation that appears to be contiguous with vegetation inside the Survey Area (based on aerial imagery interpretation).	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Poranthera asybosca	P1		Late October	Grey/white sandy soil.	Unlikely	No	43.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
***Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8)**	P1		September	Red silty clay loam. Low to mid slopes of low rises.	Yes	Yes (eastern Karara Area only)	0.2 km (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Psammomoya implexa	P3		August to September	Gentle slopes, stony hills or sandplains. Yellow sand or red clay/silt over ironstone gravel.	Yes	Yes (central and eastern Survey Area only)	3.5 km (Karara Area)	**Possible:** eastern part of Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution, with known records in close proximity.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Ptilotus fasciculatus	P4		October to December	Saline brown or grey loam and clay loam. Around watercourses or on flats.	Yes	Yes (western Survey Area only)	33.5 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Rhodanthe collina	P3		August to October	Rocky shallow red to brown sandy clay loam. Low to upper slopes of moderately inclined banded ironstone (often mixed with other minerals and rock).	Yes	Yes	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	**Mine Area: known.** Wheatbelt Area: unlikely; suitable habitat not considered to be present.
***Rhodanthe* sp. Yuna (G.J. Keighery, B.J. Keighery & B. Moyle 2820)**	P3		September to November	Red to yellow sandy loam over laterite or granite. Open flats or hillside slopes.	Yes	Yes (western end of Borefield Corridor only)	0.1 km (Borefield Corridor)	Unlikely: known records in proximity to the western end of Borefield Corridor; however, the Survey Area is predominately cleared in this area, or consists of only *Eucalyptus* trees over pasture weeds. The Survey Area is unlikely to provide suitable habitat within the taxon's known distribution.	
Ricinocarpos brevis	T	EN	February, June to July	Red brown loam gravel, sandy clay loam or silty clay. Steep upper slopes of banded ironstone ridges.	Yes	No	240 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Ricinocarpos oliganthus	P1		June, September	Red brown sandy clay or loam or stony brown clayey sand on hillsides.	Yes	No	36.0 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon. Taxon restricted to the Canna area.	
Roebuckiella halophila	P3		August to October	Sand ridges in saline drainage lines or salty lake areas. Slightly to moderately saline brown-red sand or laterite clay.	Yes	Yes (central-western Borefield Corridor only)	0.2 km (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor and Yandanooka Pipeline.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Roycea pycnophylloides	T	EN	September to October	Salt lakes and saline habitats.	Yes	No	136 km (Karara Area)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Scaevola chrysopogon	P2		August to October	Gentle sand dunes, flat sandplains, breakaway and ridges. Dry red-brown sand.	Yes	No	44.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Scaevola kallophylla	P4		May to December	Brown or yellow sand and sandy clay.	Yes	No	37.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Schoenia filifolia* subsp. *subulifolia	T	EN	August to October	Clay and brown clay loam.	Yes	Yes (western Borefield Corridor only)	0.01 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity. Note, nearest DBCA record to Survey Area likely plotted at an indicative location: collection from 1904 with locality description 'Ebbanowah to Yandanooka'.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present (vegetation almost entirely cleared in the part of the Wheatbelt Area that is within the taxon's known distribution). This area was searched in 2024 but this taxon was not recorded.
Schoenus badius	P2		September to October	Grey sand. Moist areas.	Yes	No	24.3 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Schoenus griffinianus	P4		September to October	Undulating sandplains, lower slopes, flats and depressions with grey sand.	Yes	No	21.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Schoenus natans	P4		September to December	Ephemeral wetlands. *Melaleuca lateritia/ Melaleuca viminea* shrubland, sometimes with emergent *Eucalyptus rudis*.	Yes	No	24.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
***Schoenus* sp. Eneabba (F. Obbens & C. Godden I154)**	P2		November to December	Undulating sandplains, mid slopes and tops of rises with grey, yellow or white sand.	Yes	No	35.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Scholtzia brevistylis* subsp. *brevistylis	P1		October to December	Sandplains, margins of granite outcrops, or in association with damp depressions.	Yes	Yes (western Borefield Corridor only)	0.1 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present. This area was searched in 2024 but this taxon was not recorded.
Scholtzia brevistylis* subsp. *prowaka	P2		June to September	Brown soils with granite.	Yes	No	32.7 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Scholtzia calcicola	P2		September to December	Slopes, undulating plains. Grey or yellow sand, often with limestone.	Yes	No	46.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Scholtzia multiflora	P1		August to September	Yellow to off-white siliceous sand or dry ironstone gravel laterite. Gently inclined slopes of shallow gullies or swales.	Yes	No	62 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Scholtzia prostrata	P3		November	Flats or gentle slopes. Dry sand or sand over laterite.	Yes	No	22.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Scholtzia subsessilis	P1		September to December	Yellow sand and sandy clay.	Yes	Yes (central-western Borefield Corridor only)	5.8 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in proximity.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; just outside the known range of this taxon, and suitable habitat unlikely to be present.
***Sclerolaena* sp. Koolanooka Hills (R. Meissner & Y. Caruso 437)**	P1		Unknown	Red brown soils on footslope outwash areas of banded ironstone. Known from a single record from 2005.	Yes	No, but single known record just south of western end of Yandanooka Pipeline	2.4 km (Yandanooka Pipeline)	**Possible:** western end of Yandanooka Pipeline only. Nearest DBCA location represents only known location, but similar habitat potentially present in this part of the Survey Area.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Spergularia nesophila	P3		September to December	Sand. Limestone plateaus.	Yes	Yes (western and central Survey Area only)	0.5 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. All known records of this taxon occur in coastal areas or on islands off the coast, with the exception of nearest DBCA record that occurs within chain of saline claypans in Yarra Yarra system. Suitable habitat potentially present in this part of the Survey Area.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Stawellia dimorphantha	P4		June to November	Undulating plains and slopes with yellow sand.	Yes	No	29.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Stenanthemum poicilum	P3		April, August to December	Red to brown sand, clay or loam over basalt gravel or laterised banded ironstone often with haematite. Moderately inclined upper slopes.	Yes	Yes (central and eastern Survey Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat potentially present, but taxon was not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Stylidium amabile	T	CR	September to November	Yellow/red brown sandy clay or loam. Gentle slopes of sheet laterite.	Yes	No	70.7 km (Yandanooka Pipeline)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
***Stylidium carnosum* subsp. Narrow leaves (J.A. Wege 490)**	P1		September to October	Hillslopes and plains with white-grey sand and lateritic gravel.	Yes	No	36.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Stylidium cornuatum	P2		September	Brown or orange brown clay-loam in seasonally moist habitats.	Yes	No	20.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present.	
Stylidium drummondianum	P3		August to October	Upper hillslopes and breakaways, low heath or mallee shrubland on sand or clayey sand over laterite.	Yes	Yes (very western end of Borefield Corridor only)	11.7 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution.	
Stylidium longitubum	P4		July to November	Seasonal damplands, brown clay loam.	Yes	No	46.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is not considered to be present.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Stylidium pendulum	P1		April, September to December	Hillsides, ridges and plains. Red-brown sand, loam or clay over basalt gravel or banded ironstone.	Yes	No	8.7 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is unlikely to be present in the vicinity of nearest known DBCA record.	
Stylidium pseudocaespitosum	P2		September to November	Breakaways and hillslopes on white, grey or yellow sand over laterite.	Yes	No	22.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat is not considered to be present.	
Stylidium ricae	P3		August to October	Clay loams with gravel. Over granite.	Yes	Yes (central-western part of Borefield Corridor only)	3.4 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution with known records in close proximity.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; just outside or on the edge of the known range of this taxon, and suitable habitat unlikely to be present.
Stylidium scintillans	T		August to October	Brown clay loam or brown gravelly loam on mid to upper slopes of granite outcropping. Sometimes growing in cracks between rocks.	Yes	Yes (Karara Area only)	Within Survey Area (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: unlikely; suitable habitat unlikely to be present, and taxon not recorded despite intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Stylidium tinkeri	P2		April, October to November	Winter-wet depressions, flats, wetlands and valleys with brown or grey clay loam.	Unlikely	No	9.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Stylidium torticarpum	P3		September to November	Adjacent to drainage lines, depressions, and beneath breakaways, heath or mallee shrubland on sandy clay or clay loam over laterite.	Yes	No	15.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Stylidium wilroyense	P3		September to October	Yellow sand. Gentle slopes of sand plains.	Yes	No	32.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Stylidium xanthopis	P1		September to November	Damp red clayey sand with granite and laterite. Base of rock outcrops, screes or hillsides.	Yes	No	35.5 km (Tilley Siding)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
***Stylidium* sp. Three Springs (J.A. Wege & C. Wilkins JAW 600)**	P2		August to September	Rocky slopes, flats and outcrops with clay-sand or loam.	Yes	Yes (western end of Borefield Corridor only)	10.5 km (Borefield Corridor)	**Possible:** central-western part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon. Wheatbelt Area: unlikely; on the edge of the known range of this taxon, and suitable habitat not considered to be present.
Styphelia filifolia	P3		February to June	Sand, sometimes winter damp.	Yes	No	42.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Styphelia howatharra	P2		June to July, October	Brown sandy loam, often gravelly. Mid to upper slopes.	Yes	No	120 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Styphelia hyalina	P3		June, October to December	Sand or loam soils, on lateritic uplands and often in association with breakaways.	Yes	No	15.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Styphelia longissima	T	CR	June to September	Hillsides with gentle slopes and yellow sand.	Yes	No	49.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Styphelia marginata	T	EN	May to July	Yellow sand with gravel. Hillsides, ironstone breakaways.	Yes	Yes (very western end of Borefield Corridor only)	5.8 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution.	
Styphelia obtecta	T	EN	October to November	Plains with white, grey or yellow sand.	Yes	No	43.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Styphelia pallens	P2		October to December	Usually high in the landscape in sand or light loam over laterite.	Yes	No	36.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Swainsona picta	P1		August	Red brown sandy loam. Granite outcrops and adjacent areas.	Yes (August site visits only)	Yes (Karara Area only)	0.4 km (Karara Area)	**Known:** taxon recorded within Karara Area.	Mine Area: suitable habitat unlikely to be present, and taxon was not recorded by intensive systematic survey. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Synaphea oulopha	P3		July to October	Lateritic breakaways and rises on grey sand, gravelly loam, clay.	Yes	No	8.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Synaphea sparsiflora	P2		August to September	Slopes / crests of hills and lateritic ridges with grey / brown sand.	Yes	No	14.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Synaphea xela	P2		August	Undulating sites with red-brown gravelly sand, white-pink, grey-brown clayey sand and loam, over laterite.	Yes	No	30.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Tecticornia bulbosa	T	VU	June	Brown sandy clay. Gently undulating saline areas, permanently wet saline clays.	Yes	Yes (central Borefield Corridor only)	3.2 km (Yandanooka Pipeline)	**Possible:** central part of Borefield Corridor only, within chain of saline playas/clay pans. Suitable habitat potentially present.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Tecticornia fimbriata	P3		Unknown	Saline sand and clayey soil. Shores of salt lakes.	Yes	Yes (central Borefield Corridor and central Yandanooka Pipeline only)	Within Survey Area (Borefield Corridor)	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.

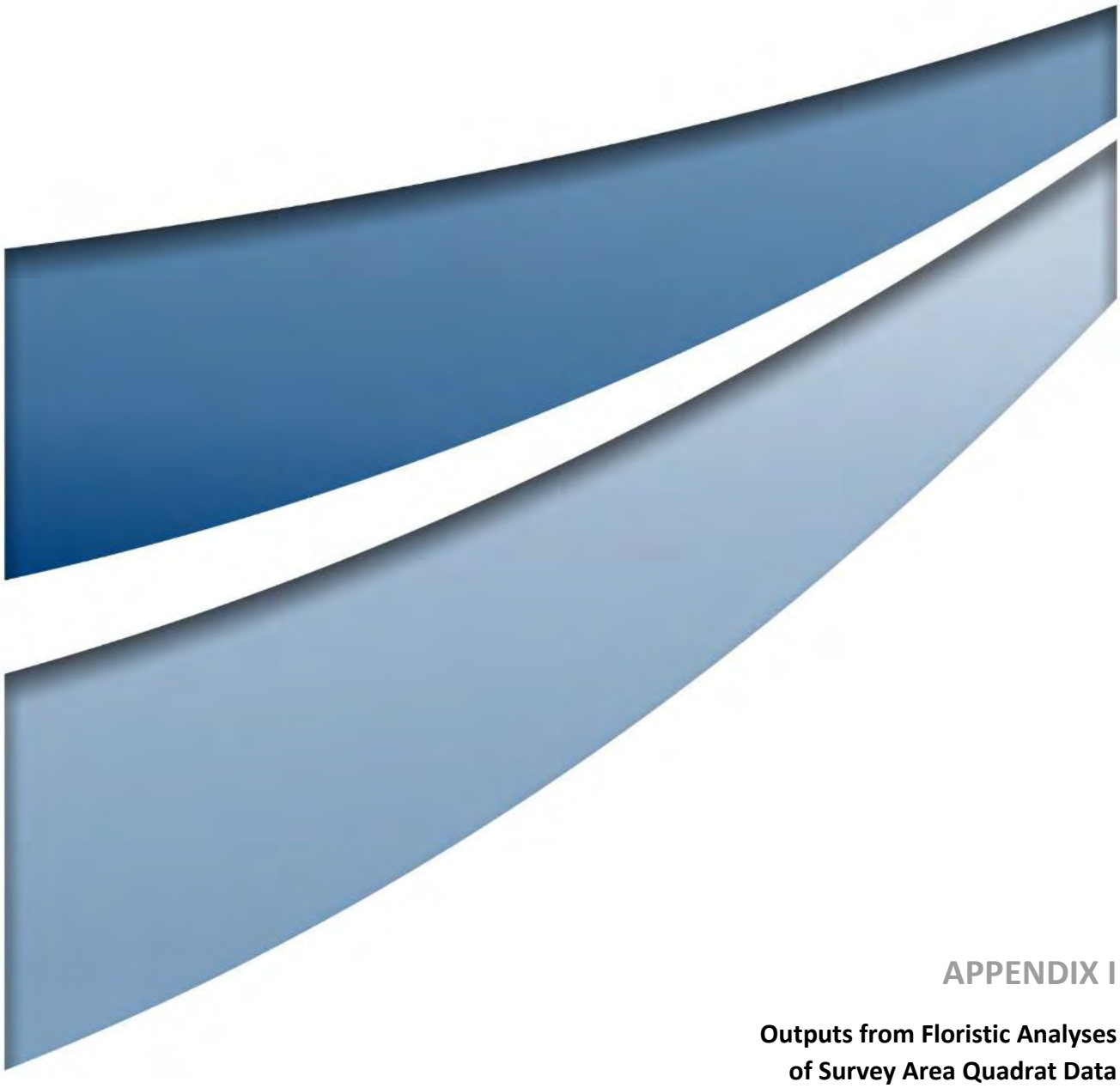
Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
***Tecticornia* sp. 'Karara 1'**	PU		Unknown	Shores of salt lakes.	Yes	Yes	NA	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
***Tecticornia* sp. 'Karara 2'**	PU		Unknown	Shores of salt lakes.	Yes	Yes	NA	**Known:** taxon recorded within Borefield Corridor.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Tetratheca nephelioides	T	CR	July to January	Slopes and ridges with white or grey gravelly sand over laterite.	Yes	No	71.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Thelymitra apiculata	P4		June to August	Hillslopes with grey sand, lateritic gravel and laterite.	Yes (August site visits only)	No	35.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Thelymitra stellata	T	EN	September to early November	Ridges and tops of lateritic hills with grey or brown sand or loam and lateritic gravel.	Yes	No	14.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat not considered to be present.	
Thomasia* x *formosa	P1		October	Orange clayey sand. Disturbed areas.	Yes	No	16.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Thryptomene nitida	P3		August to November	Lower slopes, flats and drainage lines with clay and clay/sand.	Yes	Yes (very western end of Borefield Corridor only)	0.2 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution. Note nearest DBCA record potentially erroneous; locality description states 'Enokierra Hills, on the hill, 3.5 km E of Yandanooka', which is presumably a misspelling of Enokurra Hill. The record has plotted in a cleared paddock, while Enokurra Hill occurs approx. 1.1 km south.	
Thryptomene pieroniae	P3		July to September	Yellow sandplains. Yellow sand or silty gravel. Disturbed areas.	Yes	Yes (eastern Survey Area only)	46.1 km (Karara Area)	**Possible:** eastern Yandanooka Pipeline and western Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known range.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Thryptomene shirleyae	P2		July to October	Yellow sand or sandy loam over gravel. Gentle upper slopes or plains.	Yes	No	47.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Thryptomene spicata	P2		September to November	Slopes with grey, yellow or brown lateritic sand, Rocky Springs ferricrete.	Yes	No	26.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Thryptomene velutina	P2		June to October	Sandplains, ridgetops and slopes. Red-brown, brown, yellow, orange or white sand, sandy clay.	Yes	No (DBCA record near Perth represents a cultivated location)	42.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Thysanotus glaucus	P4		October to March	White, grey or yellow sand, sandy gravel.	Unlikely	No	41.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Thysanotus vernalis	P3		September to October	Slopes, flats and winter wet depressions with grey, brown or white sand with lateritic gravel over laterite.	Yes	No	13.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Tricoryne soullierae	P3		October to December	Yellow to grey sand, gravelly clay quartz, laterite, limestone. Midslopes and uplands.	Yes	Yes (western Survey Area only)	2.7 km (Borefield Corridor)	**Known:** taxon recorded within Yandanooka Pipeline.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present. Wheatbelt Area: unlikely; suitable habitat unlikely to be present.
Triglochin protuberans	P3		August to November	Margins of ephemeral wetlands and rock pools, clay pans, sometimes granitic. Red-brown clay.	Yes	Yes	5.8 km (Borefield Corridor)	**Possible:** Suitable habitat potentially present, and the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; suitable habitat not considered to be present.
Urodon capitatus	P3		September to December	Yellow sand. Sandplains and flats.	Yes	Yes (western and central Survey Area only)	18.6 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Verticordia albida	T	EN	November to January	Undulating sandplains with grey, white or yellow sand, sometimes over laterite.	Yes	No	14.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Verticordia argentea	P2		November to April	White, grey or yellow sand. Sand ridges, undulating plains.	Yes	No	41.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia aurea	P4		September to December	Sandplains with deep white-grey sand.	Yes	No	48.8 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia capillaris	P4		March, September to November	Yellow sand across flat sandplains or slightly undulating plains.	Yes	Unlikely	2.9 km (Tilley Siding)	Unlikely: nearest DBCA record likely erroneous (locality description is 'Near Morawa' and thus the record has been plotted at Morawa townsite). The southern extent of all other records is approx. 80 km northwest of the Survey Area. The Survey Area is outside this range, and suitable habitat is unlikely to be present in the vicinity of the nearest DBCA record.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Verticordia chrysostachys* var. *pallida	P3		October to January	Yellow sand. Plains or slopes.	Yes	Yes (central Borefield Corridor only)	5.6 km (Borefield Corridor)	**Possible:** central part of Borefield Corridor only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat unlikely to be present.
Verticordia comosa	P1		September to January	Yellow sand. Plains or slopes.	Yes	Yes (western Borefield Corridor only)	0.01 km (Borefield Corridor)	Unlikely: despite the close proximity of known records, suitable habitat is not considered to be present in the part of the Survey Area that intersects the known range; vegetation almost entirely cleared in the part of the Survey Area that is within the taxon's known distribution. Intact vegetation within this part of the Survey Area is unlikely to represent suitable habitat for the taxon.	
Verticordia dasystylis* subsp. *oestopoia	P1		October to December	Gritty soils over granite. Outcrops.	Yes	No	20.4 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia densiflora* var. *roseostella	P3		September to December	Sandplains and breakaways with yellow, grey or white sand or sandy loam, often with laterite.	Yes	Yes (very western end of Borefield Corridor only)	7.9 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution.	
Verticordia fragrans	P3		September to November	Sandplains and low-lying areas with white, grey or yellow sand or clay loam.	Yes	No	44.2 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia insignis* subsp. *eomagis	P3		August to November	Sandplains and rocky rises with sandy soils over laterite.	Yes	No	47.1 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia luteola* var. *luteola	P3		October to January	Grey or yellow sand. Slopes.	Yes	No	14.5 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Verticordia luteola* var. *rosea	P1		December to January	White sand. Flats.	Yes	No	18.9 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Verticordia muelleriana* subsp. *muelleriana	P3		September to January	Sandplains and slopes with white-grey or yellow sand.	Yes	No	26.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon.	
Verticordia penicillaris	P4		September to October	Hills, rocky creeks and outcrops with shallow grey or brown sandy loam or clay loam, often with granite or sometimes laterite or sandstone.	Yes	Yes (western Borefield Corridor only)	8.9 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution.	
Verticordia polytricha	P4		September to January	Yellow sand across flat sandplains or slightly undulating plains. Often found with moist soils near gorges or gullies.	Yes	Yes (very western end of Borefield Corridor only)	45.7 km (Borefield Corridor)	Unlikely: suitable habitat is not considered to be present within the taxon's known distribution.	

Taxon	Status (WA)	Status (EPBC)	Flowering Period*	Habitat*	Identifiable During Survey?	Survey Area Within Known Range?	Nearest DBCA record to Survey Area	Likelihood of Occurrence	
								Survey Area	Targeted Survey Area
Verticordia spicata* subsp. *squamosa	T	EN	November to January	Dry yellow sand. Plains and road verges.	Yes	Yes (western Borefield Corridor only)	0.01 km (Borefield Corridor)	Unlikely: despite the close proximity of known records, suitable habitat is not considered to be present in the part of the Survey Area that intersects the known range; vegetation almost entirely cleared in the part of the Survey Area that is within the taxon's known distribution. Intact vegetation within this part of the Survey Area is unlikely to represent suitable habitat for the taxon.	
Verticordia venusta	P3		October to January	Yellow sand or yellow to brown sandy loam across undulating terrain.	Yes	No	18.6 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon, and suitable habitat unlikely to be present.	
Vittadinia cervicularis* var. *occidentalis	P1		August to September	Slopes or plains. Brown sand or sandy gravel. Disturbed areas.	Yes	No	8.0 km (Borefield Corridor)	Unlikely: the Survey Area is outside the known distribution of the taxon. Note, nearest DBCA record to Survey Area likely plotted at an indicative location: collection from 1904 with locality description 'Between Ebbano [Ebano Spring] and Yandanooka'. All other known records occur within approx. 7 km of the coast.	
Wurmbea murchisoniana	P4		July to September	Brown sand, sandy/gritty clay near ephemeral granite rock pools, riverbanks or other wet depressions.	Yes	Yes (central and eastern Survey Area only)	12.6 km (Karara Area)	**Possible:** central and eastern part of Borefield Corridor, and Yandanooka Pipeline and Karara Area only. Suitable habitat potentially present, and this part of the Survey Area occurs within the taxon's known distribution.	Mine Area: unlikely; suitable habitat not considered to be present. Wheatbelt Area: unlikely; outside the known range of this taxon, and suitable habitat not considered to be present.
Wurmbea tubulosa	T	EN	June to October	Riverbanks, seasonally-wet places with clay or loam.	Yes	Yes (western end of Borefield Corridor only)	0.04 km (Borefield Corridor)	Unlikely: despite the close proximity of known records, suitable habitat is unlikely to be present in the part of the Survey Area that intersects the known range.	

** Source: WA Herbarium specimen records data, accessed via Florabase (WA Herbarium, 1998-), except where stated otherwise.*

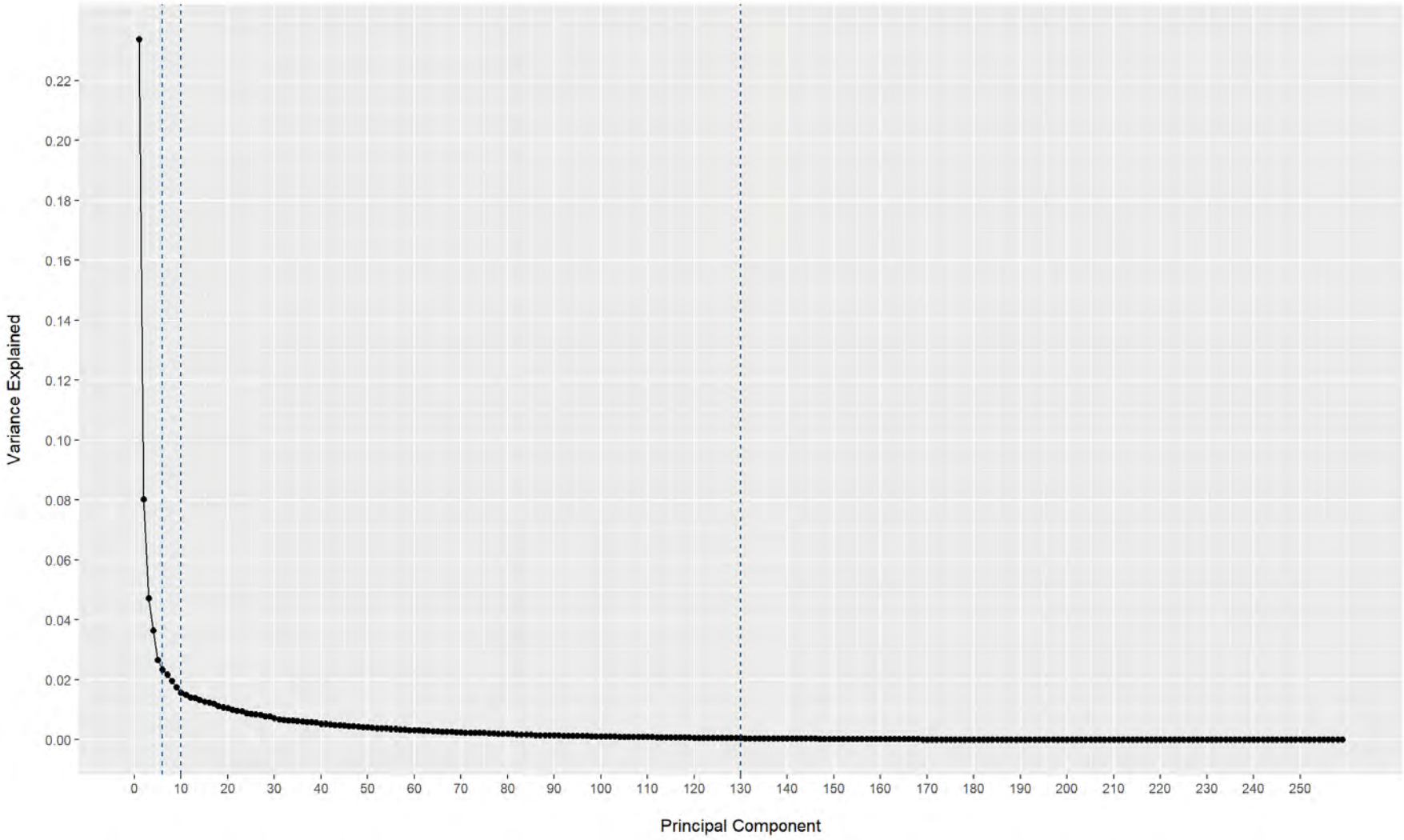


APPENDIX I

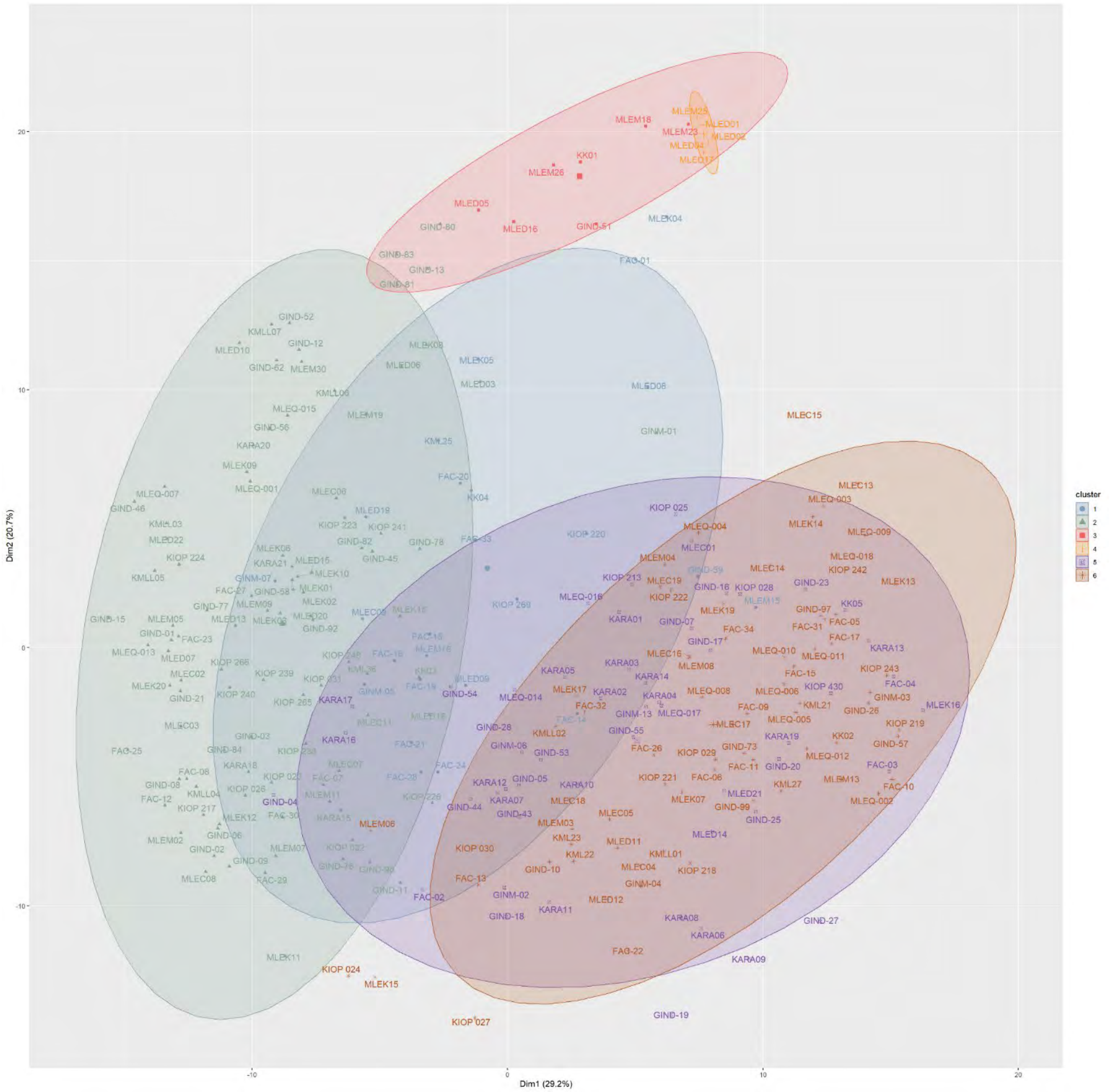
Outputs from Floristic Analyses of Survey Area Quadrat Data

PCA Scree Plot

Including results of optimal number of clusters analyses (dashed lines).

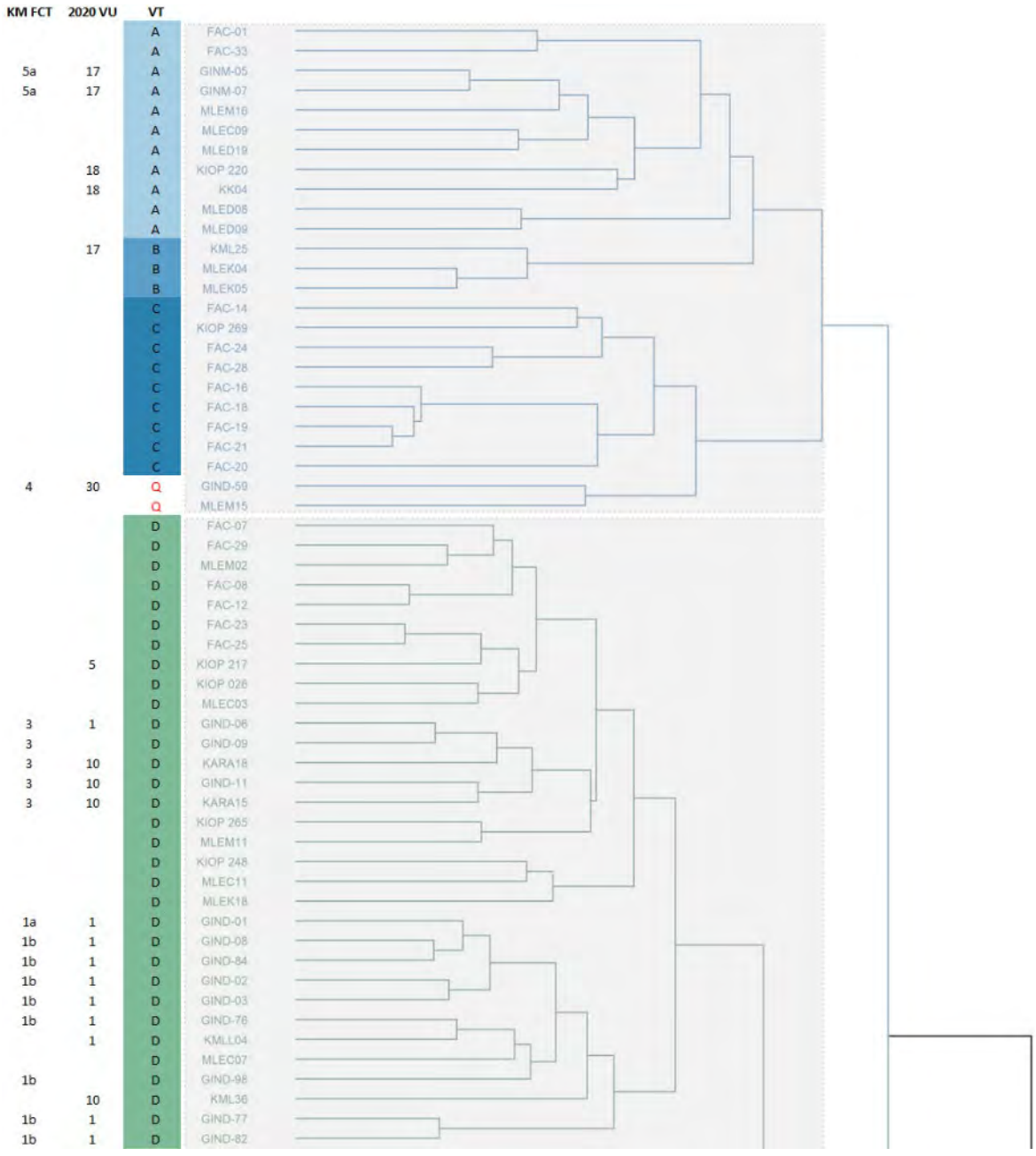


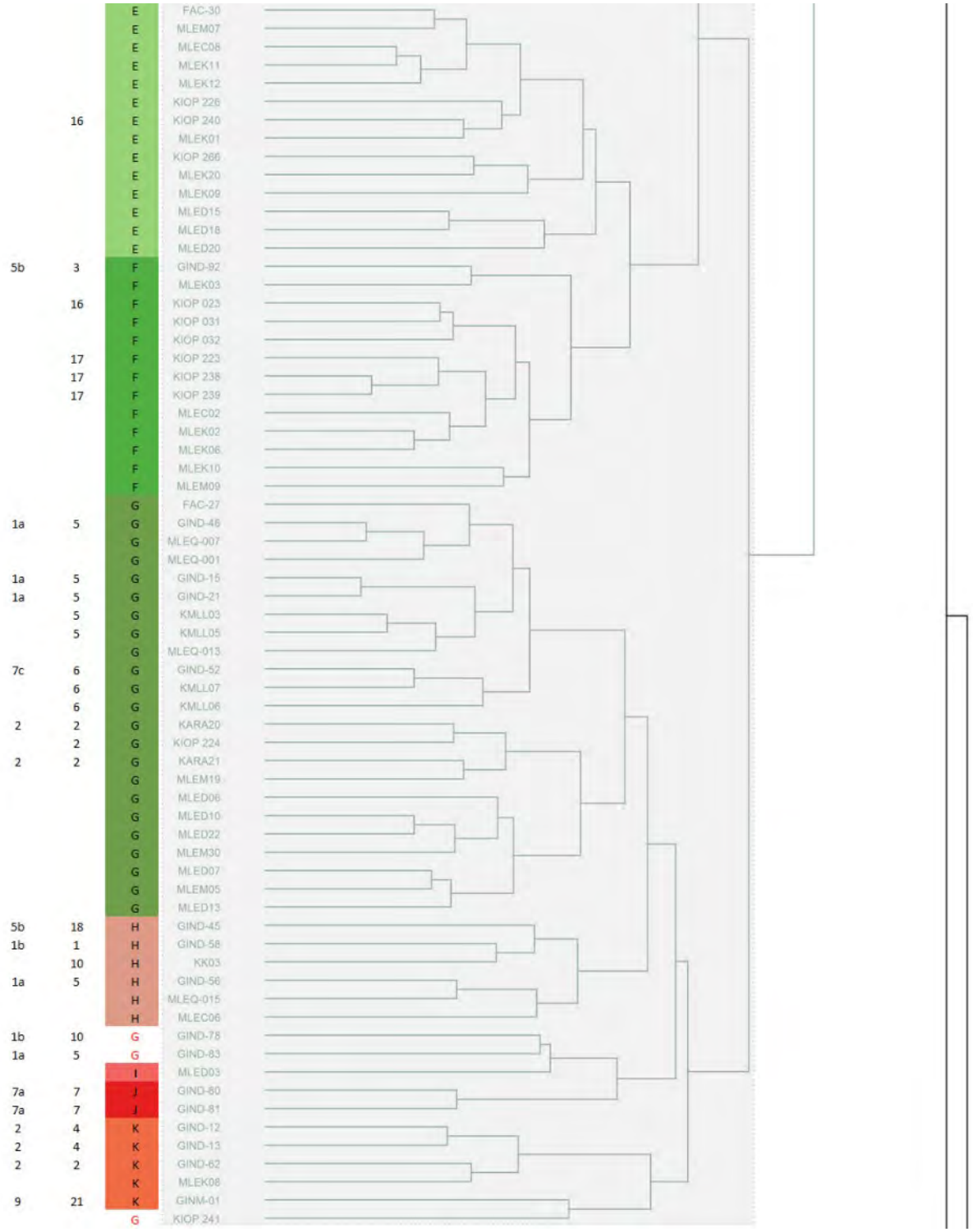
2D cluster plot

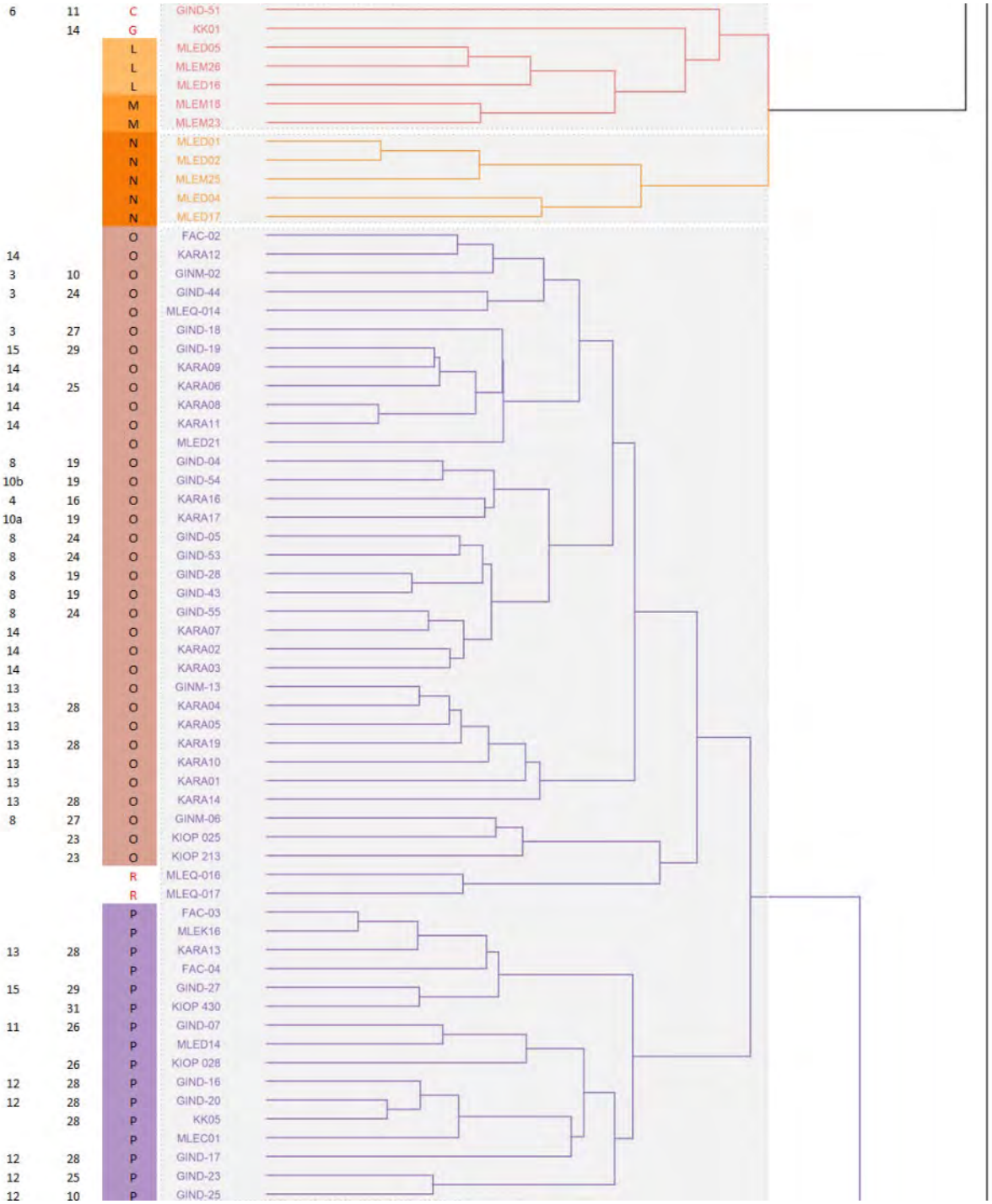


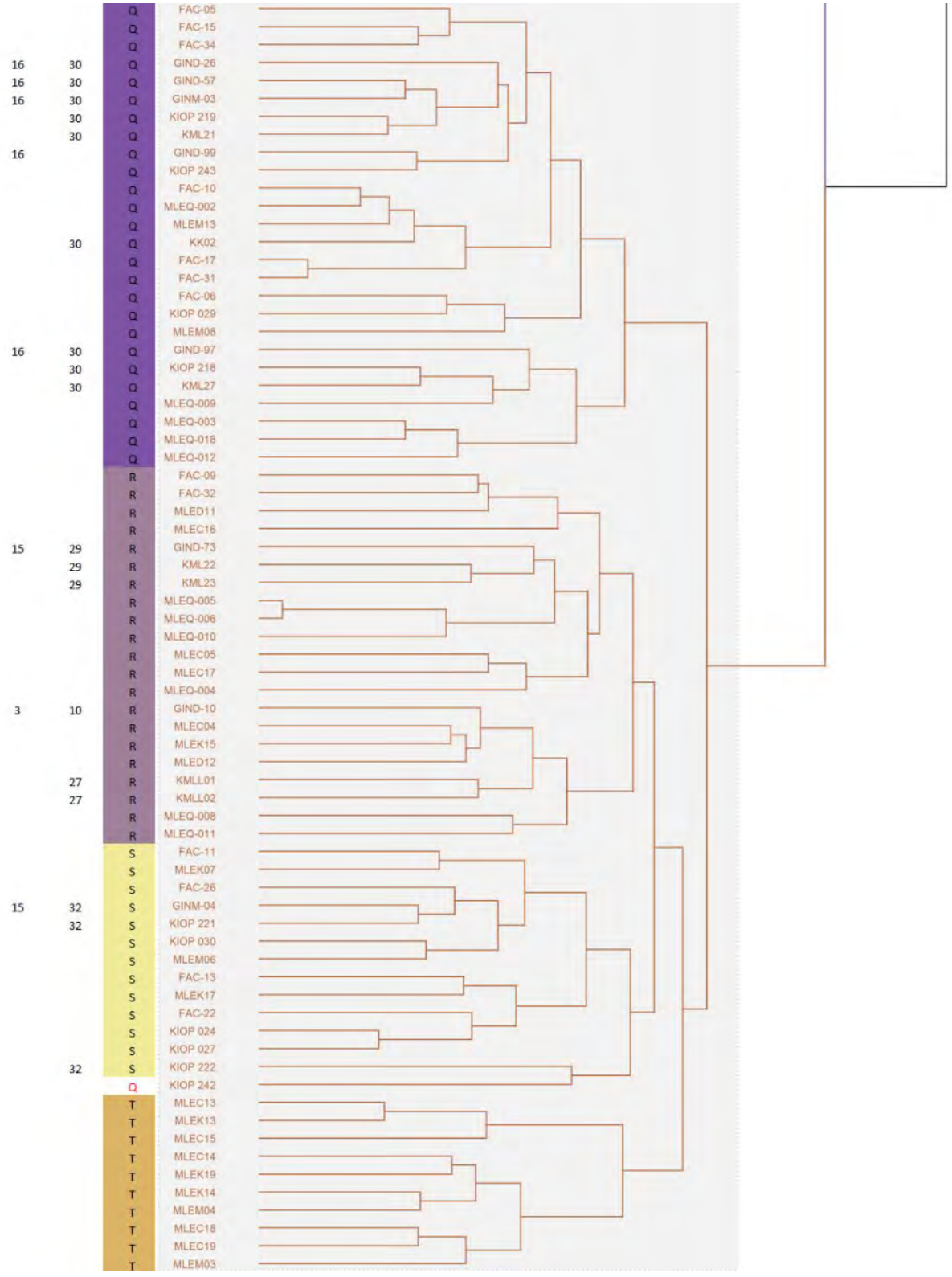
Agglomerative hierarchical clustering analysis dendrogram

Including final VT determinations ('VT'), as well as FCT and VU allocations from the Karara–Mungada Assessment ('KM FCT') and 2020 Assessment ('2020 VU'), respectively



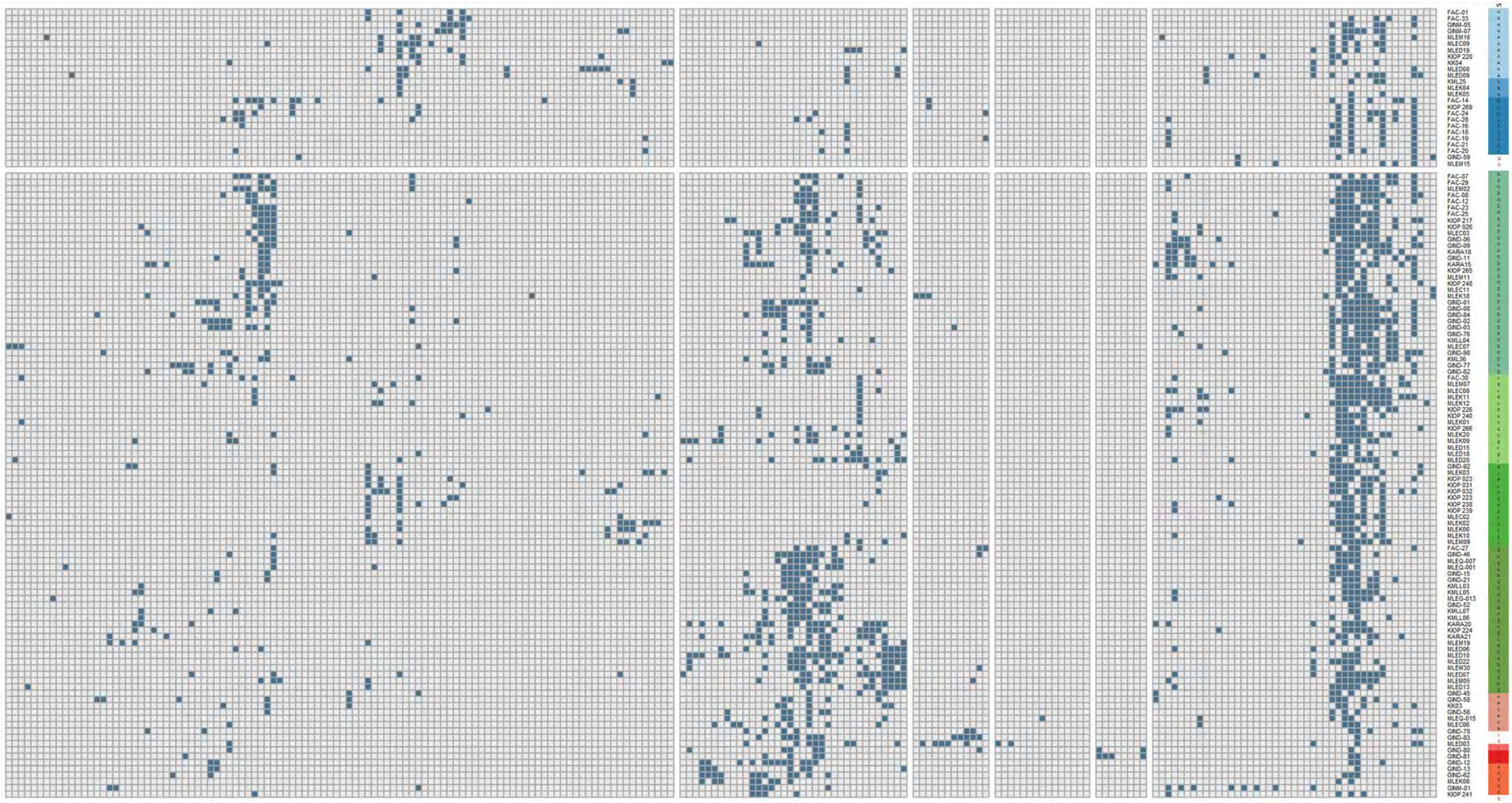

E FAC-30
E MLEM07
E MLEC08
E MLEK11
E MLEK12
E KIOP 226
16 E KIOP 240
E MLEK01
E KIOP 266
E MLEK20
E MLEK09
E MLED15
E MLED18
E MLED20
5b 3 F GIND-92
F MLEK03
16 F KIOP 023
F KIOP 031
F KIOP 032
17 F KIOP 223
17 F KIOP 238
17 F KIOP 239
F MLEC02
F MLEK02
F MLEK06
F MLEK10
F MLEM09
G FAC-27
1a 5 G GIND-46
G MLEQ-007
G MLEQ-001
1a 5 G GIND-15
1a 5 G GIND-21
5 G KMLL03
5 G KMLL05
G MLEQ-013
7c 6 G GIND-52
6 G KMLL07
6 G KMLL06
2 2 G KARA20
2 G KIOP 224
2 2 G KARA21
G MLEM19
G MLED06
G MLED10
G MLED22
G MLEM30
G MLED07
G MLEM05
G MLED13
5b 18 H GIND-45
1b 1 H GIND-58
10 H KK03
1a 5 H GIND-56
H MLEQ-015
H MLEC06
1b 10 G GIND-78
1a 5 G GIND-83
I MLED03
7a 7 J GIND-80
7a 7 J GIND-81
2 4 K GIND-12
2 4 K GIND-13
2 2 K GIND-62
K MLEK08
9 21 K GINM-01
G KIOP 241

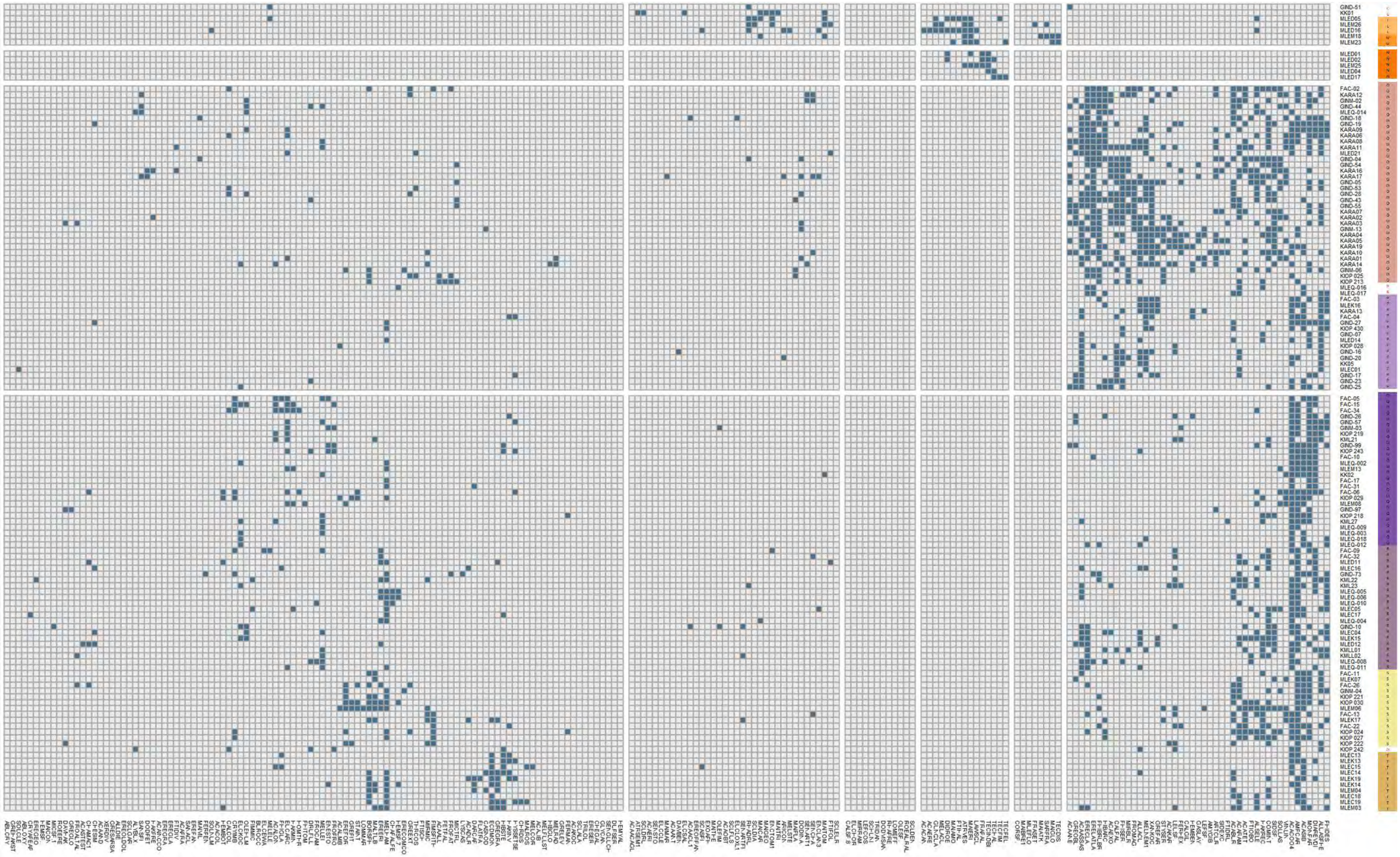

6 11 C GIND-51
14 G KK01
L MLED05
L MLEM26
L MLED16
M MLEM18
M MLEM23
N MLED01
N MLED02
N MLEM25
N MLED04
N MLED17
O FAC-02
14 O KARA12
3 10 O GINM-02
3 24 O GIND-44
O MLEQ-014
3 27 O GIND-18
15 29 O GIND-19
14 O KARA09
14 25 O KARA06
14 O KARA08
14 O KARA11
O MLED21
8 19 O GIND-04
10b 19 O GIND-54
4 16 O KARA16
10a 19 O KARA17
8 24 O GIND-05
8 24 O GIND-53
8 19 O GIND-28
8 19 O GIND-43
8 24 O GIND-55
14 O KARA07
14 O KARA02
14 O KARA03
13 O GINM-13
13 28 O KARA04
13 O KARA05
13 28 O KARA19
13 O KARA10
13 O KARA01
13 28 O KARA14
8 27 O GINM-06
23 O KIOP 025
23 O KIOP 213
R MLEQ-016
R MLEQ-017
P FAC-03
P MLEK16
13 28 P KARA13
P FAC-04
15 29 P GIND-27
31 P KIOP 430
11 26 P GIND-07
P MLED14
26 P KIOP 028
12 28 P GIND-16
12 28 P GIND-20
28 P KK05
P MLEC01
12 28 P GIND-17
12 25 P GIND-23
12 10 P GIND-25

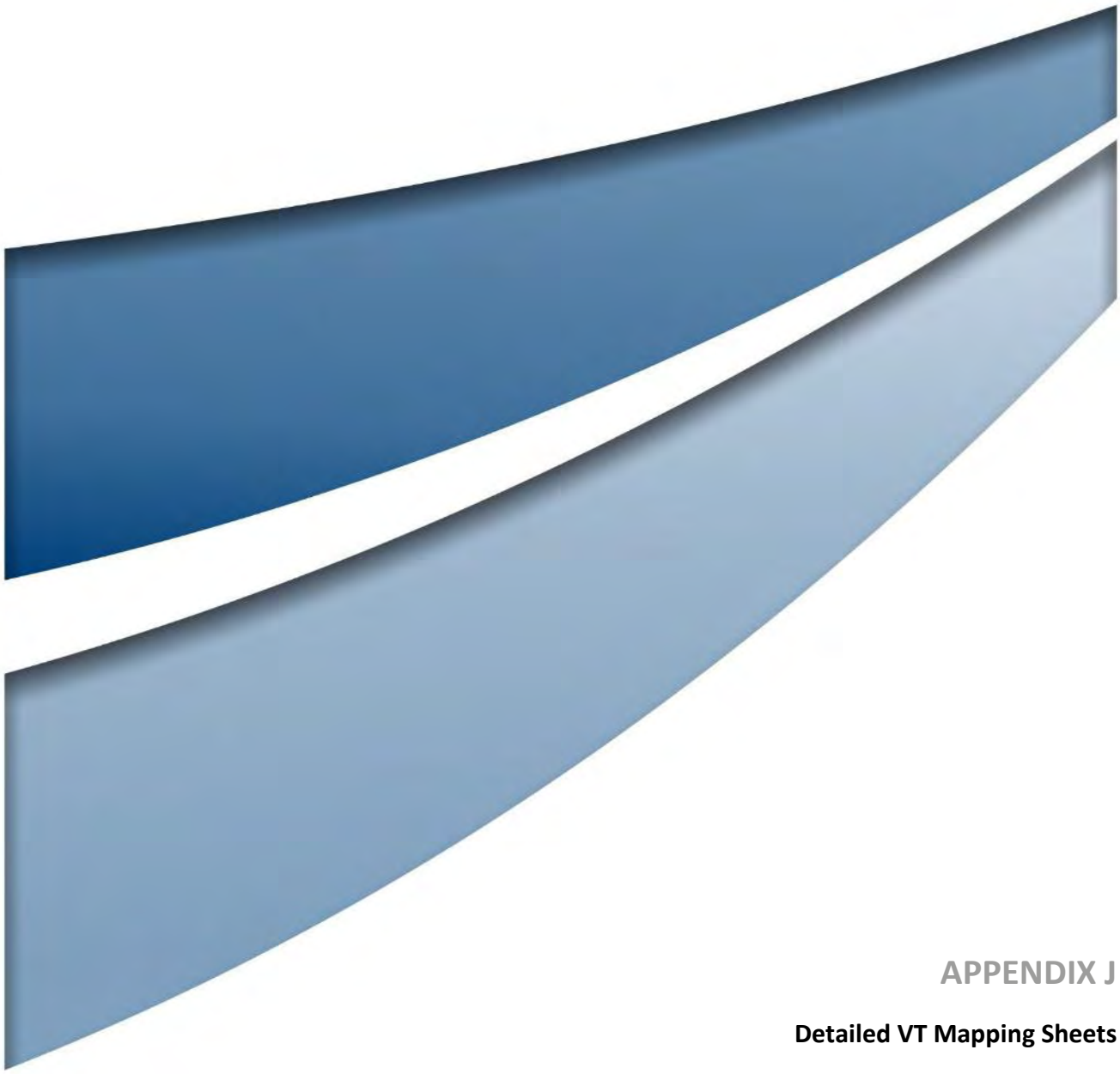

Q FAC-05
Q FAC-15
Q FAC-34
16 30 Q GIND-26
16 30 Q GIND-57
16 30 Q GINM-03
30 Q KIOP 219
30 Q KML21
16 Q GIND-99
Q KIOP 243
Q FAC-10
Q MLEQ-002
Q MLEM13
30 Q KK02
Q FAC-17
Q FAC-31
Q FAC-06
Q KIOP 029
Q MLEM08
16 30 Q GIND-97
30 Q KIOP 218
30 Q KML27
Q MLEQ-009
Q MLEQ-003
Q MLEQ-018
Q MLEQ-012
R FAC-09
R FAC-32
R MLED11
R MLEC16
15 29 R GIND-73
29 R KML22
29 R KML23
R MLEQ-005
R MLEQ-006
R MLEQ-010
R MLEC05
R MLEC17
R MLEQ-004
3 10 R GIND-10
R MLEC04
R MLEK15
R MLED12
27 R KMLL01
27 R KMLL02
R MLEQ-008
R MLEQ-011
S FAC-11
S MLEK07
S FAC-26
15 32 S GINM-04
32 S KIOP 221
S KIOP 030
S MLEM06
S FAC-13
S MLEK17
S FAC-22
S KIOP 024
S KIOP 027
32 S KIOP 222
Q KIOP 242
T MLEC13
T MLEK13
T MLEC15
T MLEC14
T MLEK19
T MLEK14
T MLEM04
T MLEC18
T MLEC19
T MLEM03

Taxon group matrix

Note that this taxon group matrix is produced using the floristic classification analyses dataset, and therefore reflects the taxa exclusions (i.e. annual/ephemeral taxa, introduced taxa, hybrids and singletons) and amalgamations (as per **Appendix A**). For a comprehensive list of all taxa present within each quadrat and VT, refer to **Appendix E** and **Appendix J**, respectively.



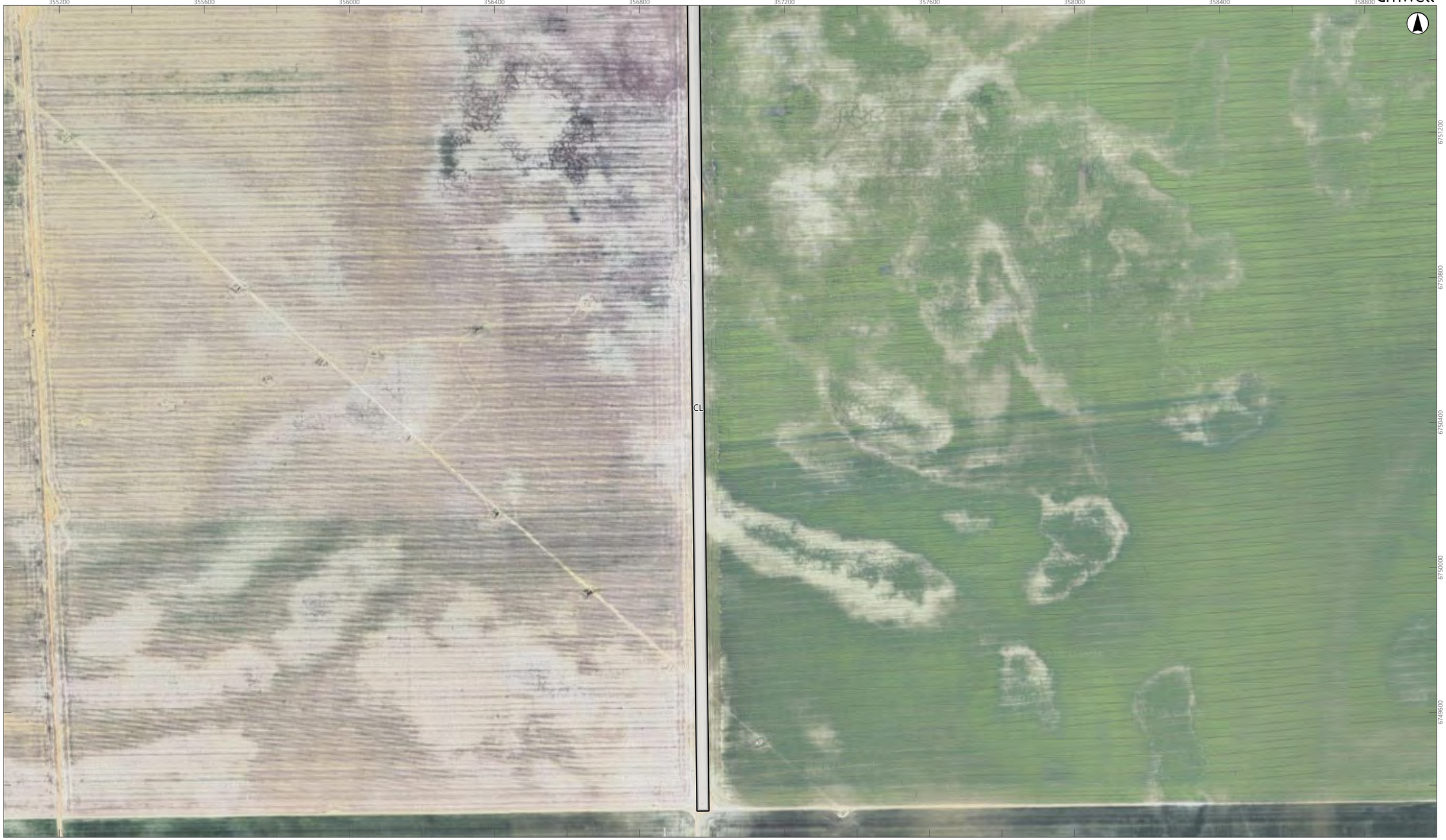

GIND-51
KK01
MLED05
MLEM26
MLED16
MLEM18
MLEM23
MLED01
MLED02
MLEM25
MLED04
MLED17
FAC-02
KARA12
GINM-02
GIND-44
MLEQ-014
GIND-18
GIND-19
KARA09
KARA06
KARA08
KARA11
MLED21
GIND-04
GIND-54
KARA16
KARA17
GIND-05
GIND-53
GIND-28
GIND-43
GIND-55
KARA07
KARA02
KARA03
GINM-13
KARA04
KARA05
KARA19
KARA10
KARA01
KARA14
GINM-06
KIOP 025
KIOP 213
MLEQ-016
MLEQ-017
FAC-03
MLEK16
KARA13
FAC-04
GIND-27
KIOP 430
GIND-07
MLED14
KIOP 028
GIND-16
GIND-20
KK05
MLEC01
GIND-17
GIND-23
GIND-25
FAC-05
FAC-15
FAC-34
GIND-26
GIND-57
GINM-03
KIOP 219
KML21
GIND-99
KIOP 243
FAC-10
MLEQ-002
MLEM13
KK02
FAC-17
FAC-31
FAC-06
KIOP 029
MLEM08
GIND-97
KIOP 218
KML27
MLEQ-009
MLEQ-003
MLEQ-018
MLEQ-012
FAC-09
FAC-32
MLED11
MLEC16
GIND-73
KML22
KML23
MLEQ-005
MLEQ-006
MLEQ-010
MLEC05
MLEC17
MLEQ-004
GIND-10
MLEC04
MLEK15
MLED12
KML01
KML02
MLEQ-008
MLEQ-011
FAC-11
MLEK07
FAC-26
GINM-04
KIOP 221
KIOP 030
MLEM06
FAC-13
MLEK17
FAC-22
KIOP 024
KIOP 027
KIOP 222
KIOP 242
MLEC13
MLEK13
MLEC15
MLEC14
MLEK19
MLEK14
MLEM04
MLEC18
MLEC19
MLEM03



APPENDIX J

Detailed VT Mapping Sheets

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



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 1

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

356800 357200 357600 358000 358400 358800 359200 359600 360000 360400

6753600 6753200 6752800 6752400 6752000 6751600

PL PL PL PL CL PL

YAN019

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

PL

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 2

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - QS SWX\0.Projects\23712_R004_Kanani_BaseliineFloraVegAssessment_Aug_v1.aprx

umwelt

357200 357600 358000 358400 358800 359200 359600 360000 360400

6756000 6755600 6755200 6754800 6754400 6754000

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Relevé

Observations – Historic

Relevé

Vegetation Type

HMVT D

PL

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 3

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

361200 361600 362000 362400 362800 363200 363600 364000 364400

6757200 6756800 6756400 6756000 6755600 6755200

HMVT F
HMVT E
HMVT D
CL
YAN061
YAN012
YAN013
MIDLANDS RD

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area
Road
Railway

Observations – Historic

Relevé

Vegetation Type

HMVT D
HMVT E
HMVT F
CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 4

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

365200 365600 366000 366400 366800 367200 367600 368000 368400

6757200 6756800 6756400 6756000 6755600

YAN008
HMVT E
YAN009
HMVT F
YAN010
HMVT F
HMVT F
HMVT F
CL
HMVT F
YAN011
HMVT F

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

HMVT E
HMVT F
CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 5

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

366800 367200 367600 368000 368400 368800 369200 369600 370000 370400

6759600 6759200 6758800 6758400 6758000 6757600

YAN006 YAN005 YAN004 YAN003 YAN007

HMVT E HMVT E HMVT D CL HMVT E HMVT E HMVT E

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

HMVT D
HMVT E
CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 6

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - 05 SWD\3.Projects\23712_R004_Karara_BaselineFloraVegAssessment_Arp_41.aprx

370800 371200 371600 372000 372400 372800 373200 373600 374000

6760400 6760000 6759600 6759200 6758800

CL
YAN055
HMVT D
HMVT G
CL
MLEDN05
HMVT D
YAN017
YAN018
MLEDN04
MLEDN07
HMVT G
HMVT D
HMVT G
MLEDN03
CL
HMVT D
CL
HMVT D
CL
YAN001
CL
YAN002

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Vegetation Mapping Note

Observations – Historic

Relevé

Vegetation Type

HMVT D

HMVT G

CL

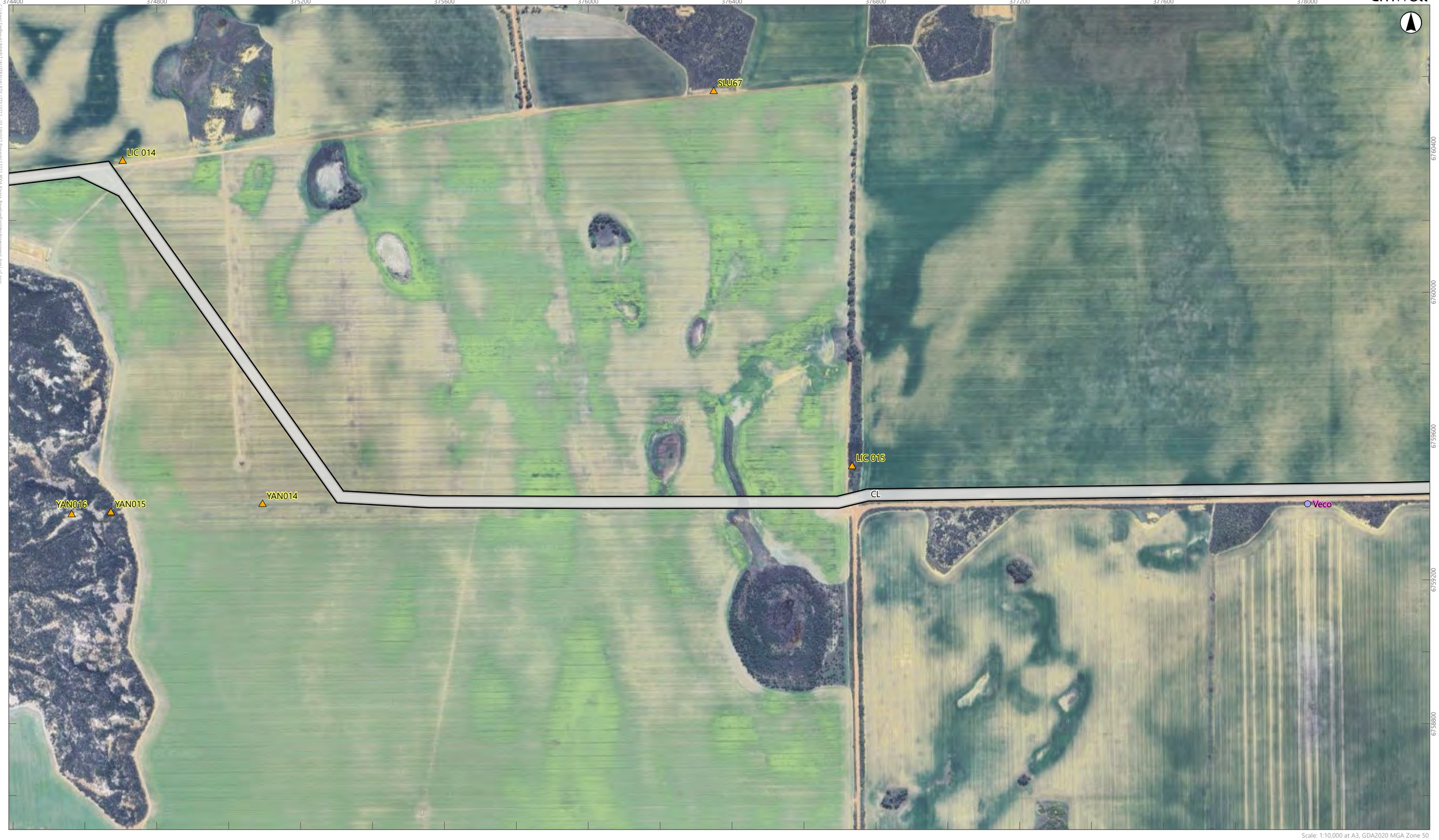
APPENDIX J

Vegetation Types of the Survey Area

Sheet 7

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Significant Flora Taxa

Veco *Verticordia comosa* (P1)

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 8

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt

378400 378800 379200 379600 380000 380400 380800 381200 381600 382000

6760000 6759600 6759200 6758800 6758400

SLU66 LIC 013 Grle Vesps CL

SLU64 SLU65

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Significant Flora Taxa

Grle *Grevillea leptopoda* (P3)

Vesps *Verticordia spicata* subsp. *squamosa* (T)

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 9

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

382400 382800 383200 383600 384000 384400 384800 385200 385600 386000

6759200

6758800

6758400

6758000

6757600

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 10

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - 05 SWVD\2-Projects\23712_BGM, Karara, Baseline\Flora\Veg\Assessment_App\J-11.aprx

386400 386800 387200 387600 388000 388400 388800 389200 389600 390000

6759200 6758800 6758400 6758000 6757600

CL

SLU63

AA AA AA

LIC 023

BaspPe

SLU62

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Significant Flora Taxa

BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)

Vegetation Type

AA

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 11

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

390400 390800 391200 391600 392000 392400 392800 393200 393600 394000

6759200 6758800 6758400 6758000 6757600

BaspPe
SLU61
AA
AA
SLU60
SLU59
CL
MLEDN08
TespK2
HMVT G

Legend

Survey Area
Road

Observations – 2023/2024

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)
TespK2 *Tecticornia* sp. 'Karara 2' (PU)

Vegetation Type

AA
HMVT G
CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

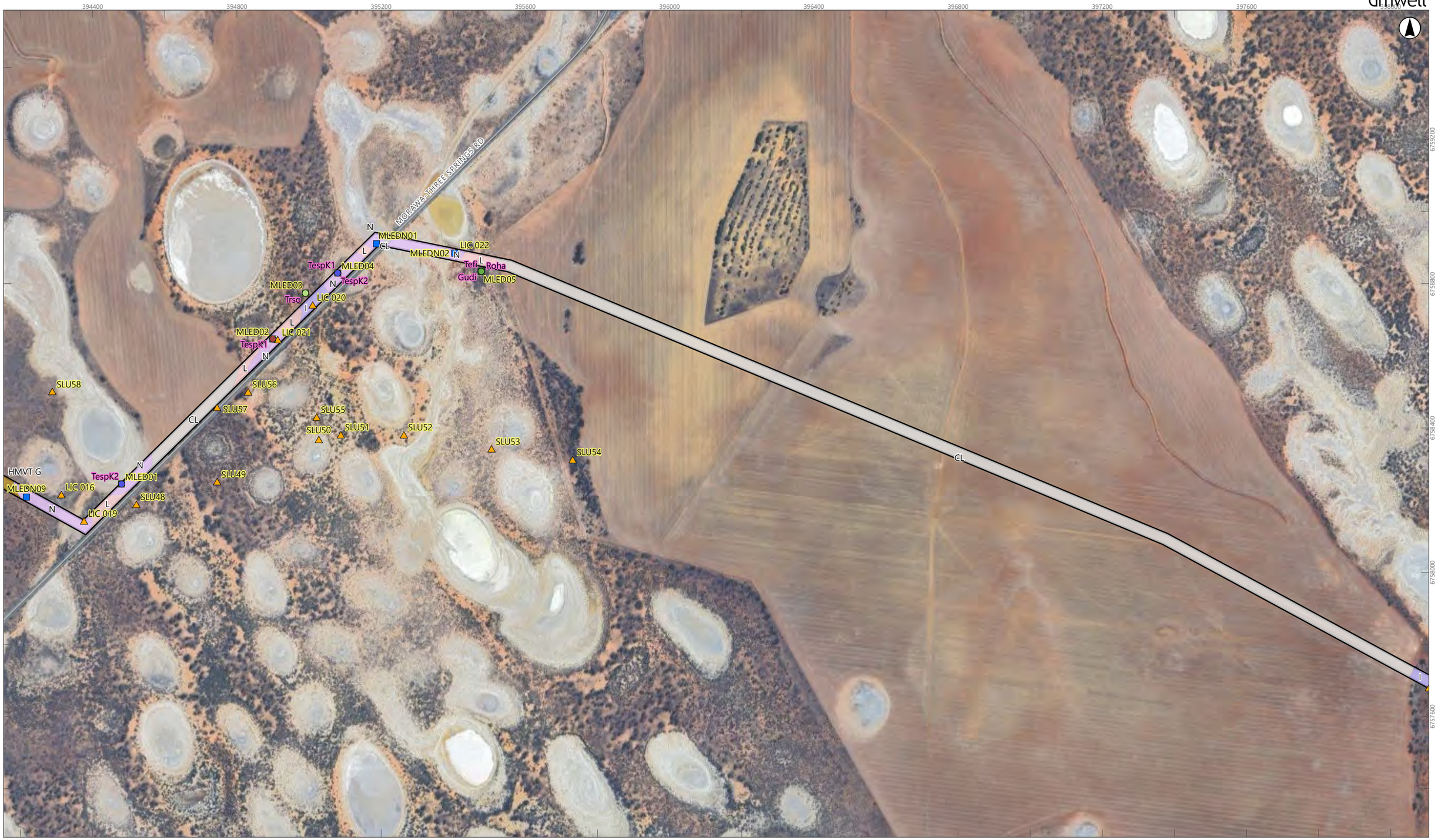
APPENDIX J

Vegetation Types of the Survey Area

Sheet 12

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Road

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Significant Flora Taxa

Gudi	*Gunniopsis divisa*	(P3)
Roha	*Roebuckiella halophila*	(P3)
Tefi	*Tecticornia fimbriata*	(P3)
TespK1	*Tecticornia* sp. 'Karara 1'	(PU)
TespK2	*Tecticornia* sp. 'Karara 2'	(PU)
Trso	*Tricoryne soullierae*	(P1)

Vegetation Type

- I
- L
- N
- HMVT G
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 13

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

398400 398800 399200 399600 400000 400400 400800 401200 401600

6758800 6758400 6758000 6757600 6757200

SLU41 MLEDN29 SLU40 Gudi Fiax Tefi SLU39 SLU38 Epde TespK1 MLEDN28 MLEDN27 Gnse Epde SLU42 SLU37 SLU36 Epde TespK2 Tefi MLEDN25 MLEDN24 SLU43 MLEDN23 Poun Gudi Roha SLU45 MLEDN22 TespK1 MLEDN21 SLU46 MLEDN20 SLU47 SLU35 SLU34 SLU33 SLU32

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Major Watercourse

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Significant Flora Taxa

Epde	*Epitriche demissus* (P2)
Fiax	*Fitzwillia axilliflora* (P2)
Gnse	*Gnephosis setifera* (P1)
Gudi	*Gunniopsis divisa* (P3)
Nisa	*Nicotiana salina* (P1)
Poun	*Podotheca uniseta* (P3)
Roha	*Roebuckiella halophila* (P3)
Tefi	*Tecticornia fimbriata* (P3)
TespK1	*Tecticornia* sp. 'Karara 1' (PU)
TespK2	*Tecticornia* sp. 'Karara 2' (PU)

Vegetation Type

- G
- I
- L
- N
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 14

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

- L
- N
- HMVT C
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 15

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

406400 406800 407200 407600 408000 408400 408800 409200 409600

6760000 6759600 6759200 6758800 6758400 6758000

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

PL

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 16

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Legend

Survey Area
Road
Railway

Observations – Historic

Relevé

Vegetation Type

HMVT A
CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 17

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

414000 414400 414800 415200 415600 416000 416400 416800 417200 417600

6760800 6760400 6760000 6759600 6759200 6758800

SLU21

CL

HMVT B Pivi

HMVT B

Legend

Survey Area
Road
Railway

Observations – Historic

Relevé

Significant Flora Taxa

Pivi *Pityrodia viscida* (P4)

Vegetation Type

HMVT B
CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 18

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

PL

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 19

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt

422000 422400 422800 423200 423600 424000 424400 424800 425200 425600

6762000 6761600 6761200 6760800 6760400 6760000

CL

TespK2 SLU18 HMVT A MLEDN13 G G G

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

TespK2 *Tecticornia* sp. 'Karara 2' (PU)

Vegetation Type

G

HMVT A

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 20

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

426000 426400 426800 427200 427600 428000 428400 428800 429200

6762000 6761600 6761200 6760800 6760400 6760000

SLU16 BaspPe SLU15 CL BaspPe SLU14

SLU17

Legend

Survey Area

Observations – Historic

Relevé

Significant Flora Taxa

BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)

Vegetation Type

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 21

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Legend

Survey Area

Observations – Historic

Relevé

Significant Flora Taxa

Pepe *Persoonia pentasticha* (P3)

Vegetation Type

G

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 22

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - QS SWVD\2-Projects\23712_BGM_Kanani_Basel\reef\eral\vegAssessment_Arpy_v1.aprx

434000 434400 434800 435200 435600 436000 436400 436800 437200

6764000 6763600 6763200 6762800 6762400 6762000

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 23

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

438000 438400 438800 439200 439600 440000 440400 440800 441200

6764000 6763600 6763200 6762800 6762400 6762000

SLU07B SLU08 SLU09 SLU10 SLU11

Meba BaspPe CL E BaspPe GI-8 BaspPe BaspPe Roha MLEDN36 GI-7 BaspPe GI-6 Pepe BaspPe BaspPe GI-5 G

GI-2 GI-3 O MLEDN37 GI-4 E G E

Legend

Survey Area

Observations – 2023/2024

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

BaspPe *Baeckea* sp. Perenjori (J.W. Green 1516) (P2)

Meba *Melaleuca barlowii* (P3)

Pepe *Persoonia pentasticha* (P3)

Roha *Roebuckiella halophila* (P3)

Vegetation Type

E

G

O

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 24

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

439200 439600 440000 440400 440800 441200 441600 442000 442400 442800

6766000 6765600 6765200 6764800 6764400

SLU04
SLU03
SLU05
SLU06
SLU07A
CL

Legend

Survey Area

Observations – Historic

Relevé

Vegetation Type

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 25

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWVP2-Projects\23712_R004_Kanani_BaseliineFloraVegAssessment_v4.aprx

440000 440400 440800 441200 441600 442000 442400 442800 443200 443600

6768400 6768000 6767600 6767200 6766800 6766400

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Vegetation Type

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 26

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

403200 403600 404000 404400 404800 405200 405600 406000 406400 406800

6772400 6772000 6771600 6771200 6770800 6770400

MULLEWA-WUBIN RD

RC 33 RC 34 MLEDN10 MLEDN11 MLEDN12 MLED06 HR40 HR39 HR38 HR35

CL L Q G

Legend

- Survey Area
- Road
- Railway

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Vegetation Type

- G
- L
- Q
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 27

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

420800 421200 421600 422000 422400 422800 423200 423600 424000 424400

6772000 6771600 6771200 6770800 6770400 6770000

HR23
HR22
KOOL34
KOOL32
KOOL33
KOOL35
KOOL36
KOOL37
KOOL38
Y
CL
A
Y

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Quadrat
Relevé

Vegetation Type

A
Y
CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 28

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

420800 421200 421600 422000 422400 422800 423200 423600 424000 424400

6769600 6768800 6768400 6768000

HR14 HR15 HR16 HR17 HR18 HR19 HR20 HR21

KOOL39 KOOL41 KOOL40

W X Y Z CL

Legend

Survey Area

Observations – Historic

- Quadrat
- Relevé

Vegetation Type

- W
- X
- Y
- Z
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 29

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Legend

- Survey Area
- **Observations – 2023/2024**
  - Quadrat
- **Observations – Historic**
  - Relevé
- **Significant Flora Taxa**
  - Pepe *Persoonia pentasticha* (P3)
  - Roha *Roebuckiella halophila* (P3)
- **Vegetation Type**
  - A
  - G
  - V
  - W
  - CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 30

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

428800 429200 429600 430000 430400 430800 431200 431600 432000 432400

6770800 6770400 6770000 6769600 6769200 6768800

HR04 HR03 HR02 HR01

RC 32 RC 31

Roha MLED15 MLEDN18 MLEDN17 Roha MLED10

MLEDN16 MLEDN15 MLEDN14

CL

Legend

Survey Area

Observations – 2023/2024

Quadrat

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

Roha *Roebuckiella halophila* (P3)

Vegetation Type

E

G

N

R

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

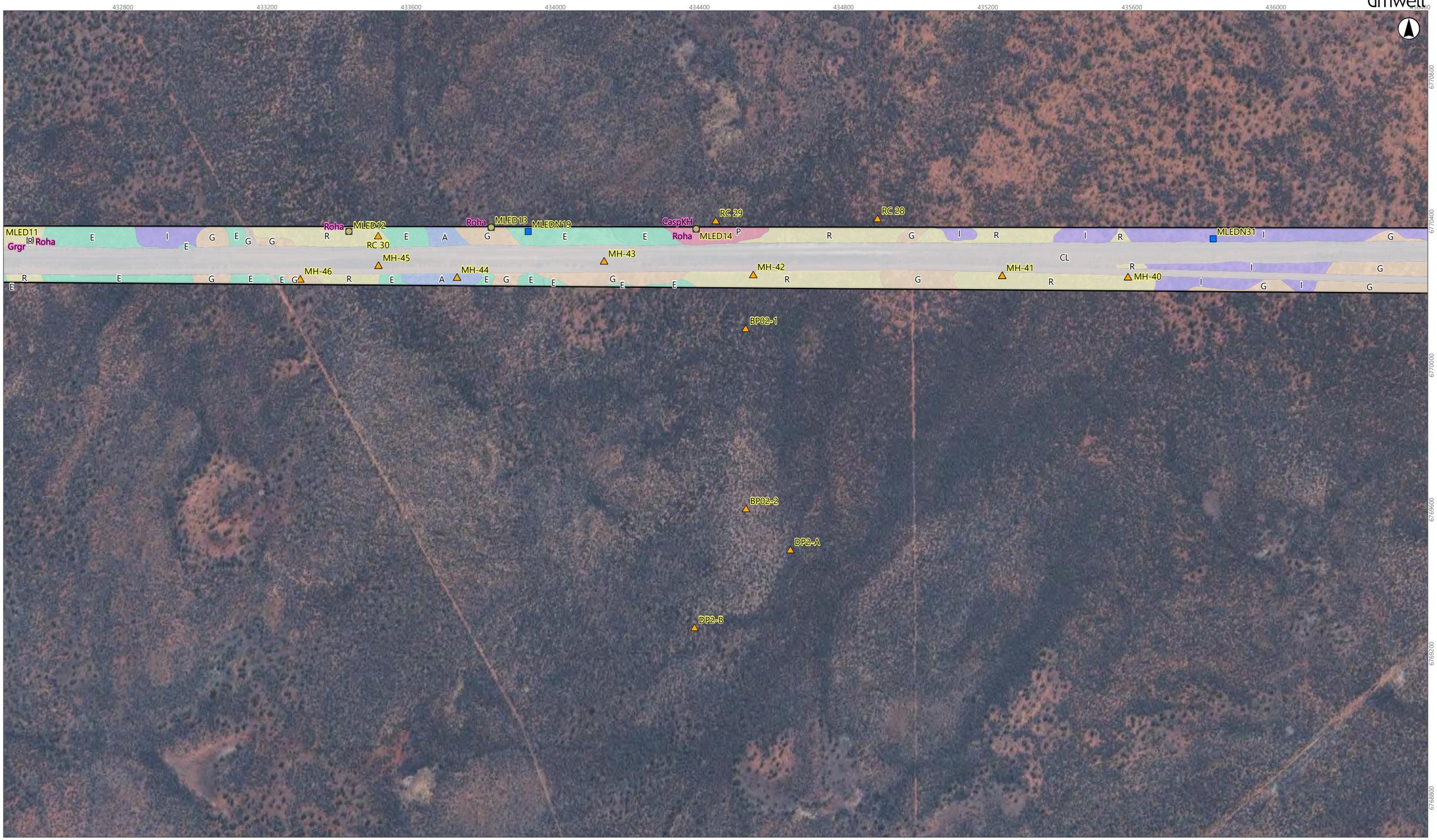
Vegetation Types of the Survey Area

Sheet 31

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Relevé

Significant Flora Taxa

- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Grgr *Grevillea granulosa* (P3)
- Roha *Roebuckiella halophila* (P3)

Vegetation Type

- A
- E
- G
- I
- P
- R
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 32

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

436800 437200 437600 438000 438400 438800 439200 439600 440000

6770800 6770400 6770000 6769600 6769200 6768800

RC 27
MLEDN33
MH-39
MLEDN32
MLED22
Roha
Roha MLED18

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

Roha *Roebuckiella halophila* (P3)

Vegetation Type

E

G

I

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 33

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt

440400 440800 441200 441600 442000 442400 442800 443200 443600 444000

6770800 6770400 6770000 6769600 6769200 6768800

Roha MLED19 MLEM29 MLEM22 RC 26 W14 GI-1 MH-38 MH-37 MH-36 MLED20 Roha MLEM30 MLEMN04 MLEM28 MLEM27 MLED21 Roha WA2 RC 63 W01 W02 RC 62 W03 W04 W05 W06 W07 W08 W13 W12 W11 W09 W10 MLEDN34

Legend

- Survey Area
- **Observations – 2023/2024**
  - Quadrat
  - Relevé
  - Vegetation Mapping Note
- **Observations – Historic**
  - Relevé
- **Significant Flora Taxa**
  - Roha *Roebuckiella halophila* (P3)
- **Vegetation Type**
  - A
  - E
  - G
  - O
  - Q
  - R
  - CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

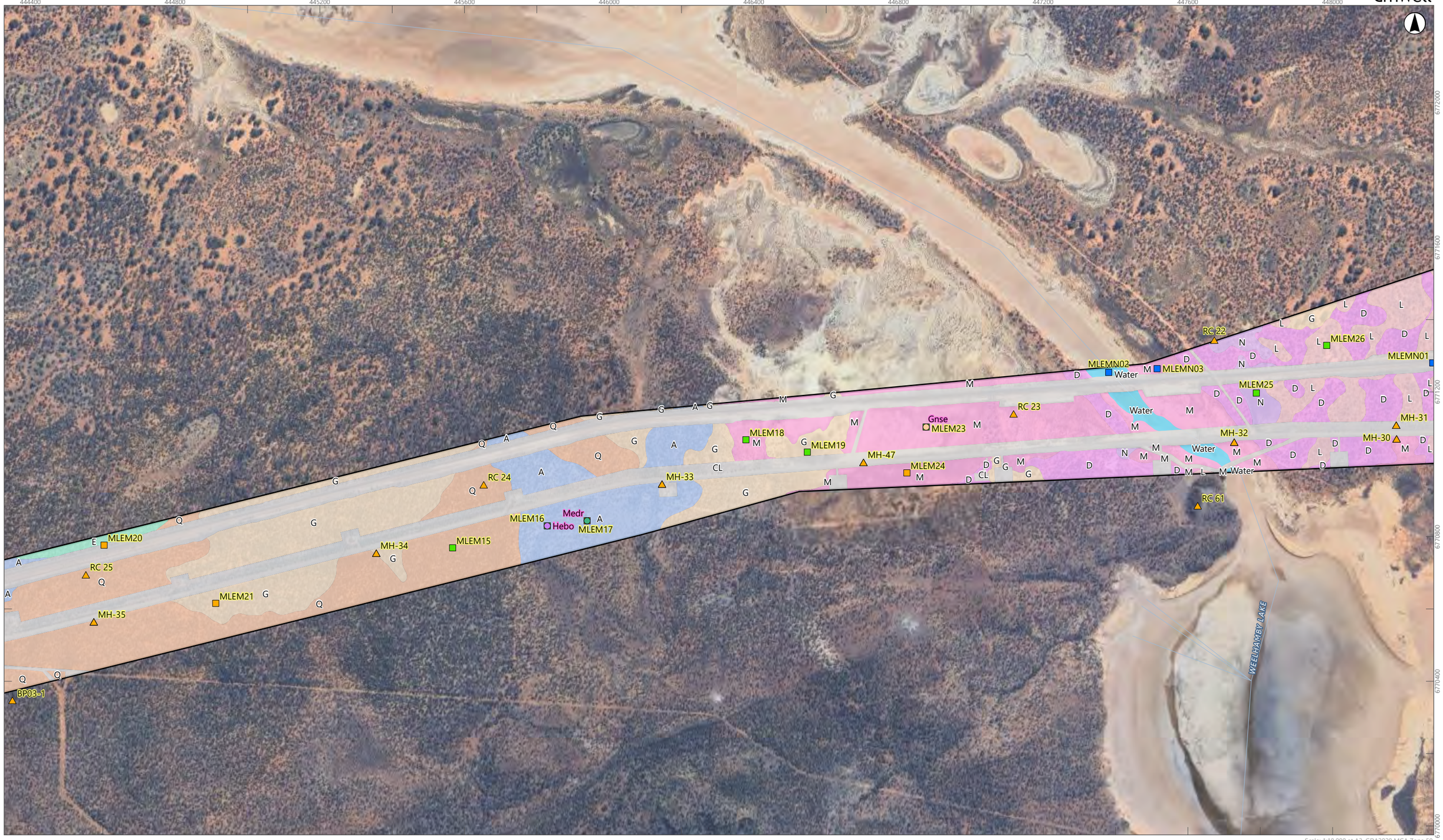
APPENDIX J

Vegetation Types of the Survey Area

Sheet 34

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- Major Watercourse

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

- Relevé

Significant Flora Taxa

- Gnse *Gnephosis setifera* (P1)
- Hebo *Hemigenia* sp. aff. *botryphylla* (PU)
- Medr *Menkea draboides* (P3)

Vegetation Type

- A
- D
- E
- G
- L
- M
- N
- Q
- Water
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 35

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

448400 448800 449200 449600 450000 450400 450800 451200 451600 452000

6772400 6772000 6771600 6771200 6770800 6770400

RC 16 MLEM13 MH-28 MLEM14 RC 17 RC 19 RC 21 RC 20 RC 18 MH-29

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

- Relevé

Vegetation Type

- D
- E
- G
- L
- Q
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 36

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JJeffreys\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWVD\2-Projects\23712_R004_Kanan_Basel\reflora\Vegetassessment_Appx_v1.aprx

452400 452800 453200 453600 454000 454400 454800 455200 455600 456000

6772800 6772400 6772000 6771600 6771200 6770800

CaspKH MLEM08 RC 15 CaspKH MLEM07 RC 14 CaspKH MLEM06 LespBH CaspKH MLEM05 LespBH MLEM09 CaspKH MH-27 MLEM04 Grgr MH-26 MH-25

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Observations – Historic

Relevé

Significant Flora Taxa

CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)

Grgr *Grevillea granulosa* (P3)

LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)

Vegetation Type

D E F G Q R S T CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 37

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

- Quadrat
- Relevé

Significant Flora Taxa

- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Swpi *Swainsona picta* (P1)

Vegetation Type

- D
- G
- T
- CL

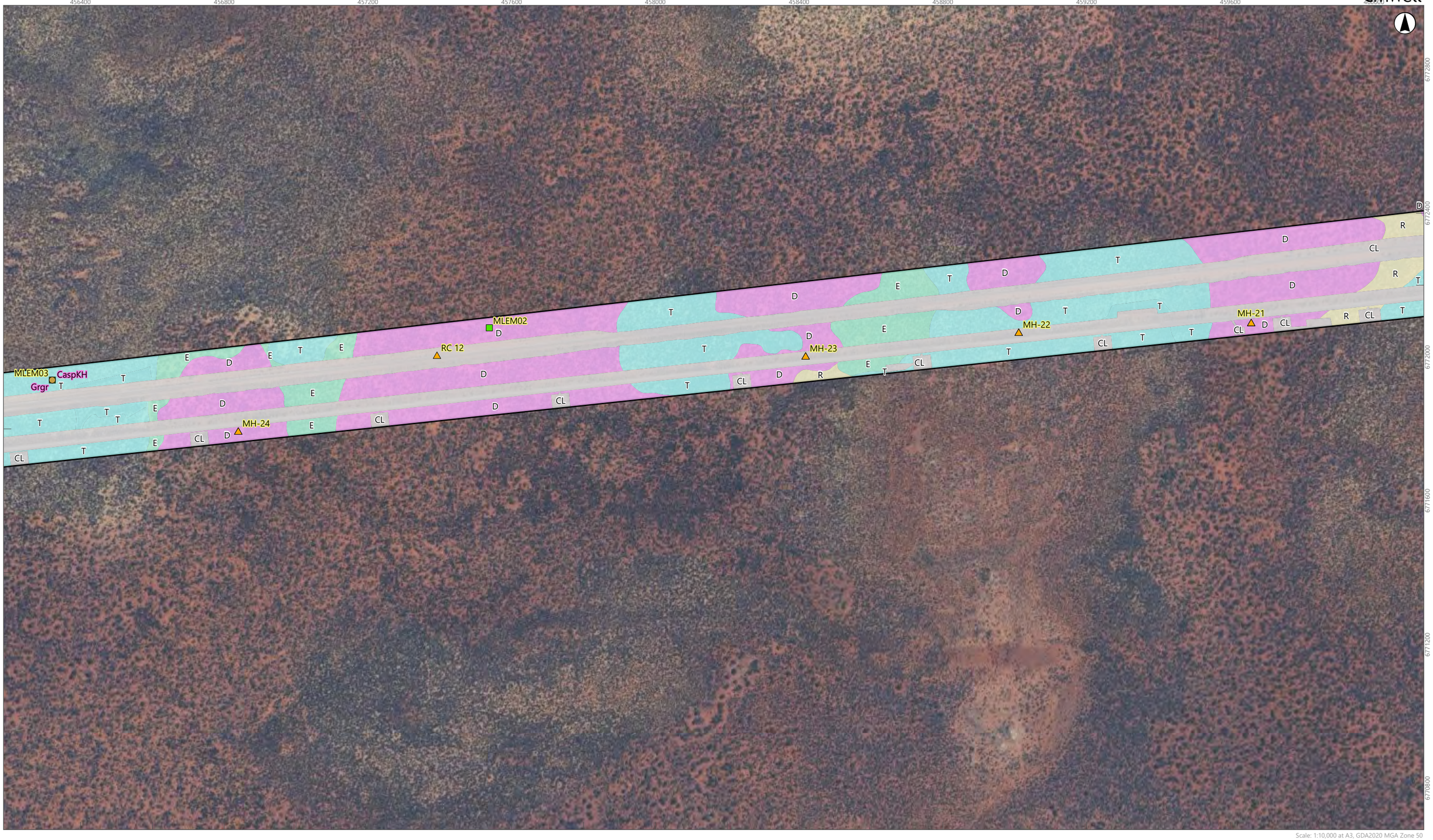
APPENDIX J

Vegetation Types of the Survey Area

Sheet 38

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Observations – Historic

Relevé

Significant Flora Taxa

CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)

Grgr *Grevillea granulosa* (P3)

Vegetation Type

D

E

R

T

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 39

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

460400 460800 461200 461600 462000 462400 462800 463200 463600 464000

6772800 6772400 6772000 6771600 6771200 6770800

MH-20 MH-19 MLEC17 MLEC16 CaspKH MH-18 MLEC15 BP04-1 RC 58 BP04-2 DP4-A DP4-B RC 59 MLEKN03 Grgr RC 60 BP04-3

Legend

Survey Area

Observations – 2023/2024

Quadrat

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)

Grgr *Grevillea granulosa* (P3)

Vegetation Type

D

G

R

S

T

CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 40

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

460400 460800 461200 461600 462000 462400 462800 463200 463600 464000

6770400 6770000 6769600 6769200 6768800 6768400

DP4-C

Grgr MLEC19

Grgr CaspKH MLEC18

MLEK20

MLEKN02

T E CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Vegetation Mapping Note

Observations – Historic

Relevé

Significant Flora Taxa

CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)

Grgr *Grevillea granulosa* (P3)

Vegetation Type

E

T

CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 41

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

464400 464800 465200 465600 466000 466400 466800 467200 467600

6772000 6771600 6771200 6770800 6770400

RC 13 MH-17 MH-16 MLEC14 Grgr MLEC13 Trso RC 11 MLEK15 Grgr MH-15 MH-14 MLEC10 MH-12 Meba MH-13 KIOP 228

MLEKN01 MLEK19 Grgr MLEK18 MLEK17 Grgr MLEK16 MLEK14 Grgr MLEK13

Legend

- Survey Area

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

- Grgr *Grevillea granulosa* (P3)
- Meba *Melaleuca barlowii* (P3)
- Trso *Tricoryne soullierae* (P1)

Vegetation Type

- C
- D
- P
- R
- S
- T
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

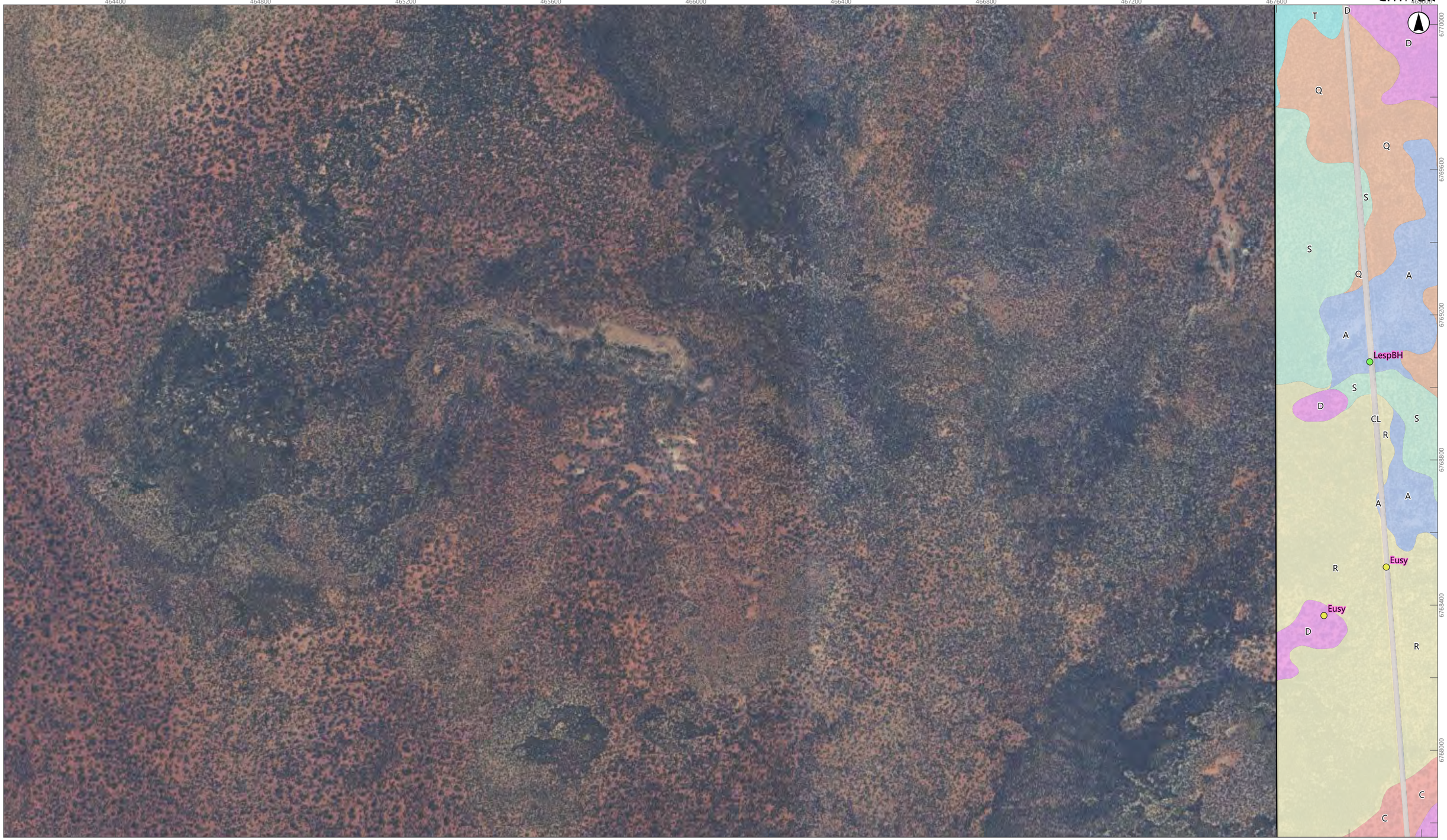
Vegetation Types of the Survey Area

Sheet 42

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JJeffreys\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWVD\2-Projects\23712_BGM, Karara, Basel-Heifer\Veg\Assessment_Layp\...\1.aprx



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Significant Flora Taxa

- Eusy *Eucalyptus synandra* (T)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)

Vegetation Type

- A
- C
- D
- Q
- R
- S
- T
- CL

APPENDIX J

Vegetation Types of the Survey Area

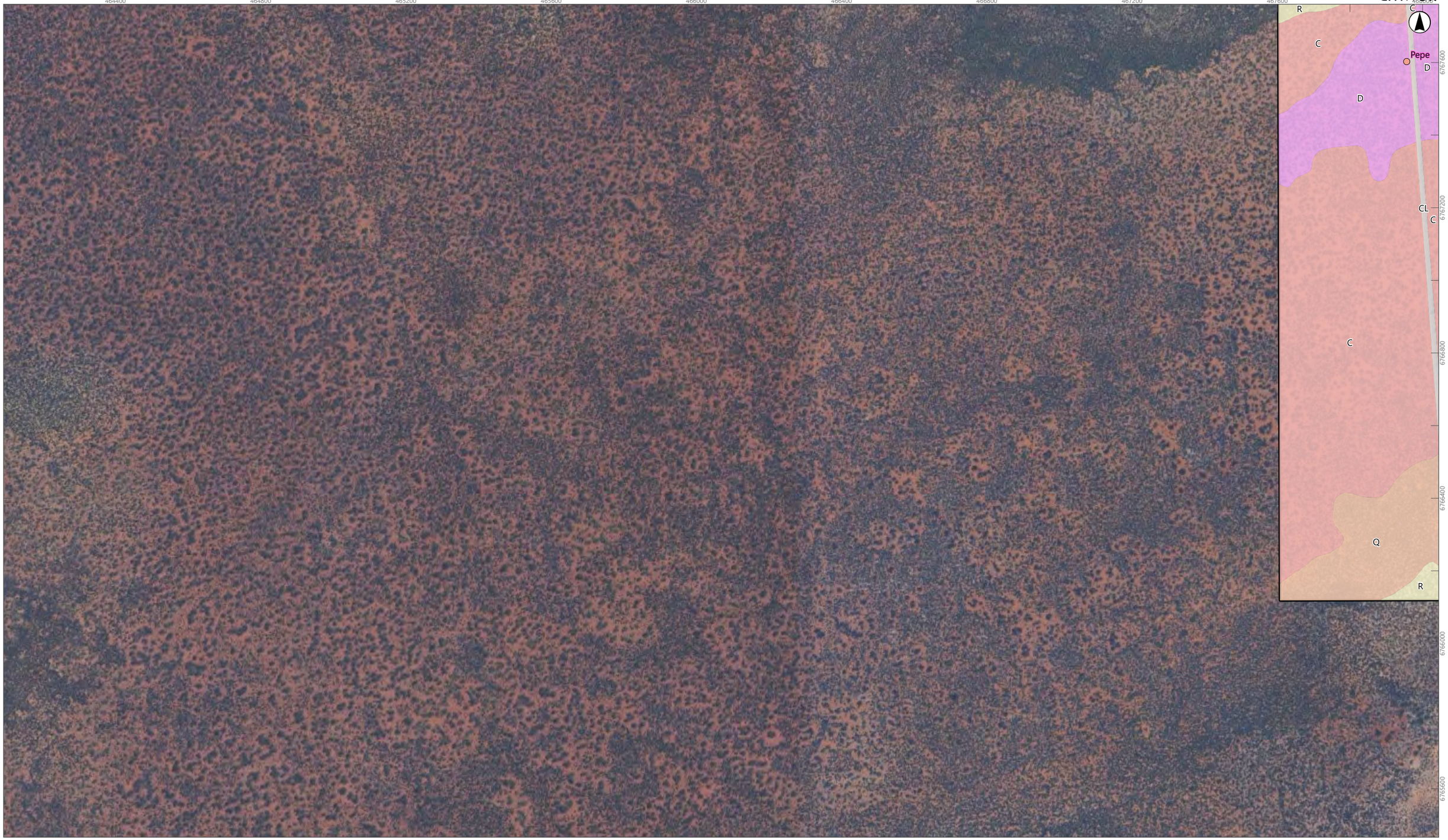
Sheet 43

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

464400 464800 465200 465600 466000 466400 466800 467200 467600

6767600 6767200 6766800 6766400 6766000 6765600



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Significant Flora Taxa

Pepe *Persoonia pentasticha* (P3)

Vegetation Type

C
D
Q
R
CL

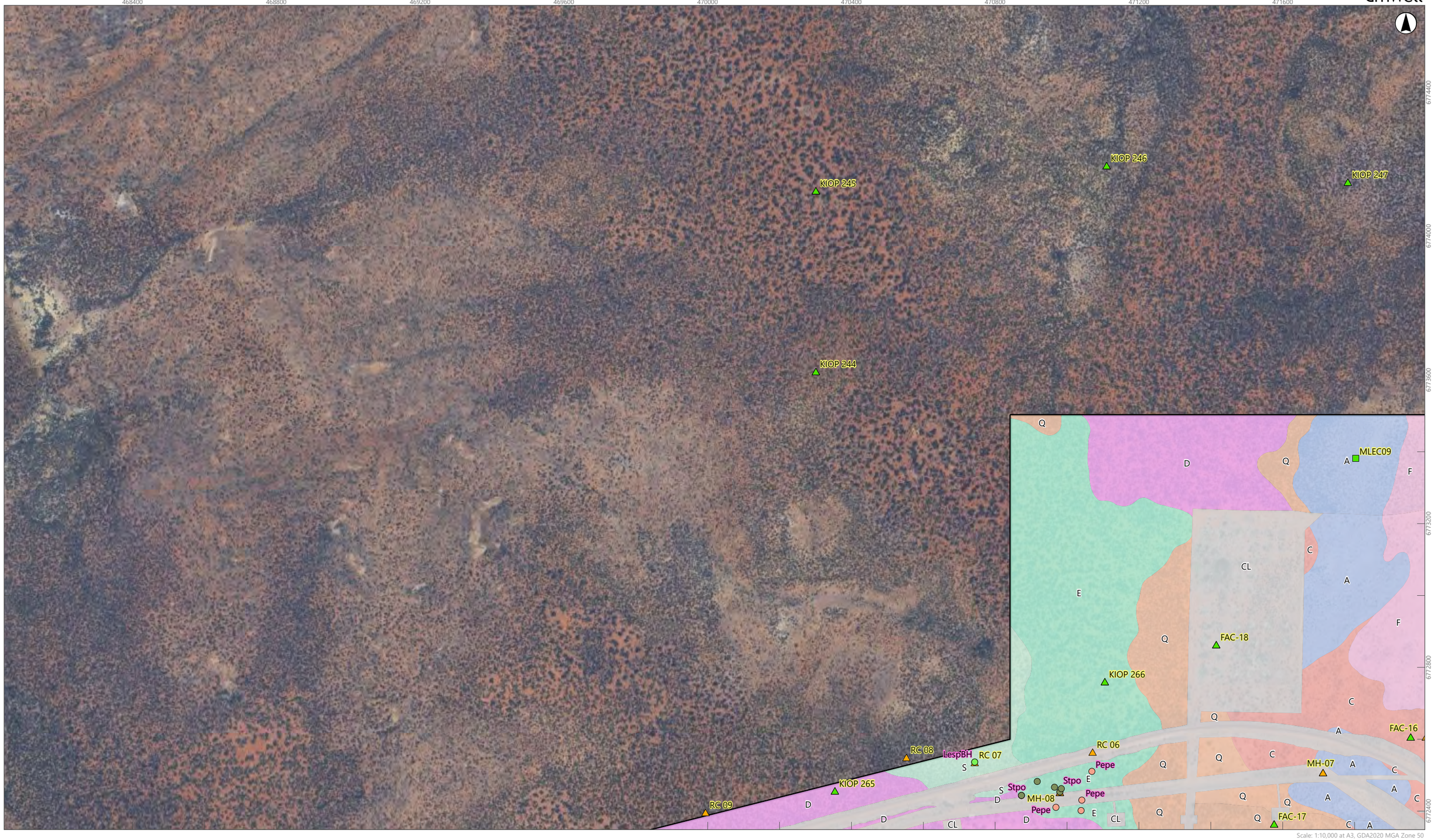
APPENDIX J

Vegetation Types of the Survey Area

Sheet 44

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat

Observations – Historic
- Quadrat
- Relevé

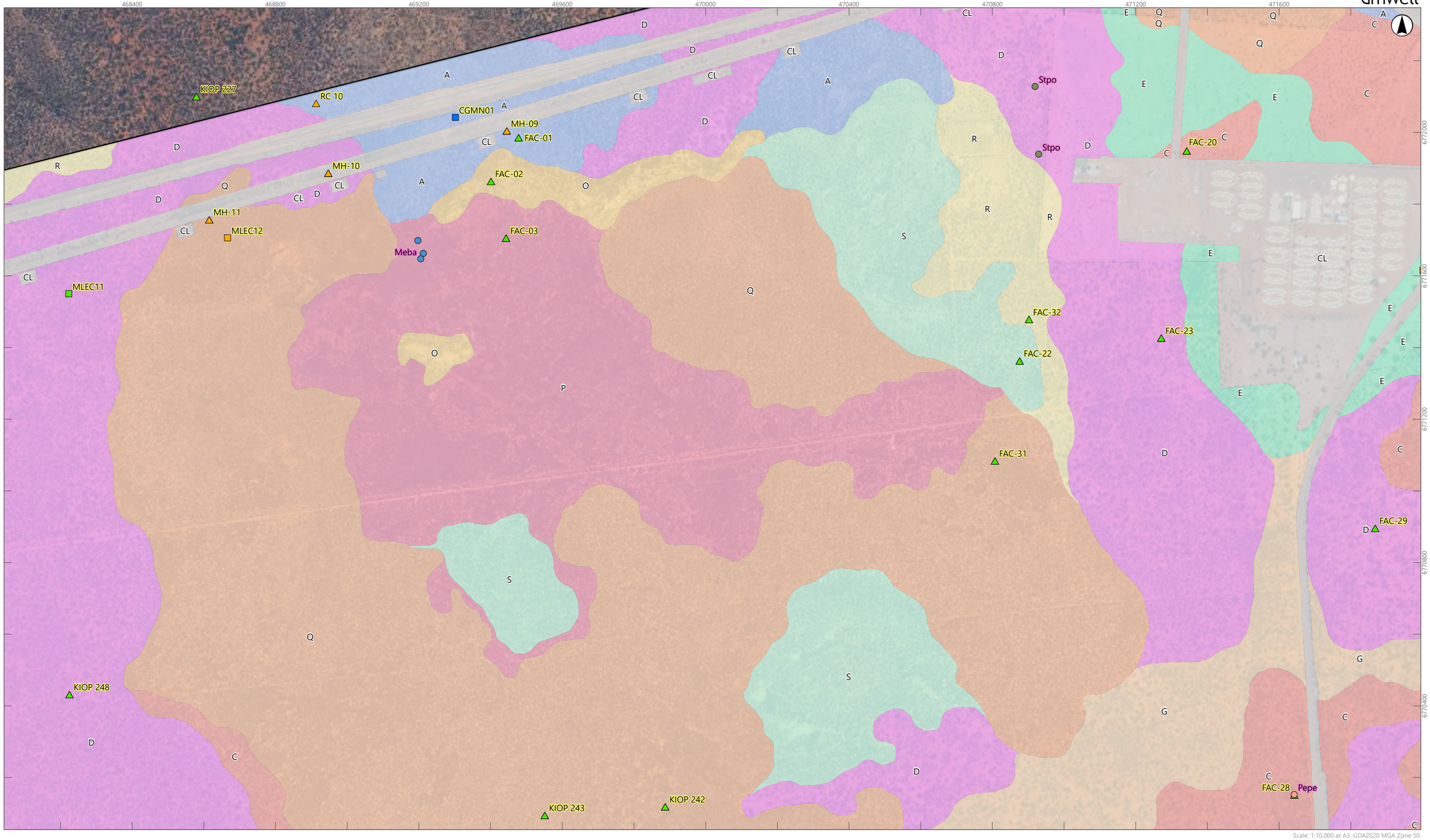
Significant Flora Taxa
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Pepe *Persoonia pentasticha* (P3)
- Stpo *Stenanthemum poicilum* (P3)

Vegetation Type
- A
- C
- D
- E
- F
- Q
- S
- CL

APPENDIX J
Vegetation Types of the Survey Area
Sheet 45

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

- Meba *Melaleuca barlowii* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Stpo *Stenanthemum poicilum* (P3)

Vegetation Type

A, C, D, E, G, O, P, Q, R, S, CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 46

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

- Eusy *Eucalyptus synandra* (T)
- Medr *Menkea draboides* (P3)
- Pepe *Persoonia pentasticha* (P3)

Vegetation Type

A, C, D, E, F, G, Q, R, S, CL

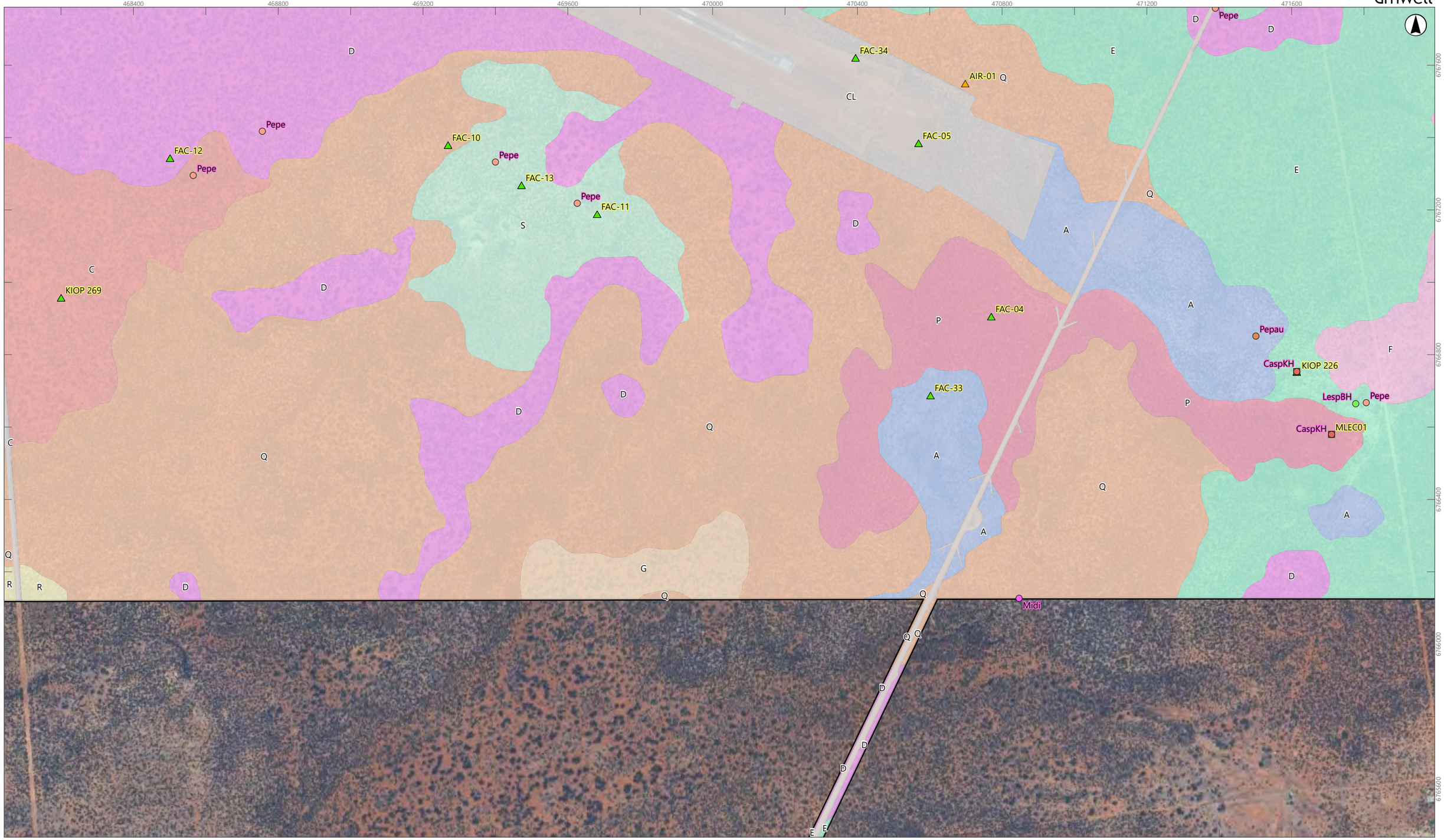
APPENDIX J

Vegetation Types of the Survey Area

Sheet 47

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa

CaspKH	*Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	
Midi	*Millotia dimorpha* (P1)	
Pepe	*Persoonia pentasticha* (P3)	
Pepau	*Petrophile pauciflora* (P3)	

Vegetation Type

A, C, D, E, F, G, P, Q, R, S, CL

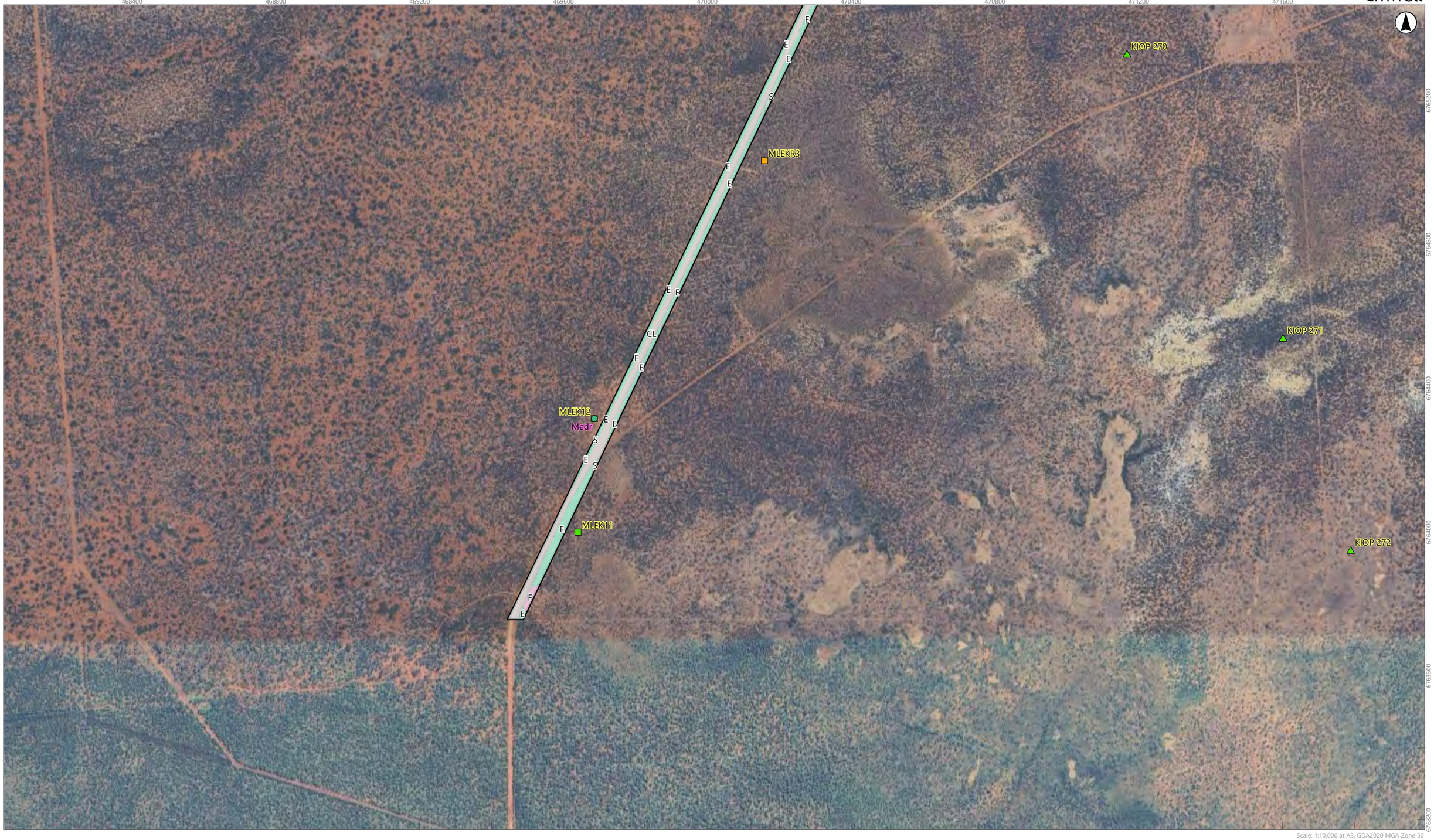
APPENDIX J

Vegetation Types of the Survey Area

Sheet 48

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- **Observations – 2023/2024**
  - Quadrat
  - Relevé
- **Observations – Historic**
  - Quadrat
- **Significant Flora Taxa**
  - Medr *Menkea draboides* (P3)
- **Vegetation Type**
  - E
  - F
  - S
  - CL

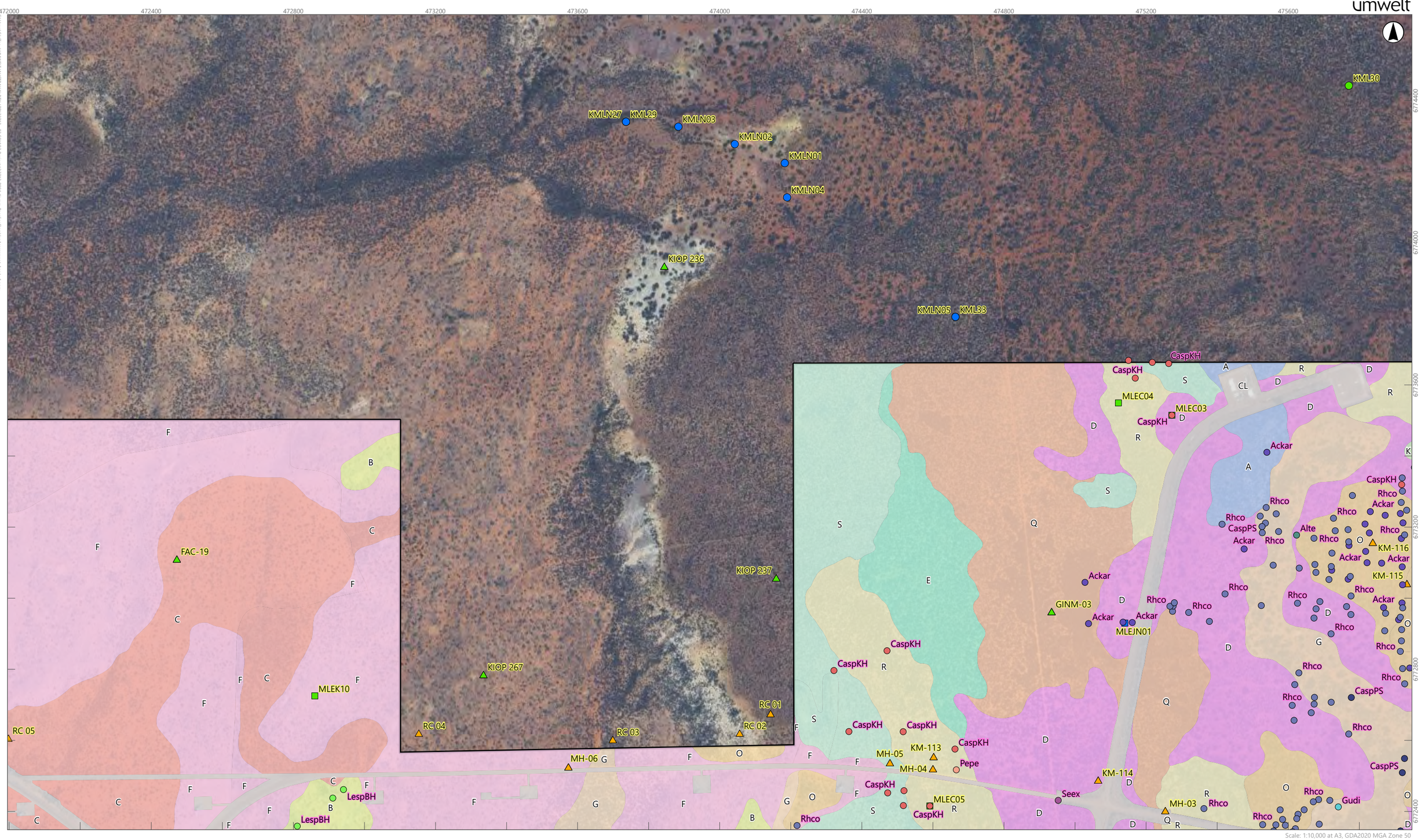
APPENDIX J

Vegetation Types of the Survey Area

Sheet 49

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area

Observations – 2023/2024

- Quadrat
- Vegetation Mapping Note

Observations – 2020

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae*	(P3)
Alte	*Allocasuarina tessellata*	(P3)
CaspKH	*Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)	(P1)
CaspPS	*Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)	(P3)
Gudi	*Gunniopsis divisa*	(P3)
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)	(P1)
Pepe	*Persoonia pentasticha*	(P3)
Rhco	*Rhodanthe collina*	(P3)
Seex	*Seringia exastia*	(EPBC – CR)

Vegetation Type

A, B, C, D, E, F, G, K, O, Q, R, S, CL

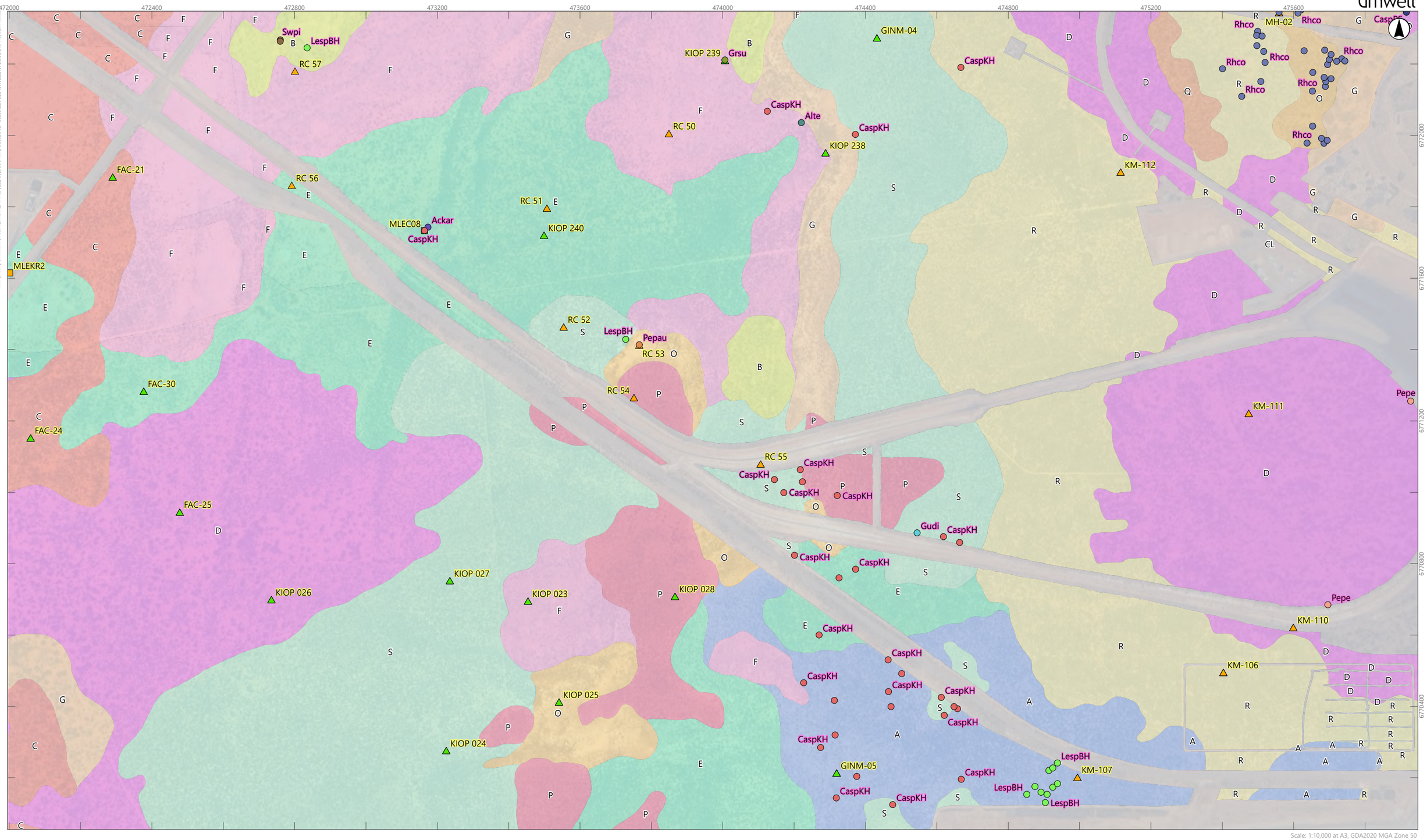
APPENDIX J

Vegetation Types of the Survey Area

Sheet 50

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat
- Relevé

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae*	(P3)
Alte	*Allocasuarina tessellata*	(P3)
CaspKH	*Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78)	(P1)
CaspPS	*Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)	(P3)
Grsu	*Grevillea subtiliflora*	(P3)
Gudi	*Gunniopsis divisa*	(P3)
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)	(P1)
Pepe	*Persoonia pentasticha*	(P3)
Pepau	*Petrophile pauciflora*	(P3)
Rhco	*Rhodanthe collina*	(P3)
Swpi	*Swainsona picta*	(P1)

Vegetation Type

A, B, C, D, E, F, G, O, P, Q, R, S, CL

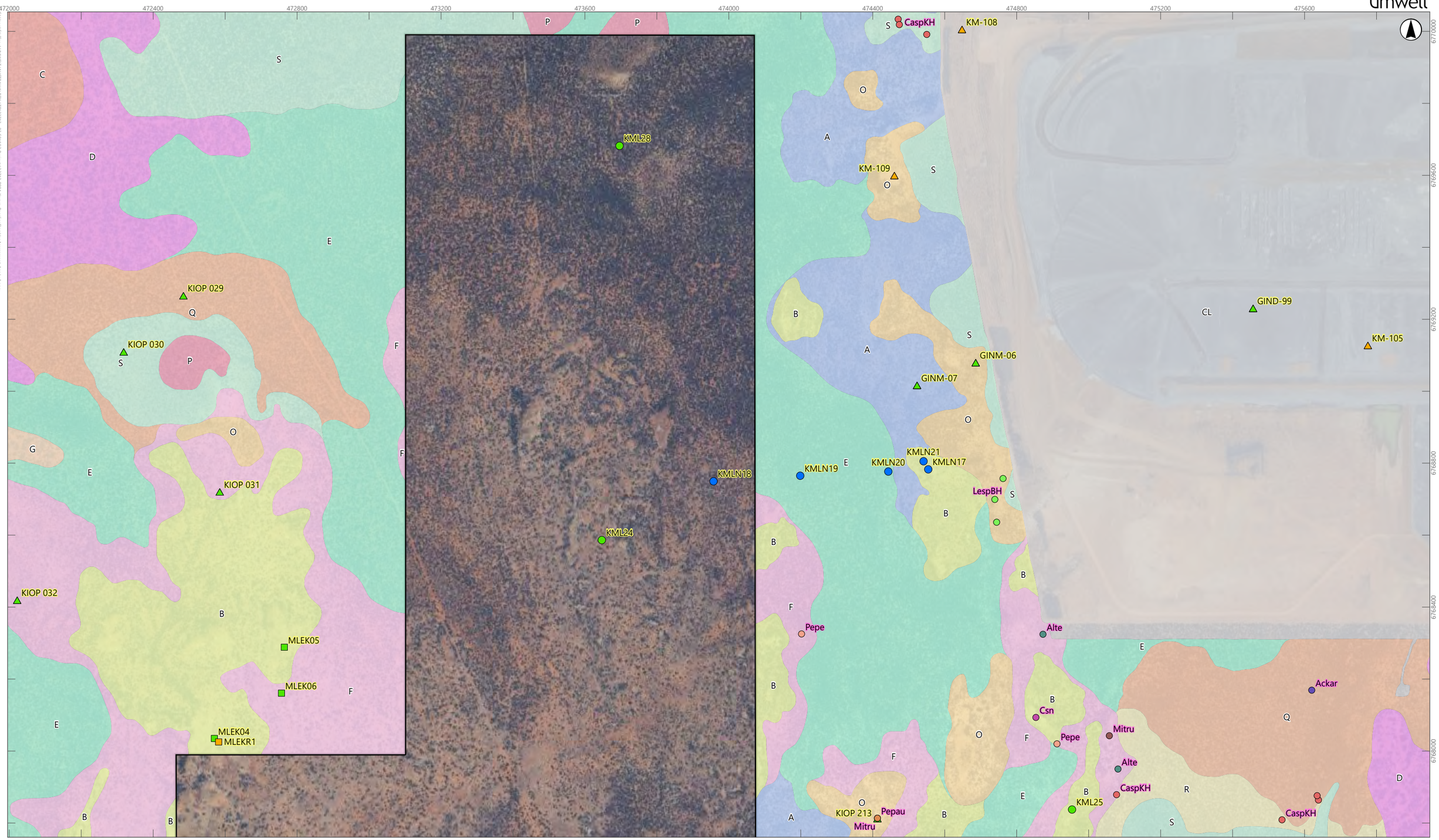
APPENDIX J

Vegetation Types of the Survey Area

Sheet 51

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

- Survey Area

Observations – 2023/2024

- Quadrat
- Relevé

Observations – 2020

- Quadrat
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

- Ackar *Acacia karinae* (P3)
- Alte *Allocasuarina tessellata* (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Csn *Crassula sp. nov.* (PU)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Mitru *Micromyrtus trudgenii* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Pepau *Petrophile pauciflora* (P3)

Vegetation Type

A, B, C, D, E, F, G, O, P, Q, R, S, CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

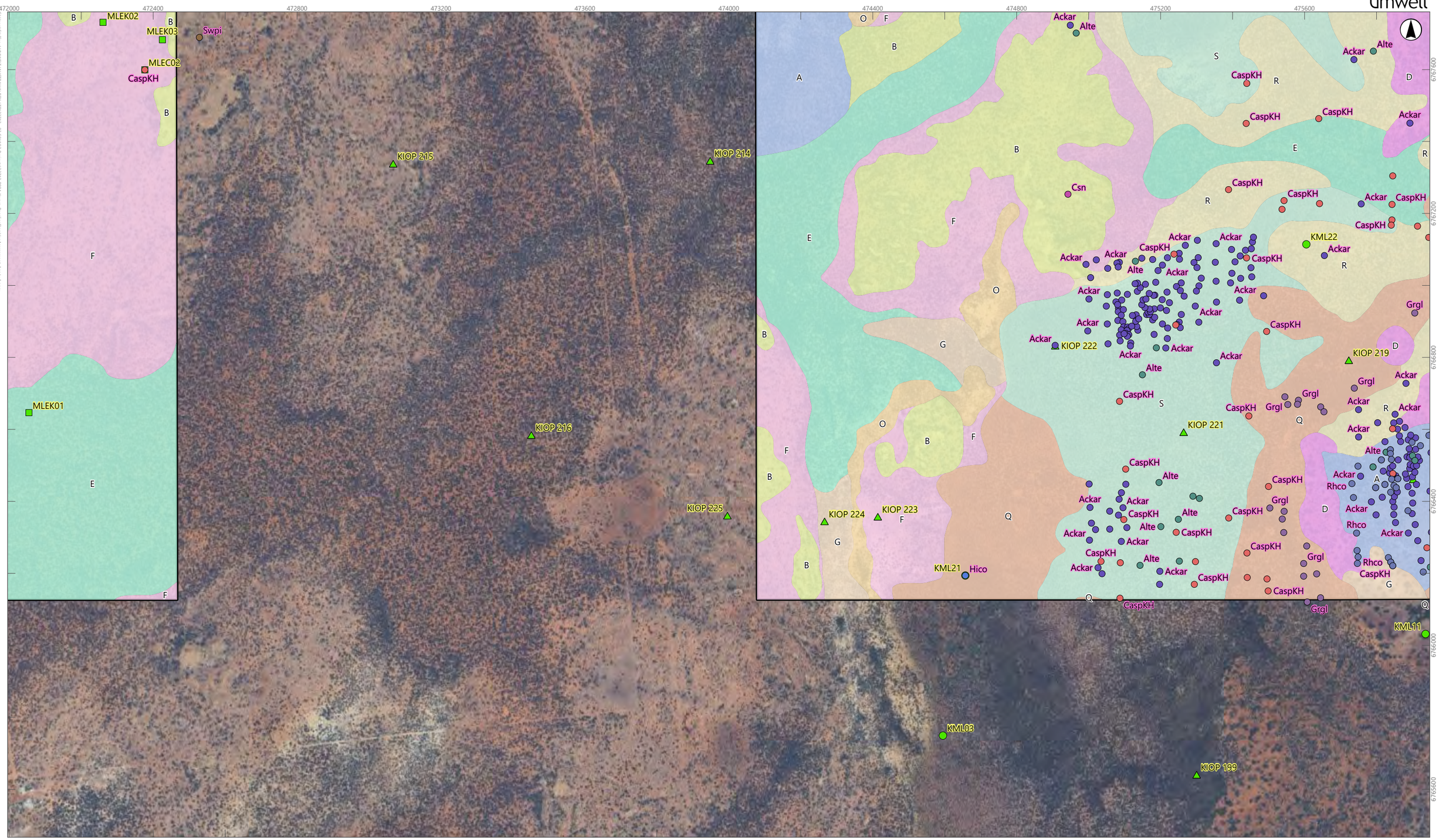
APPENDIX J

Vegetation Types of the Survey Area

Sheet 52

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

0 200 400 m



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Observations – 2020

Quadrat

Observations – Historic

Quadrat

Significant Flora Taxa

- Ackar *Acacia karinae* (P3)
- Alte *Allocasuarina tessellata* (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Csn *Crassula sp. nov.* (PU)
- Grgl *Grevillea globosa* (P3)
- Hico *Hibbertia cockertoniana* (P3)
- Rhco *Rhodanthe collina* (P3)
- Swpi *Swainsona picta* (P1)

Vegetation Type

A, B, D, E, F, G, O, Q, R, S

APPENDIX J

Vegetation Types of the Survey Area

Sheet 53

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

476000 476400 476800 477200 477600 478000 478400 478800 479200 479600

6777200 6776800 6776400 6776000 6775600

KML34
KML14
KML06
KM-011
KM-012
KM-125
GIND-81
GIND-80

Gudi Pepe CaspKH CaspPS Grgl Rhco

U K J G H Q P A D

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2020
- Quadrat

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Grgl *Grevillea globosa* (P3)
- Gudi *Gunniopsis divisa* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Rhco *Rhodanthe collina* (P3)

Vegetation Type
- A
- D
- G
- H
- J
- K
- P
- Q
- U

APPENDIX J
Vegetation Types of the Survey Area
Sheet 54

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

476000 476400 476800 477200 477600 478000 478400 478800 479200 479600

6775200 6774800 6774400 6774000 6773600 6773200

KML37 KML31 KML39 KML13 KML32

KM-124 KK03 KMLL03 KK04 KMLL02 GIND-21 KMLL04 KMLL05 MLETN01 KM-123 C-024 GIND-20 KARA16 KK05 KARA17 KARA20 KARA15 KM-127 KMLL01 C-025 KK01 KM-126 GINM-01 KMLN26 KM-117 GIND-19 KMLN22

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area
- **Observations – 2023/2024**
  - Vegetation Mapping Note
- **Observations – 2020**
  - Quadrat
  - Vegetation Mapping Note
- **Observations – Historic**
  - Quadrat
  - Relevé

Significant Flora Taxa

- Ackar *Acacia karinae* (P3)
- Alte *Allocasuarina tessellata* (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Grgl *Grevillea globosa* (P3)
- Grsc *Grevillea scabrida* (P3)
- Gudi *Gunniopsis divisa* (P3)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Midi *Millotia dimorpha* (P1)
- Pepe *Persoonia pentasticha* (P3)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Rhco *Rhodanthe collina* (P3)

Vegetation Type

A D G H K O P Q R S CL

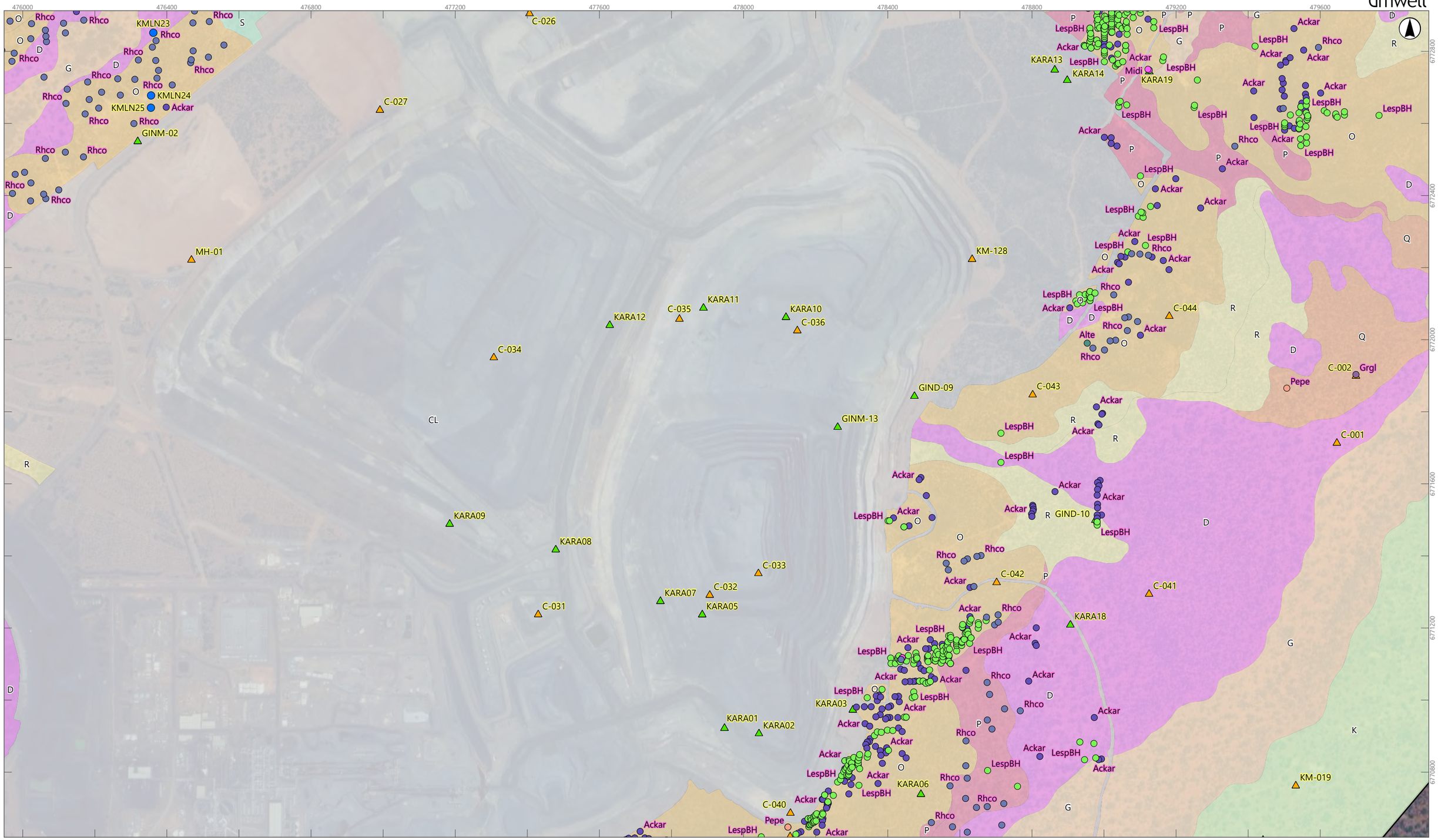
Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

0 200 400 m

APPENDIX J

Vegetation Types of the Survey Area

Sheet 55



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2020

- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae* (P3)	
Alte	*Allocasuarina tessellata* (P3)	
Grgl	*Grevillea globosa* (P3)	
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	
Midi	*Millotia dimorpha* (P1)	
Pepe	*Persoonia pentasticha* (P3)	
Rhco	*Rhodanthe collina* (P3)	

Vegetation Type

D, G, K, O, P, Q, R, S, CL

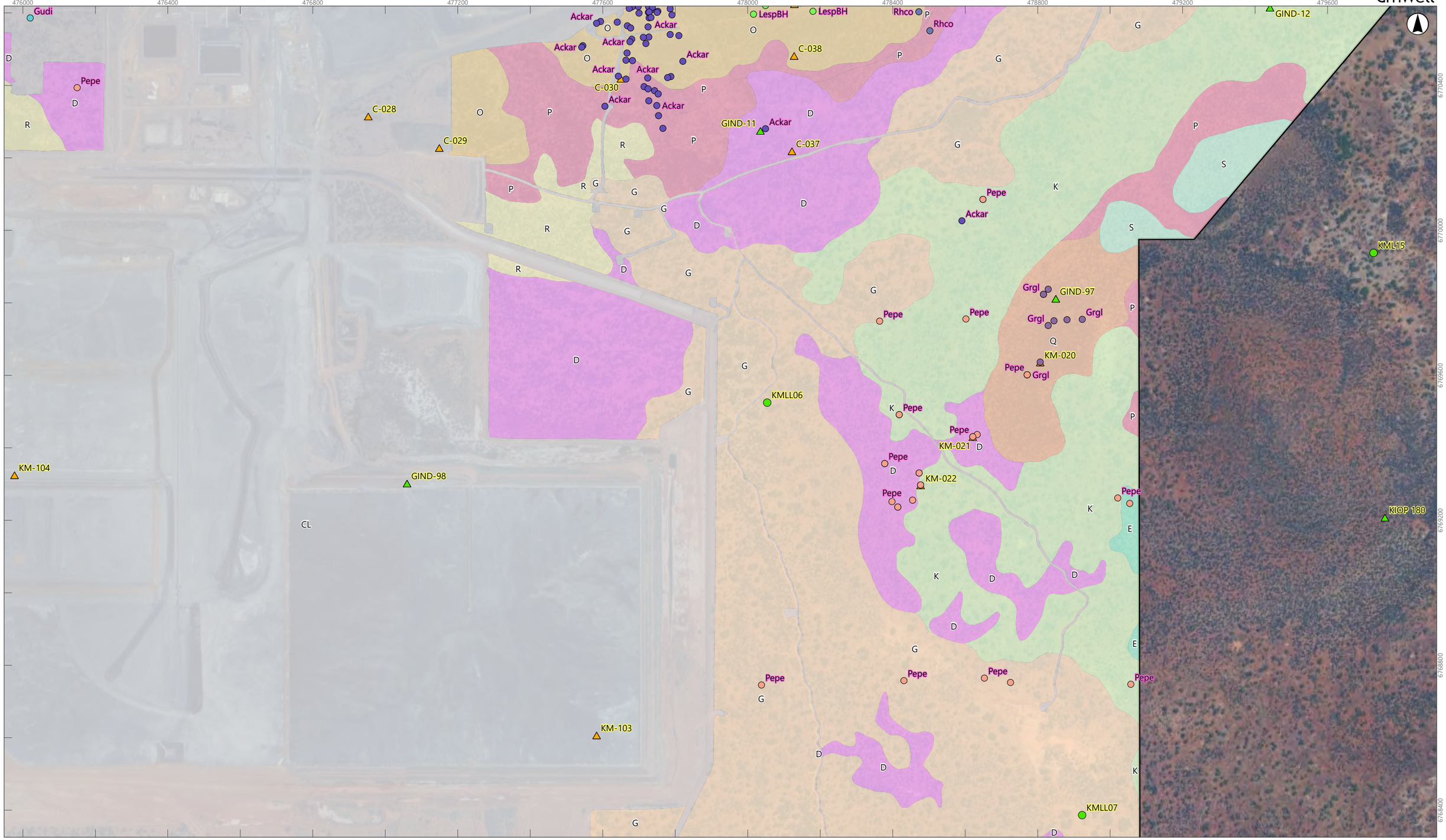
APPENDIX J

Vegetation Types of the Survey Area

Sheet 56

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

Survey Area

Observations – 2020
- Quadrat

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa
- Ackar *Acacia karinae* (P3)
- Grgl *Grevillea globosa* (P3)
- Gudi *Gunniopsis divisa* (P3)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Pepe *Persoonia pentasticha* (P3)
- Rhco *Rhodanthe collina* (P3)

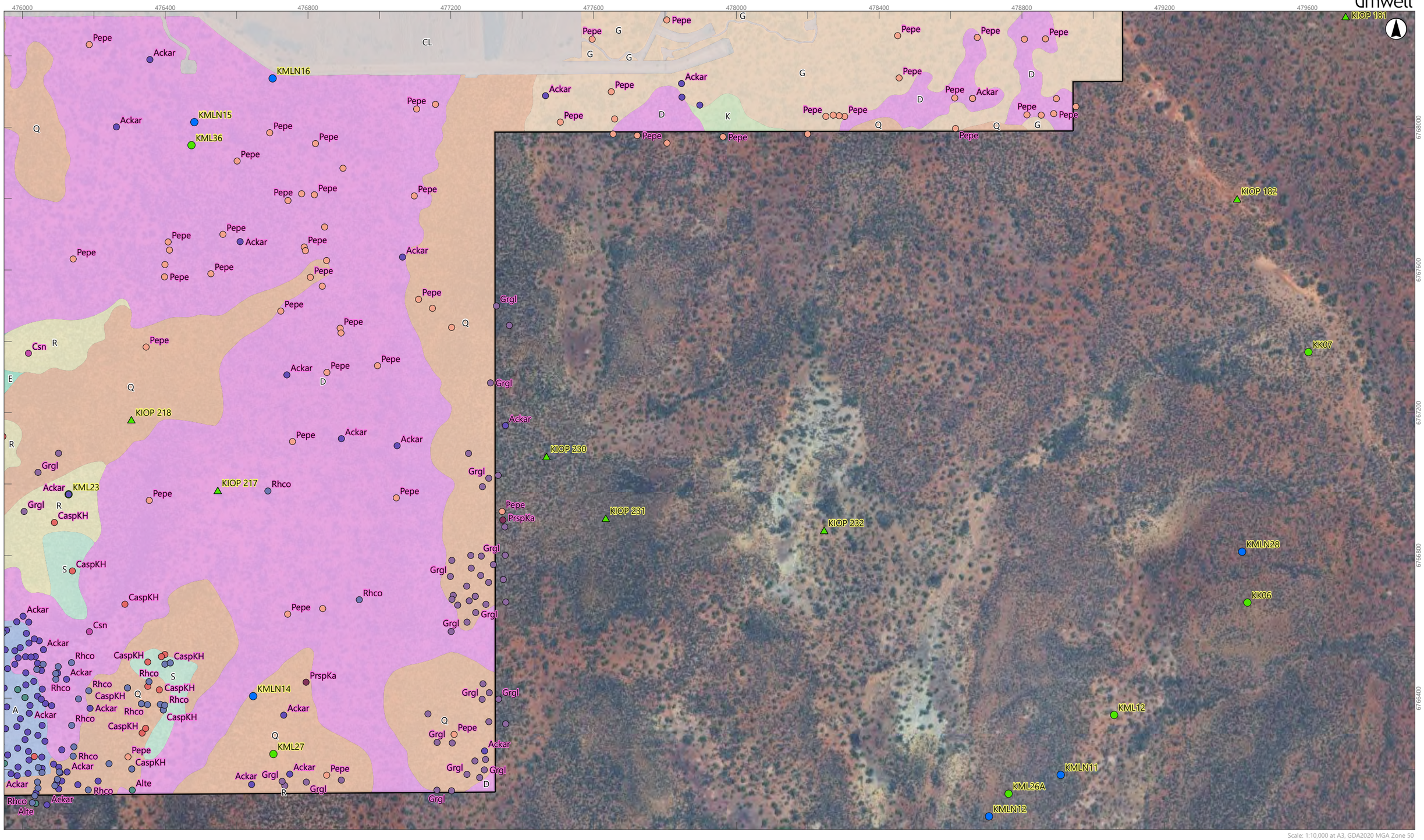
Vegetation Type
- D
- E
- G
- K
- O
- P
- Q
- R
- S
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J
Vegetation Types of the Survey Area
Sheet 57

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

Survey Area

Observations – 2020
- Quadrat
- Vegetation Mapping Note

Observations – Historic
- Quadrat

Significant Flora Taxa
- Ackar *Acacia karinae* (P3)
- Alte *Allocasuarina tessellata* (P3)
- CaspKH *Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)
- Csn *Crassula sp. nov.* (PU)
- Grgl *Grevillea globosa* (P3)
- Pepe *Persoonia pentasticha* (P3)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Rhco *Rhodanthe collina* (P3)

Vegetation Type
- A
- D
- E
- G
- K
- Q
- R
- S
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 58

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

480000 480400 480800 481200 481600 482000 482400 482800 483200 483600

6779600 6779200 6778800 6778400 6778000 6777600

KM-035
KM-033
KM-034
KM-032
GIND-79
KM-028
GIND-77
Pepe
KM-039
GIND-76
Pepe
KM-036
GIND-78
KM-037
Pepe

D G U

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa
- Pepe *Persoonia pentasticha* (P3)

Vegetation Type
- D
- G
- U

APPENDIX J
Vegetation Types of the Survey Area
Sheet 59

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

480000 480400 480800 481200 481600 482000 482400 482800 483200 483600

6777200 6776800 6776400 6776000 6775600

KM-038 Pepe
KM-013
KM-010
GIND-82 Pepe
GIND-83
GIND-84
GIND-08
GIND-06
KM-009
KM-121 Pepe
GIND-07
GIND-05
KM-122
GIND-04
GIND-53
C-054
C-053
C-052
C-055

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae* (P3)
Drfu	*Drummondita fulva* (P3)
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
Mitru	*Micromyrtus trudgenii* (P3)
Pepe	*Persoonia pentasticha* (P3)
Rhco	*Rhodanthe collina* (P3)

Vegetation Type

D, G, J, K, O, P, Q, U, CL

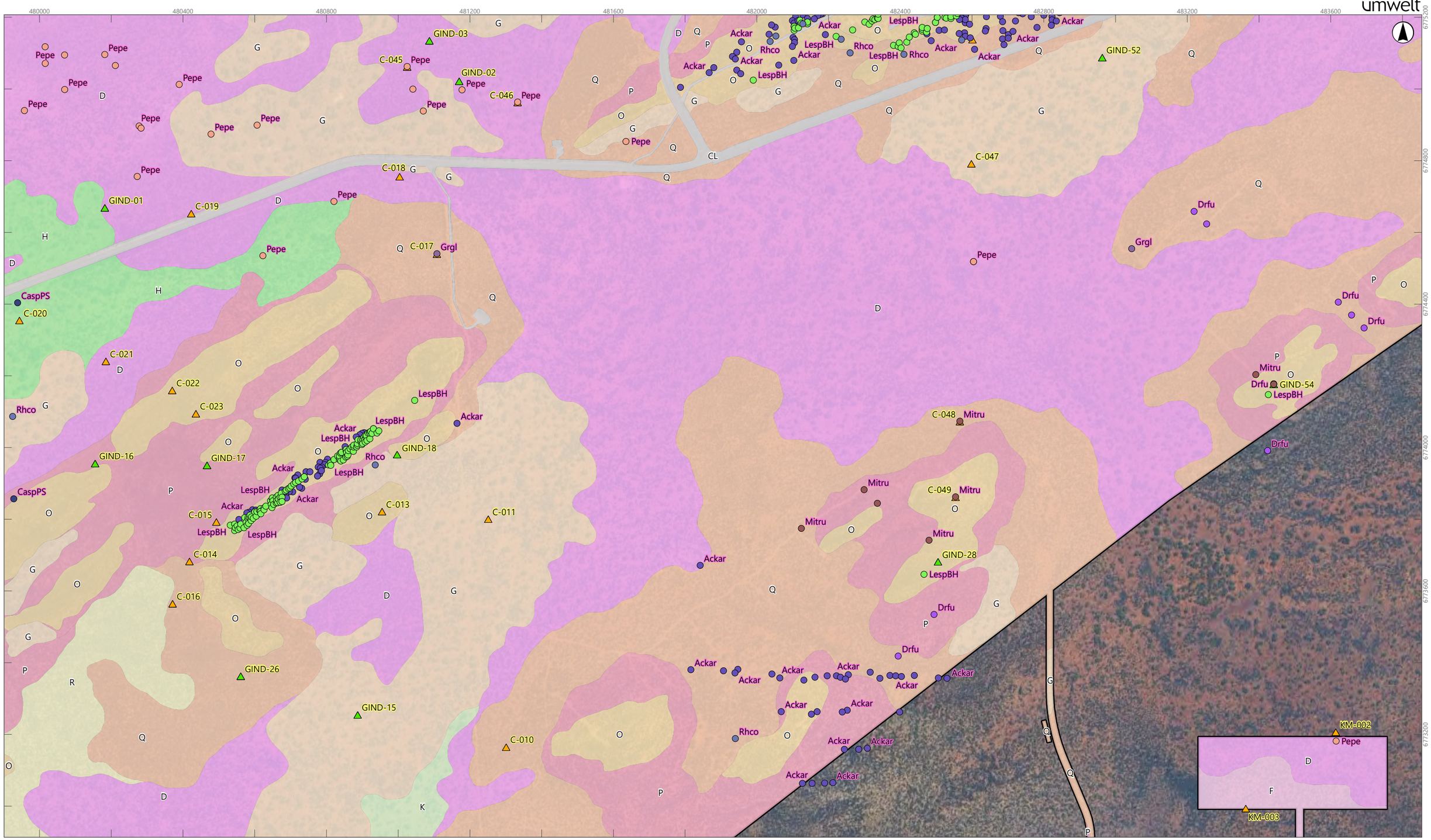
APPENDIX J

Vegetation Types of the Survey Area

Sheet 60

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae*	(P3)
CaspPS	*Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)	(P3)
Drfu	*Drummondita fulva*	(P3)
Grgl	*Grevillea globosa*	(P3)
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468)	(P1)
Mitru	*Micromyrtus trudgenii*	(P3)
Pepe	*Persoonia pentasticha*	(P3)
Rhco	*Rhodanthe collina*	(P3)

Vegetation Type

D, F, G, H, K, O, P, Q, R, CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 61

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

480000 480400 480800 481200 481600 482000 482400 482800 483200 483600

6772800 6772400 6772000 6771600 6771200 6770800

C-012 C-009 GIND-27 KM-004 MLEK07 MLEK08 MLEK09 CaspKH MLEC06 CaspKH MLEC07 GIND-94 KM-001 KM-006 Grsc GIND-92 C-008 C-007 Rhco KM-008 Rhco Grsc KM-005 Rhco C-003 KM-007 KIOP 003 KIOP 140 KIOP 139 LespBH C-006 GIND-14 Rhco GIND-93 C-004 KIOP 002 KIOP 001 GIND-13 C-005 GIND-95 MON03 KIOP 166 MON02 GIND-96

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa

CaspKH	*Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)	
Grsc	*Grevillea scabrida* (P3)	
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)	
Rhco	*Rhodanthe collina* (P3)	

Vegetation Type

D E F G H K O P Q R S

APPENDIX J
Vegetation Types of the Survey Area
Sheet 62

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt

484000 484400 484800 485200 485600 486000 486400 486800 487200 487600

6780000 6779600 6779200 6778800 6778400

GIND-74 KM-046 GIND-71 KM-044 KM-045 KM-043 KM-025 GIND-73 Pepe KM-042 GIND-72 KM-024 KM-023 KM-027 KM-026 KM-040 GIND-48 C-088 GIND-49 C-087 C-086 C-089 GIND-47 MLEQ-017 Mitru Poco Rhco PrspKa Drfu LespBH CaspPS

G D R O Q P CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Drfu *Drummondita fulva* (P3)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Mitru *Micromyrtus trudgenii* (P3)
- Pepe *Persoonia pentasticha* (P3)
- Poco *Polianthion collinum* (P3)
- PrspKa *Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
- Rhco *Rhodanthe collina* (P3)

Vegetation Type
- D
- G
- O
- P
- Q
- R
- CL

APPENDIX J
Vegetation Types of the Survey Area
Sheet 63

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

umwelt

484000 484400 484800 485200 485600 486000 486400 486800 487200 487600

6778000 6777600 6777200 6776800 6776400 6776000

KM-041 GIND-50 MLEQ-018 CaspPS C-090 CaspPS GIND-51 C-091 Grgl C-092 GIND-75 KM-101 KM-100 M-04 M-03 KM-102 GIND-58 Pepe GIND-57 Pepe C-064 C-060 GIND-56 C-059 LespBH C-058 C-057

Q G CL C R P H D O

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat

Observations – Historic
- Quadrat
- Relevé

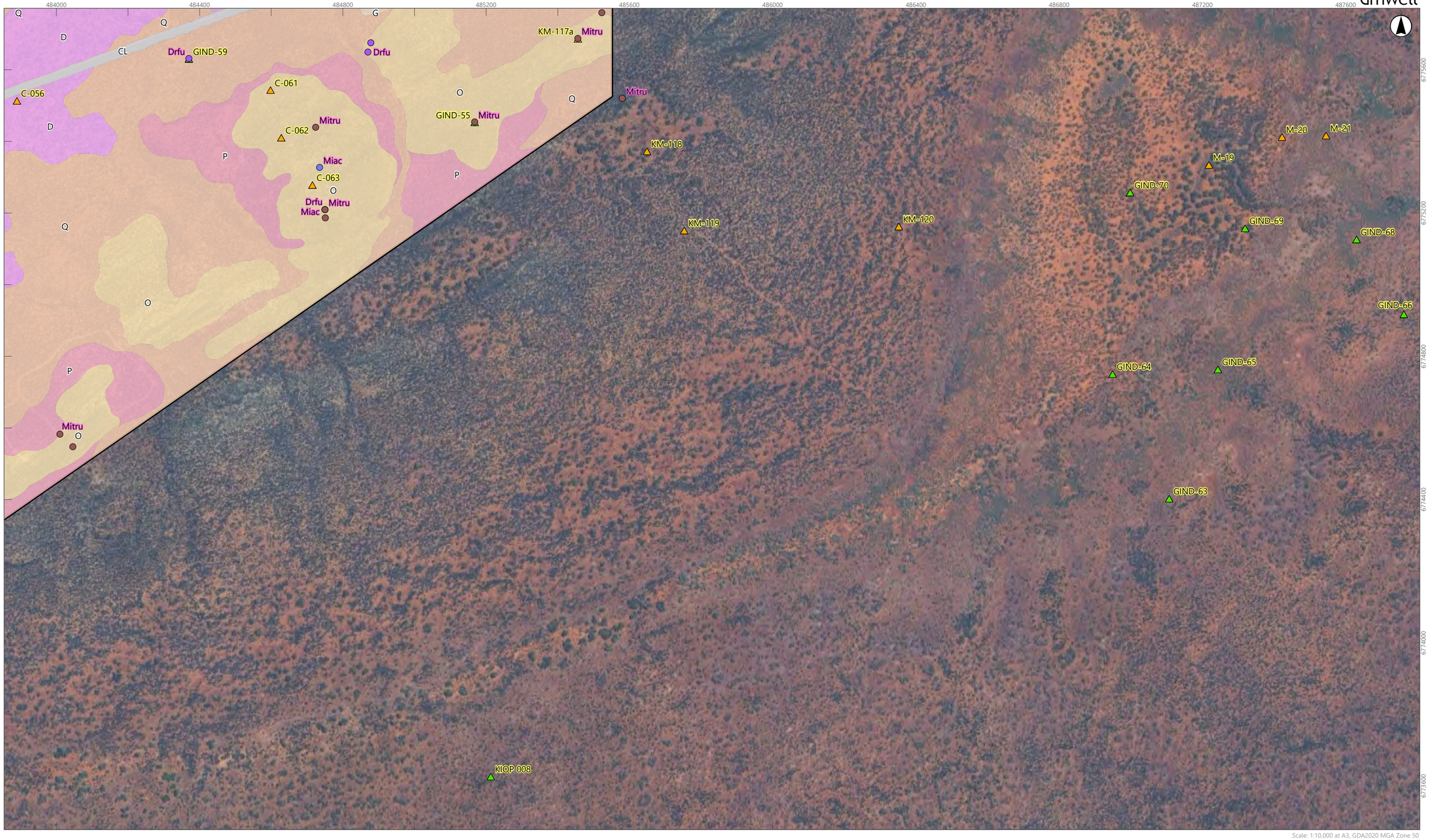
Significant Flora Taxa
- CaspPS *Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
- Grgl *Grevillea globosa* (P3)
- LespBH *Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
- Pepe *Persoonia pentasticha* (P3)

Vegetation Type
- C
- D
- G
- H
- O
- P
- Q
- R
- CL

APPENDIX J
Vegetation Types of the Survey Area
Sheet 64

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

Survey Area

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

- Drfu *Drummondita fulva* (P3)
- Miac *Micromyrtus acuta* (P3)
- Mitru *Micromyrtus trudgenii* (P3)

Vegetation Type

- D
- G
- O
- P
- Q
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

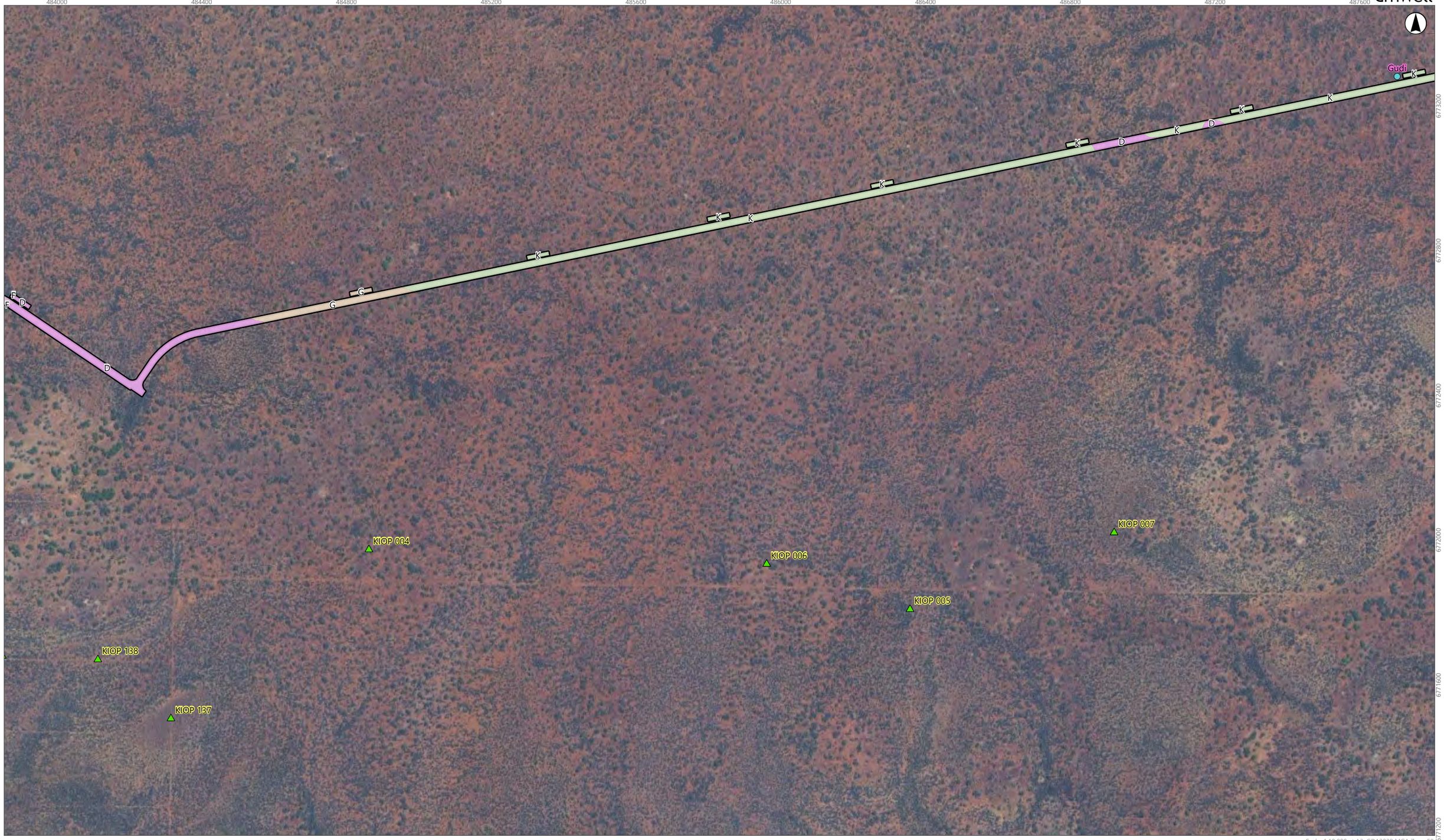
APPENDIX J

Vegetation Types of the Survey Area

Sheet 65

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – Historic

Quadrat

Significant Flora Taxa

Gudi *Gunniopsis divisa* (P3)

Vegetation Type

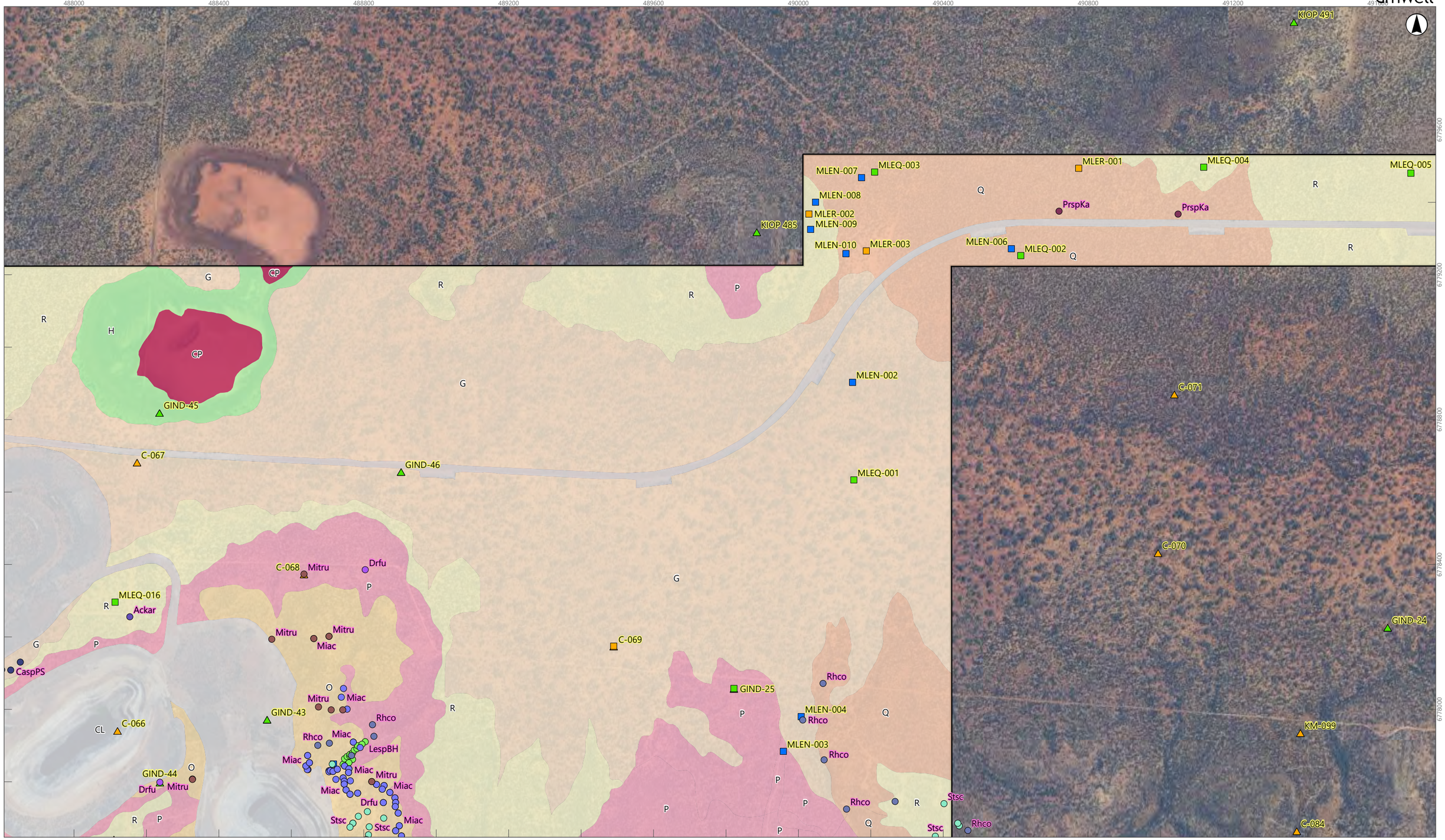
D
F
G
K

APPENDIX J

Vegetation Types of the Survey Area
Sheet 66

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

- Survey Area

Observations – 2023/2024

- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic

- Quadrat
- Relevé

Significant Flora Taxa

Ackar	*Acacia karinae* (P3)
CaspPS	*Calotis* sp. Perrinvale Station (R.J. Cranfield 7096) (P3)
Drfu	*Drummondita fulva* (P3)
LespBH	*Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)
Miac	*Micromyrtus acuta* (P3)
Mitru	*Micromyrtus trudgenii* (P3)
PrspKa	*Prostanthera* sp. Karara (D. Coultas & K. Greenacre Opp 8) (P1)
Rhco	*Rhodanthe collina* (P3)
Stsc	*Stylidium scintillans* (T)

Vegetation Type

- G
- H
- O
- P
- Q
- R
- CP
- CL

APPENDIX J

Vegetation Types of the Survey Area

Sheet 67

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

488000 488400 488800 489200 489600 490000 490400 490800 491200 491600

6777600 6777200 6776800 6776400 6776000 6775600

C-065 Stsc Miac Miac Miac Drfu GIND-23 Drfu Stsc

CL P R O Q P R Q

WIND12 WIND11 GIND-22 C-085 C-083 GINM-14

M-16 M-15 M-18 KIOP 482 GIND-36 C-096 C-095 WIND05 WIND04 C-097

KIOP 481 WIND03 C-094 GIND-29 C-081 WIND06 C-082

M-08 M-17 KIOP 479 M-05 C-093 GIND-37 GIND-30

WIND20 M-01 WIND01 WIND10 KIOP 480 GIND-40 C-080

M-02 WIND02 C-098

M-07 M-06 GIND-39 GIND-31

C-079 WIND07 C-078 C-099 GIND-38 GIND-32 C-077

GIND-41 C-076

Gudi M-09 Gudi M-22 D C-100

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024

Quadrat

Observations – Historic

Quadrat

Relevé

Significant Flora Taxa

Drfu *Drummondita fulva* (P3)

Gudi *Gunniopsis divisa* (P3)

Miac *Micromyrtus acuta* (P3)

Stsc *Stylidium scintillans* (T)

Vegetation Type

D

O

P

Q

R

CL

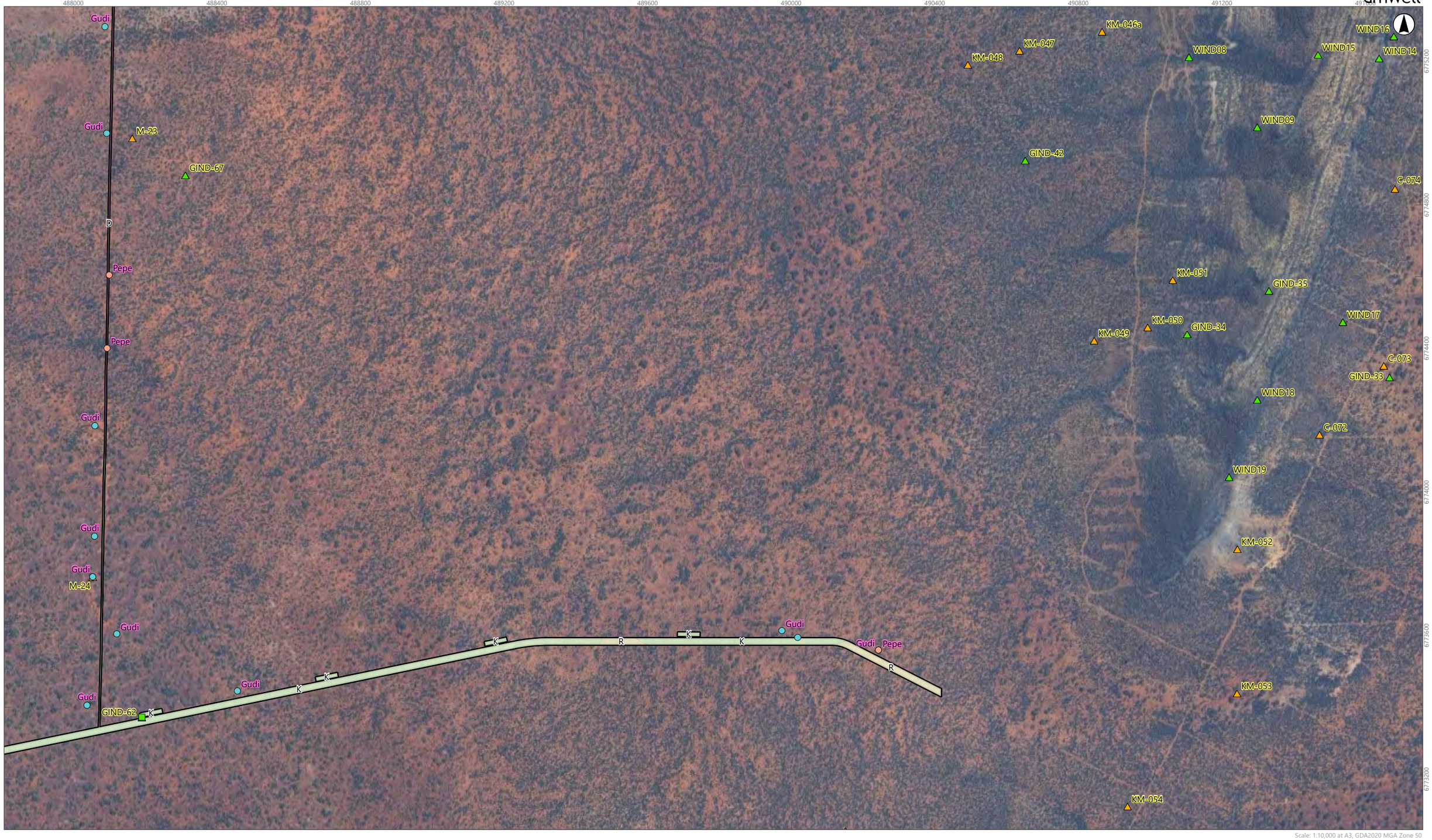
APPENDIX J

Vegetation Types of the Survey Area

Sheet 68

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)



Legend

Survey Area

Observations – 2023/2024

Quadrat

Observations – Historic

Quadrat

Relevé

Significant Flora Taxa

Gudi *Gunniopsis divisa* (P3)

Pepe *Persoonia pentasticha* (P3)

Vegetation Type

D

K

R

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J

Vegetation Types of the Survey Area

Sheet 69

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

492000 492400 492800 493200 493600 494000 494400 494800 495200

6779600 6779200 6778800 6778400 6778000

KM-090 GIND-88 KIOP 487 KM-089 KM-088 KIOP 431 KIOP 432 KIOP 422

MLEQ-006 MLEQ-010 MLEQ-011 MLEQ-007 MLEQ-009 MLEQ-008 MLEQ-013 MLEQ-007

MLER-005 MLER-007 MLER-012 MLER-010 MLER-011 MLER-009 MLER-006

MLEN-018 MLEN-019 MLEN-011 MLEN-012 MLEN-013 MLEN-017 MLEN-016 MLEN-014 MLEN-015 MLEN-022 MLEN-021 MLEN-020 MLEN-018

KIOP 430 KIOP 426 KIOP 512 KIOP 433 KIOP 513

KM-098 GIND-91 KM-097

Grgl Drfu Stsc

CL

Legend

Survey Area

Observations – 2023/2024
- Quadrat
- Relevé
- Vegetation Mapping Note

Observations – Historic
- Quadrat
- Relevé

Significant Flora Taxa
- Drfu *Drummondita fulva* (P3)
- Grgl *Grevillea globosa* (P3)
- Stsc *Stylidium scintillans* (T)

Vegetation Type
- A
- G
- H
- O
- P
- Q
- R
- CL

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

APPENDIX J
Vegetation Types of the Survey Area
Sheet 70

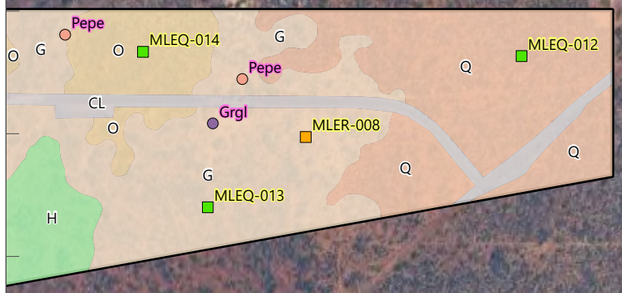
0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

C:\Users\JeffreysA\UMWELT (AUSTRALIA) PTY. LTD\23712 - 03 SWVP2 Projects\23712_8004_Banarli_Basel\reflora\Vegetassessment_Appx_V1.aprx

496000 496400 496800 497200 497600 498000 498400 498800 499200 499600

6779600 6779200 6778800 6778400 6778000



KIOP 423

KIOP 421

Scale: 1:10,000 at A3, GDA2020 MGA Zone 50

Legend

Survey Area

Observations – 2023/2024
- Quadrat
- Relevé

Observations – Historic
- Quadrat

Significant Flora Taxa
- GrgI *Grevillea globosa* (P3)
- Pepe *Persoonia pentasticha* (P3)

Vegetation Type
- G
- H
- O
- Q
- CL

APPENDIX J
Vegetation Types of the Survey Area
Sheet 71

0 200 400 m

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2021, 2025), KML (2023)

Vegetation Type

A — Tall sparse shrubland to isolated shrubs of mixed species including *Acacia acuminata/Acacia burkittii*, *Acacia tetragonophylla*, *Melaleuca hamata* and/or *Acacia umbraculiformis* over mid sparse shrubland of mixed species including *Thryptomene costata* and *Malleostemon tuberculatus*, over low sparse shrubland of mixed species including *Mirbelia microphylla*, *Solanum lasiophyllum* and *Eremophila eriocalyx*, over low sparse forbland of mixed species including *Schoenia cassiniana*, *Borya sphaerocephala*, *Erodium cygnorum* and *Rhodanthe chlorocephala* subsp. *splendida*, on red-brown clay loam, sometimes with granite surface stones, on plains and gentle slopes

B — Low open forbland of *Borya sphaerocephala* and other species including *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Calotis hispidula* and *Chthonocephalus pseudevax*, in pockets of red clayey sand on and immediately adjacent to granite sheet outcropping

C — Low open woodland of *Eucalyptus kochii* subsp. *plenissima* or *Eucalyptus loxophleba* subsp. *supralaevis*, over occasional tall isolated clumps of shrubs of *Acacia ramulosa* var. *ramulosa*, *Melaleuca eleuterostachya*, *Acacia assimilis* subsp. *assimilis*, *Acacia burkittii*, and/or *Acacia colletioides*, over low isolated clumps of shrubs of *Ptilotus obovatus* and *Solanum lasiophyllum*, over low open tussock grassland of *Monachather paradoxus*, over low isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Crassula colorata* var. *colorata*, *Helipterum craspedioides*, *Cephalipterum drummondii* and *Chthonocephalus pseudevax*, on red clayey sand or clay loam, sometimes with ironstone or quartz surface stones, on flats and plains

D — Occasional low woodland to open woodland of *Eucalyptus kochii*, *Callitris columellaris*, and/or *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of mixed species including *Acacia tetragonophylla*, *Acacia ramulosa* var. *ramulosa*, *Acacia acuminata*, *Acacia obtecta* and *Exocarpos aphyllus*, over mid sparse shrubland of mixed species including *Hakea recurva* subsp. *recurva*, *Senna artemisioides* subsp. *filifolia*, *Eremophila clarkei* and *Acacia assimilis* subsp. *assimilis*, over low sparse shrubland of mixed species including *Rhagodia drummondii*, *Ptilotus obovatus* and *Olearia humilis*, over low sparse tussock grassland of *Austrostipa elegantissima* and *Monachather paradoxus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Cephalipterum drummondii* and *Gilruthia osbornei*, on red or red-brown sandy clay loam, sometimes with occasional ironstone or quartz surface stones, on flats and plains

E — Tall open to sparse shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva*, *Acacia assimilis* subsp. *assimilis* and *Eremophila clarkei*, over low isolated clumps of shrubs of mixed species including *Maireana planifolia*, *Ptilotus obovatus*, *Solanum lasiophyllum* and *Sida* sp. dark green fruits (S. van Leeuwen 2260), over low isolated clumps of grasses of *Austrostipa elegantissima*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Gilruthia osbornei*, *Cephalipterum drummondii*, *Calotis multicaulis* and *Panaetia lessonii*, on red clay loam, usually with ironstone, granite and/or quartz surface stones, on undulating plains and flats

F — Tall sparse shrubland of *Acacia tetragonophylla*, *Acacia umbraculiformis*, *Acacia ramulosa* var. *ramulosa* and occasionally *Acacia burkittii* and *Thryptomene costata*, over mid isolated shrubs of mixed species including *Hakea recurva* subsp. *recurva* and *Acacia kochii*, over low sparse shrubland of *Solanum lasiophyllum* and *Ptilotus obovatus*, over low sparse forbland of mixed species including *Borya sphaerocephala*, *Rhodanthe chlorocephala*, *Myriocephalus gueriniae* and *Goodenia cycnopotamica*, on red or red-brown clay loam or silty loam, sometimes with small amounts of granite outcropping and granite surface stones, on simple slopes and plains

G — Mid to low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis* and occasionally *Eucalyptus kochii*, over tall sparse shrubland of mixed species including *Acacia tetragonophylla* and occasionally *Acacia ramulosa* var. *ramulosa*, *Exocarpos aphyllus*, *Acacia obtecta* and *Acacia burkittii*, over an occasional mid sparse shrubland of *Senna* sp. Austin (A. Strid 20210), *Scaevola spinescens* and/or *Dodonaea inaequifolia*, over low isolated clumps of shrubs of mixed species including *Senna artemisioides* subsp. *filifolia*, *Ptilotus obovatus* and *Pimelea microcephala* subsp. *microcephala*, over low isolated clumps of chenopod shrubs of mixed species including *Rhagodia drummondii*, *Sclerolaena fusiformis*, *Maireana georgei*, *Maireana carnosa* and *Enchylaena lanata*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including **Mesembryanthemum nodiflorum*, *Cephalipterum drummondii*, *Erodium cygnorum* and *Gilruthia osbornei*, on red or red-brown clay loam or silty clay loam, usually with ironstone and/or granite and/or quartz surface stones, on flats and plains

H — Occasional low open woodland to isolated trees of mixed species including *Eucalyptus loxophleba* subsp. *supralaevis*, *Eucalyptus salubris*, *Eucalyptus clelandiorum* or *Eucalyptus kochii* subsp. *amaryssia*, over tall open to sparse shrubland of mixed species including *Acacia obtecta*, *Acacia ramulosa* var. *ramulosa*, *Acacia latior* and *Melaleuca leiocarpa*, over mid isolated shrubs of mixed species including *Acacia tetragonophylla*, *Exocarpos aphyllus* and *Acacia exocarpoides*, over occasional low isolated clumps of shrubs of *Ptilotus obovatus*, *Senna charlesiana*, *Persoonia pentasticha* (P3) and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of mixed species dominated by *Rhagodia drummondii* and *Sclerolaena fusiformis* and occasionally *Maireana georgei* and *Enchylaena lanata*, on red-brown clay loam, with occasional ironstone surface stones, on flats and plains

I — Low open woodland of *Eucalyptus horistes* and *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Melaleuca stereophloia*, over mid sparse shrubland of mixed species including *Acacia acuaria* and *Scholtzia uniovulata*, over mid sparse tussock grassland of *Austrostipa elegantissima*, over low isolated forbs of mixed species including *Goodenia rosea*, *Rhodanthe chlorocephala* subsp. *splendida*, *Lawrencella davenportii*, *Podolepis aristata* subsp. *aristata* and *Waitzia acuminata* var. *acuminata*, on red sandy clay, on plains and low rises

J — Occasional tall to mid isolated shrubs of *Acacia obtecta*, *Duma florulenta*, *Exocarpos aphyllus* and *Eremophila glabra*, over low sparse shrubland of *Ptilotus obovatus* and *Corchorus* sp., over mid open to sparse samphire shrubland of *Tecticornia disarticulata*, over low sparse chenopod shrubland of mixed species including *Maireana carnosa*, *Sclerolaena diacantha*, *Sclerolaena fusiformis*, *Atriplex semilunaris* and *Maireana brevifolia*, on brown or red-brown clay loam or silty clay loam, in saline claypans

K — Occasional low woodland to open woodland of mixed species including *Eucalyptus clelandiorum*, *Eucalyptus loxophleba* subsp. *supralaevis* and/or *Eucalyptus salubris*, over tall sparse shrubland of mixed species including *Eremophila oppositifolia* subsp. *angustifolia*, *Acacia erinacea*, *Exocarpos aphyllus* and *Eremophila pantonii*, over low isolated clumps of shrubs of mixed species including *Senna stowardii*, *Scaevola spinescens*, *Ptilotus obovatus* and *Olearia pimeleoides*, over low isolated clumps of chenopod shrubs of *Sclerolaena fusiformis*, *Rhagodia drummondii*, *Maireana thesioides*, *Maireana georgei* and *Maireana marginata*, on red-brown silty clay loam or clay loam, sometimes with ironstone surface stones, on plains

L — Tall sparse shrubland of *Melaleuca acutifolia* and occasionally *Melaleuca eleuterostachya*, *Acacia eremaea* and *Melaleuca stereophloia*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Rhagodia drummondii*, *Maireana eriosphaera*, *Enchylaena tomentosa* var. *tomentosa* and *Sclerolaena diacantha*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, over low isolated clumps of forbs of mixed species including *Gunniopsis quadrifida*, *Rhodanthe chlorocephala* subsp. *splendida*, *Calandrinia granulifera*, *Gnephosis angianthoides* and **Mesembryanthemum nodiflorum*, on slightly saline brown sandy clay, on flats and lower slopes

M — Occasional low isolated clumps of shrubs of *Lawrencia squamata* and *Frankenia pauciflora*, over low open to sparse samphire shrubland of mixed species including *Tecticornia disarticulata*, *Tecticornia loriae*, *Tecticornia* sp. 'Karara 4' and *Tecticornia peltata*, over low sparse chenopod shrubland of *Atriplex vesicaria*, *Maireana eriosphaera*, *Maireana glomerifolia* and *Maireana atkinsiana*, over isolated clumps of forbs of mixed species including *Senecio lacustrinus*, *Pogonolepis muelleriana*, *Stenopetalum salicola*, *Lawrencia squamata*, *Siemssenia capillaris* and *Cotula cotuloides*, on brown or orange sandy clay, in saline depressions

APPENDIX J

LEGEND: Vegetation Types of the Survey Area

Image Source: ESRI Basemap (2024) | **Data Source:** Landgate (2022, 2025), Umwelt (2025), KML (2023)

Vegetation Type

N	Low sparse samphire shrubland of mixed species, including *Tecticornia indica* subsp. *bidens*, *Tecticornia* sp. 'Karara 1' (PU), *Tecticornia* sp. 'Karara 2' (PU), and occasionally *Tecticornia peltata*, over low isolated clumps of forbs of mixed species including *Triglochin mucronata*, *Senecio lacustrinus*, *Cotula cotuloides*, **Parapholis incurva* and *Gunniopsis septifraga*, on grey-brown or brown sandy clay, in saline depressions
O	Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall sparse shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Calycopeplus paucifolius*, *Melaleuca nematophylla*, and/or *Acacia ramulosa* var. *ramulosa*, over mid sparse shrubland of mixed species including *Eremophila clarkei*, *Philotheca brucei* subsp. *brucei*, *Philotheca sericea*, *Aluta aspera* subsp. *aspera* and *Eremophila latrobei* subsp. *latrobei*, over low isolated shrubs of *Xanthosia kochii*, *Sida* sp. dark green fruits (S. van Leeuwen 2260) and *Hibbertia arcuata*, over low isolated clumps of forbs of mixed species including *Waitzia acuminata* var. *acuminata*, *Podolepis lessonii* and *Lawrencella rosea*, on red-brown silty loam or silty clay loam with ironstone, BIF or granite stones, and sometimes with ironstone, BIF or granite outcropping, on slopes and crests
P	Occasional low isolated trees of *Allocasuarina acutivalvis* subsp. *prinsepiana*, over tall shrubland to open shrubland of mixed species including *Acacia assimilis* subsp. *assimilis*, *Melaleuca nematophylla*, *Acacia latior*, *Calycopeplus paucifolius* and *Acacia sibina*, over mid shrubland to open shrubland dominated by *Aluta aspera* subsp. *hesperia* and occasionally with *Philotheca sericea*, *Hibbertia arcuata* and/or *Grevillea paradoxa*, over occasional low open shrubland of mixed species including *Philotheca deserti* subsp. *deserti* and *Xanthosia kochii*, over low isolated clumps of tussock grasses of *Monachather paradoxus* and *Amphipogon caricinus* var. *caricinus*, over low sparse forbland of mixed species including *Erodium cygnorum*, *Bellida graminea*, *Trachymene ornata*, *Cheilanthes sieberi* subsp. *sieberi* and *Lawrencella rosea*, on red or red-brown clay loam or silty loam with ironstone or BIF surface stones, and occasionally with ironstone or BIF outcropping, on lower to upper slopes
Q	Occasional low open woodland of *Eucalyptus arctata* and/or *Eucalyptus kochii* subsp. *amaryssia*, over tall shrubland to open shrubland of mixed species dominated by *Acacia latior*, *Acacia sibina*, and occasionally *Melaleuca leiocarpa*, *Acacia longispinea* and *Melaleuca hamata*, over occasional mid isolated shrubs of mixed species including *Aluta aspera* subsp. *hesperia* and *Hakea recurva* subsp. *recurva*, over low isolated shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Cryptandra imbricata*, *Prostanthera prostantheroides* and *Enekbatus stowardii*, over low sparse tussock grassland of *Monachather paradoxus*, *Amphipogon caricinus* var. *caricinus* and occasionally *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Bellida graminea*, *Erodium cygnorum*, *Dianella revoluta* var. *divaricata* and *Cheilanthes sieberi* subsp. *sieberi*, on brown or red clay loam, sandy clay loam or silty loam with ironstone surface stones, on lower slopes, plains and flats
R	Occasional low open woodland of *Allocasuarina acutivalvis* subsp. *prinsepiana* and/or *Eucalyptus kochii*, over tall shrubland to open shrubland of mixed species including *Acacia ramulosa* var. *ramulosa*, *Melaleuca hamata*, *Acacia latior*, *Acacia incognita* and *Acacia sibina*, over mid sparse shrubland to isolated clumps of shrubs of mixed species including *Eremophila clarkei*, *Acacia tetragonophylla*, *Eremophila eriocalyx*, *Aluta aspera* subsp. *hesperia* and *Eremophila latrobei* subsp. *latrobei*, over low sparse shrubland to isolated clumps of shrubs of mixed species including *Philotheca deserti* subsp. *deserti*, *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), *Hibbertia arcuata*, and occasionally *Chamelaucium pauciflorum* subsp. Perenjori (B.J. Conn 2181) and *Olearia humilis*, over low sparse tussock grassland of *Amphipogon caricinus* var. *caricinus*, over low sparse forbland to isolated clumps of forbs of mixed species including *Erodium cygnorum*, *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Waitzia acuminata* var. *acuminata* and *Gilruthia osbornei*, on red or red-brown clay loam with ironstone and sometimes quartz surface stones, on plains and simple slopes
S	Tall sparse shrubland to isolated clumps of shrubs of mixed species including *Acacia sibina*, *Acacia ramulosa* var. *ramulosa*, *Acacia tetragonophylla*, *Hakea recurva* subsp. *recurva* and *Acacia burkittii*, over mid shrubland to sparse shrubland of mixed species including *Aluta aspera* subsp. *hesperia*, *Eremophila forrestii* subsp. *forrestii*, *Malleostemon tuberculatus* and *Leucopogon* sp. Clyde Hill (M.A. Burgman 1207), over low sparse shrubland to isolated clumps of shrubs of mixed species including *Pimelea spiculigera* var. *thesioides*, *Mirbelia microphylla*, *Hibbertia arcuata* and *Grevillea pityophylla*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, *Monachather paradoxus* and/or *Austrostipa elegantissima*, over low sparse forbland to isolated clumps of forbs of mixed species including *Chthonocephalus pseudevax*, *Bellida graminea*, *Goodenia rosea*, *Brachyscome ciliocarpa* and *Podolepis lessonii*, on red or brown clay loam, sandy clay loam or silty loam with ironstone or BIF surface stones, on flats, plains and slopes
T	Tall open to sparse shrubland of mixed species including *Acacia sibina*, *Melaleuca hamata*, *Acacia latior*, *Acacia acuminata* and *Hysterobaeckea setifera* subsp. *setifera*, over mid isolated shrubs of mixed species including, *Malleostemon tuberculatus*, *Philotheca glabra*, *Philotheca deserti* subsp. *deserti* and *Allocasuarina acutivalvis* subsp. *prinsepiana*, over low isolated clumps of shrubs of mixed species including *Grevillea granulosa* (P3), *Hibbertia stenophylla*, *Darwinia capitella* and *Malleostemon roseus*, over low isolated clumps of tussock grasses of *Amphipogon caricinus* var. *caricinus*, over low sparse sedgeland of *Ecdeiocolea monostachya*, over low sparse forbland of mixed species including *Cheilanthes sieberi* subsp. *sieberi*, *Bellida graminea*, *Trachymene cyanopetala*, *Borya sphaerocephala* and *Lawrencella davenportii*, on orange, brown or red sandy loam or sandy clay loam, occasionally with ironstone and quartz surface stones, on plains and flats
U	Low woodland of *Eucalyptus clelandiorum* or tall shrubland of *Melaleuca acutifolia*, over low sparse chenopod shrubland of mixed species dominated by *Maireana thesioides*, *Maireana carnosa*, *Sclerolaena diacantha* and *Maireana georgei*, on red-brown silty clay loam, occasionally with calcrete stones, in drainage depressions and on the edges of saline claypans
V	Tall open shrubland to shrubland of *Acacia tetragonophylla*, *Acacia quadrimarginea* and occasionally *Allocasuarina dielsiana*, *Acacia ramulosa* var. *ramulosa* and *Hakea recurva* subsp. *recurva*, over mid open shrubland of mixed species including *Dodonaea inaequifolia*, *Grevillea paradoxa*, *Senna glutinosa* subsp. *chatelainiana* and *Acacia kochii*, occasionally over low isolated shrubs of *Solanum cleistogamum* and *Ptilotus obovatus*, over low open forbland dominated by *Borya sphaerocephala*, on red or brown silty soil with ironstone and granite surface stones, on low to mid slopes
W	Low woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis*, over tall shrubland to open shrubland of mixed species including *Senna charlesiana*, *Acacia ramulosa* var. *ramulosa*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Acacia burkittii*, over low open shrubland of mixed species including *Acacia acanthoclada* subsp. *glaucescens*, *Cryptandra apetala* var. *apetala*, *Eremophila clarkei* and *Acacia ?nigripilosa* subsp. *nigripilosa*, on red-brown silty-sands with ironstone surface stones, on low to mid slopes
X	Occasional low isolated trees of *Eucalyptus arctata*, over tall shrubland dominated by *Senna charlesiana* and occasionally *Acacia stereophylla* var. *stereophylla*, *Grevillea obliquistigma* subsp. *obliquistigma* and *Melaleuca cordata*, over mid to low open to sparse shrubland of *Aluta aspera* subsp. *hesperia*, *Eremophila clarkei*, *Hakea multilineata*, *Hemigenia botryphylla* and *Ptilotus obovatus*, on red-brown silty loam with ironstone and granite surface stones, on low to mid slopes
Y	Low woodland to open woodland of *Eucalyptus ebbanoensis* subsp. *ebbanoensis* and/or *Eucalyptus arctata*, over tall open shrubland of *Acacia ramulosa* var. *ramulosa*, *Acacia stereophylla* var. *stereophylla*, *Acacia acanthoclada* subsp. *glaucescens* and occasionally *Grevillea obliquistigma* subsp. *obliquistigma* and *Senna charlesiana*, over occasional mid sparse shrubland of *Senna glutinosa* subsp. *chatelainiana*, *Hakea recurva* subsp. *recurva*, *Ptilotus schwartzi* and *Chenopodium gaudichaudianum*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima* and *Monachather paradoxus*, on red, brown or orange loam or silty-sands with ironstone surface stones, on plains and lower slopes

APPENDIX J

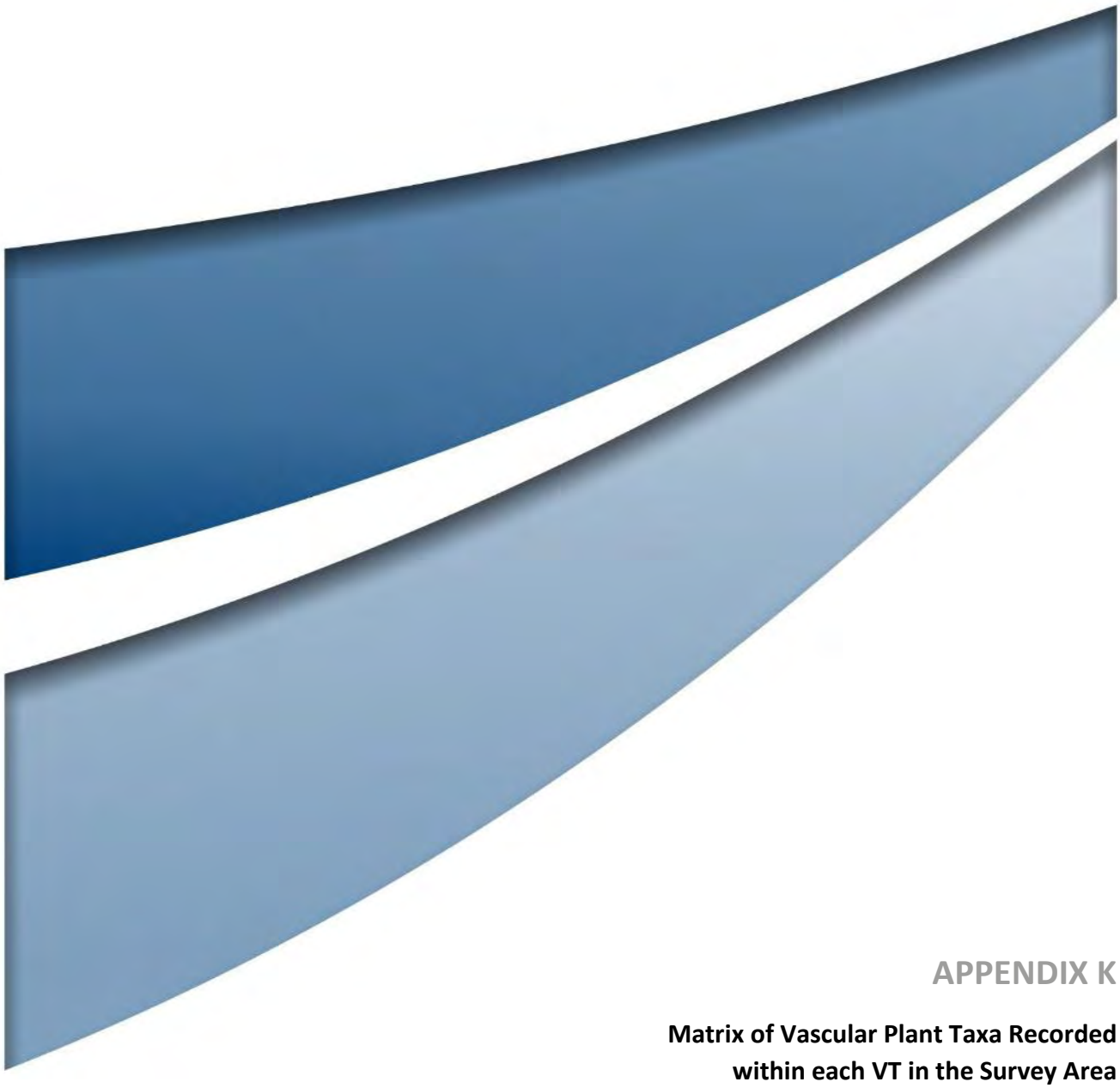
LEGEND: Vegetation Types of the Survey Area

Vegetation Type

Z	Low open woodland of *Eucalyptus kochii* subsp. *plenissima* and occasionally *Eucalyptus loxophleba* subsp. *supralaevis*, over tall open shrubland of *Acacia anthochaera*, *Acacia ramulosa* var. *ramulosa*, *Hakea recurva* subsp. *recurva* and *Bursaria occidentalis*, over low open chenopod shrubland of *Chenopodium gaudichaudianum*, *Maireana brevifolia*, *Maireana georgei* and *Maireana* ?*planifolia*, over low isolated clumps of tussock grasses of *Austrostipa elegantissima*, on red-brown sandy loam, on flats and plains
AA	Occasional low woodland to open woodland of *Eucalyptus loxophleba* subsp. *supralaevis*, over tall closed shrubland to open shrubland of *Allocasuarina campestris* with *Acacia acuminata*, *Acacia tetragonophylla*, *Melaleuca nematophylla* and/or *Hakea scoparia*, over mid open to sparse shrubland of mixed species including *Baeckea* sp. Perenjori (J.W. Green 1516) (P2), *Ricinocarpos velutinus* and *Solanum ellipticum*, on rocky brown clay-silt with heavy quartz, on slopes
HMVT A	Low open chenopod shrubland of mixed species dominated by *Maireana brevifolia* and *Tecticornia pergranulata* subsp. *pergranulata* and occasionally *Enchylaena tomentosa* var. *tomentosa*, over low forbland of **Mesembryanthemum nodiflorum*, on saline red-brown sandy loam on flats
HMVT B	Low open woodland to isolated trees of *Eucalyptus arctata*, over tall shrubland of mixed species including *Acacia sibina*, *Grevillea obliquistigma* subsp. *obliquistigma*, *Melaleuca* ?*atroviridis* and *Acacia prainii*, over mid sparse shrubland of *Acacia dielsii* and *Grevillea extorris*, over low open sedgeland of *Ecdeiocolea monostachya*, on yellow sand on flats
HMVT C	Tall open shrubland of mixed species including *Acacia anthochaera*, *Acacia acuminata*, *Acacia* ?*inceana* subsp. *conformis* and *Melaleuca eleuterostachya*, over low open chenopod shrubland of mixed species including *Enchylaena tomentosa* var. *tomentosa*, *Maireana brevifolia*, *Salsola australis* and *Rhagodia drummondii*, over low isolated clumps of tussock grasses of *Aristida* ?*contorta*, *Austrostipa elegantissima* and *Austrostipa nodosa*, on slightly saline red sand on flats
HMVT D	Mid forest to low open woodland of *Eucalyptus camaldulensis* and/or *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open to sparse shrubland of mixed species including *Hakea preissii*, *Acacia rostellifera* and/or *Acacia acuminata*, over occasional low sparse chenopod shrubland of mixed species including *Maireana brevifolia*, *Salsola australis*, *Enchylaena tomentosa* var. *tomentosa* and **Mesembryanthemum nodiflorum*, over low tussock grassland of mixed species including **Avena barbata*, **Ehrharta calycina*, **Cynodon dactylon* and **Bromus diandrus*, on red-brown sandy clay loam, on drainage lines and flats
HMVT E	Mid to low open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall open shrubland of mixed species including *Acacia acuminata*, *Acacia tetragonophylla*, *Acacia aestivalis* and *Hakea recurva* subsp. *recurva*, over low isolated chenopod shrubs of *Maireana brevifolia*, *Chenopodium gaudichaudianum* and *Rhagodia drummondii*, over low open tussock grassland dominated by **Avena barbata* and **Bromus diandrus*, on red sandy loam or clay loam, on lower to upper slopes
HMVT F	Mid open woodland of *Eucalyptus loxophleba* subsp. *loxophleba*, over tall shrubland to open shrubland of *Acacia colletioides* and *Acacia acuminata*, over low open to sparse chenopod shrubland of mixed species including **Mesembryanthemum nodiflorum*, *Rhagodia drummondii*, *Maireana brevifolia*, *Atriplex semibaccata* and *Salsola australis*, over low open tussock grassland dominated by **Avena barbata*, **Bromus diandrus*, **Lolium* ?*rigidum* and **Hordeum* ?*glaucum*, on red loamy clay on lower slopes
HMVT G	Mid isolated shrubs of *Acacia acuminata*, *Acacia tetragonophylla* and *Hakea recurva* subsp. *recurva*, over mid to low closed tussock grassland and forbland of agricultural weeds, on red-brown loam on gently undulating plains
CP	Occasional low open forbland of *Myriophyllum decussatum* on red clay in claypans. Bare clay that is completely devoid of vegetation when dry. It periodically fills with water, and in the subsequent weeks while water is still present (or when the clay is still waterlogged), *Myriophyllum decussatum* is present.
PL	Planted trees and shrubs, predominately *Eucalyptus* spp., on plains in pasture and road verges
Water	Water in salt lakes and clay pans
CL	Land cleared for roads, infrastructure and agriculture. May contain occasional isolated native or introduced plants.

APPENDIX J

LEGEND: Vegetation Types of the Survey Area



APPENDIX K

Matrix of Vascular Plant Taxa Recorded within each VT in the Survey Area

Vegetation types defined by floristic composition classification (species data from quadrats only)

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Abutilon cryptopetalum				X		X														
***Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)**							X													
Acacia acanthoclada* subsp. *glaucescens					X		X													
Acacia acuaria				X			X	X	X						X			X		
Acacia acuminata	X			X	X	X	X	X							X	X			X	X
Acacia andrewsii							X				X									
Acacia aneura				X			X								X					
Acacia anthochaera				X			X	X												
Acacia assimilis* subsp. *assimilis			X	X	X		X				X				X	X	X	X	X	X
Acacia aulacophylla															X					
Acacia burkittii	X		X	X	X	X	X	X							X	X		X	X	
Acacia caesaneura			X					X							X	X	X			
Acacia colletioides			X	X	X		X													
Acacia coolgardiensis				X	X										X		X	X		
Acacia duriuscula	X																	X	X	X
Acacia effusifolia				X																
Acacia eremaea												X								
Acacia erinacea							X				X									
Acacia exocarpoides				X	X			X							X	X		X		
Acacia inceana* subsp. *conformis				X							X									
Acacia incognita			X	X	X		X	X							X	X		X	X	
Acacia jibberdingensis	X					X														
***Acacia karinae* (P3)**	X														X			X	X	

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Acacia kochii	X	X				X	X													
Acacia latior			X	X				X							X	X	X	X	X	X
Acacia longispinea			X												X		X			X
Acacia obtecta				X			X	X		X	X									
Acacia prainii				X																
Acacia ramulosa* var. *ramulosa	X		X	X	X	X	X	X			X				X	X	X	X	X	X
Acacia sibina				X	X										X	X	X	X	X	X
Acacia stereophylla* var. *stereophylla																		X		
Acacia tetragonophylla	X			X	X	X	X	X			X				X			X	X	
Acacia umbraculiformis	X					X	X									X	X		X	
Acanthocarpus canaliculatus									X			X								
Actinobole uliginosum	X		X	X	X	X	X		X						X				X	X
Allocasuarina acutivalvis* subsp. *prinsepiana	X			X	X	X					X				X	X	X	X		X
Allocasuarina dielsiana						X														
Aluta aspera* subsp. *hesperia					X										X	X	X	X	X	
Alyxia buxifolia				X				X							X		X			
Amphibromus nervosus														X						
Amphipogon caricinus* var. *caricinus			X	X	X	X	X								X	X	X	X	X	X
Amyema gibberula* var. *tatei					X										X					
Angianthus tomentosus							X								X					
Anthosachne scabra	X						X								X					
****Arctotheca calendula***	X		X		X	X	X		X			X		X						
Aristida contorta	X	X			X	X	X		X			X			X	X				
Aristida ?holathera			X																	
Arthropodium curvipes															X			X		

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Arthropodium dyeri	X			X	X		X		X		X				X		X			
Asplenium subglandulosum															X					
Atriplex codonocarpa							X						X							
Atriplex holocarpa														X						
Atriplex semilunaris					X		X			X										
Atriplex stipitata* subsp. *stipitata							X													
Atriplex ?suberecta											X									
Atriplex vesicaria								X				X	X							
Austrostipa elegantissima	X			X	X	X	X	X	X	X	X	X			X		X	X	X	X
Austrostipa eremophila															X					
Austrostipa hemipogon															X					
Austrostipa macalpinei												X								
Austrostipa nitida							X													
Austrostipa scabra* subsp. *scabra			X	X	X	X	X		X						X		X	X	X	
Austrostipa ?tenuifolia										X										
Austrostipa trichophylla	X		X	X			X	X							X					
Austrostipa variabilis					X		X													
Bellida graminea			X	X	X	X	X								X	X	X	X	X	X
Blennospora drummondii	X	X		X	X		X								X	X		X	X	
Blennospora phlegmatocarpa									X											
Borya sphaerocephala	X	X			X	X	X								X				X	X
Brachyscome iberidifolia					X				X			X		X						
Brachyscome perpusilla	X		X	X		X						X			X					
****Brassica tournefortii***				X			X					X								
Bromus arenarius												X	X		X					

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Bromus diandrus**						X									X					
***Bromus rubens**	X						X		X			X		X						
Brunonia australis	X			X											X	X	X			
Bulbine semibarbata		X			X	X	X												X	X
Bursaria occidentalis				X			X													
Caesia micrantha																			X	
***Caesia* sp. Koolanooka Hills (R. Meissner & Y. Caruso 78) (P1)**				X	X	X	X	X								X	X	X	X	X
***Caesia* sp. Wongan (K.F. Keneally 8820)**	X						X								X	X	X	X	X	
Caladenia hirta* subsp. *rosea	X		X		X										X	X		X	X	X
Caladenia petrensis				X	X													X		
Caladenia roei																X			X	
Calandrinia baccata			X	X			X		X						X					
Calandrinia calyptrata							X								X					
Calandrinia disperma				X		X			X											
Calandrinia eremaea	X	X	X	X	X	X	X		X		X	X	X		X		X			
***Calandrinia eremaea* s. lat. (non-papillate variant)**				X																
Calandrinia* aff. *eremaea				X			X													
Calandrinia flava							X													
Calandrinia granulifera	X	X	X	X	X	X	X		X			X	X	X						
Calandrinia ?polyandra	X																X		X	
Calandrinia primuliflora						X														
Calandrinia ptychosperma													X							
Calandrinia pumila				X	X	X											X			
Calandrinia remota			X																	
Calandrinia translucens	X		X	X			X													

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Calandrinia* sp. Bungalbin (G.J. Keighery & N. Gibson 1656)**	X		X	X	X	X	X		X						X	X	X	X	X	X
***Calandrinia* sp. Needilup (K.R. Newbey 4892)**														X						
***Calandrinia* sp. Truncate capsules (A. Markey & S. Dillon 3474)**	X		X		X	X									X					
Callitris columellaris			X	X											X		X			
Calocephalus multiflorus				X			X								X			X		
Calothamnus gilesii															X					
Calotis hispidula	X	X	X	X	X	X	X	X			X				X		X	X	X	
Calotis multicaulis	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X		
***Calotis* sp. Perrinvale Station (R.J. Cranfield 7096)**															X					
Calycopeplus paucifolius	X	X			X										X	X		X		
***Calytrix* sp. Paynes Find (F. & J. Hort 1188)**				X																
****Carrichtera annua***							X													
Cassytha nodiflora															X			X		X
****Centaurea melitensis***							X													
Centrolepis aristida															X					
Centrolepis cephaloformis* subsp. *cephaloformis	X				X	X			X			X	X	X						
Centrolepis pilosa												X								
Centrolepis polygyna												X		X						
***Centrolepis* sp. Kalannie (B.J. Lepschi et al. BJL 3517)**	X																			
Cephalipterum drummondii	X		X	X	X	X	X	X		X	X				X		X	X	X	
Ceratogyne obionoides	X														X	X		X		
Chamaexeros fimbriata				X																
Chamaexeros macranthera				X				X									X	X	X	

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Chamelaucium pauciflorum* subsp. Perenjori (B.J. Conn 2181)**																		X		
Cheilanthes adiantoides	X		X	X	X	X	X								X	X	X	X	X	
Cheilanthes brownii															X					
Cheilanthes sieberi* subsp. *sieberi	X	X		X	X	X	X	X			X				X	X	X	X	X	X
Cheiranthera simplicifolia				X				X							X	X		X		
Chenopodium gaudichaudianum			X		X	X														
Chrysitrix distigmatosa																				X
Chthonocephalus pseudevax	X	X	X	X	X	X	X		X			X			X	X	X	X	X	X
****Cleretum papulosum* subsp. *papulosum***	X			X	X	X	X								X					
Comesperma integerrimum	X		X	X	X	X	X	X							X	X	X	X	X	X
Comesperma volubile															X					
Convolvulus* ?*remotus										X										
***Corchorus* sp.**										X										
Cotula cotuloides												X	X	X						
Crassula closiana	X			X	X		X								X	X		X		
Crassula colorata* var. *colorata	X		X	X			X								X	X	X		X	
Crassula colorata* var. *acuminata	X	X		X	X	X	X	X	X		X	X	X		X	X		X		X
Crassula exserta		X					X					X		X						
Crassula extrorsa		X													X					
Crassula tetramera							X								X					
Cryptandra apetala* var. *apetala																		X		
Cryptandra imbricata			X	X	X		X										X	X	X	
****Cuscuta epithymum***	X		X	X											X	X				
****Cuscuta planiflora***	X	X			X	X	X		X			X				X	X	X	X	
Cyanicula amplexans	X		X												X	X	X	X	X	X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Darwinia capitellata																	X			X
Daucus glochidiatus			X	X	X		X		X		X				X					
Daviesia benthamii				X				X								X				
Daviesia hakeoides* subsp. *subnuda	X														X		X		X	
Dendrophyllanthus erwinii		X				X									X					
Dianella revoluta* var. *divaricata	X			X	X	X		X	X						X	X	X	X		X
Didymanthus roei												X		X						
Dioscorea hastifolia	X																			
Dithyrostegia amplexicaulis													X	X						
Dodonaea inaequifolia				X	X	X	X								X					
Dodonaea petiolaris															X					
Dodonaea viscosa* subsp. *angustissima				X				X												
Drosera bulbosa* subsp. *bulbosa	X	X			X	X									X		X	X	X	
Drosera eremaea	X				X	X											X		X	X
Drosera glanduligera	X				X	X			X			X				X	X		X	X
Drosera macrantha	X		X	X		X									X	X	X	X	X	
Drosera major	X	X			X	X	X												X	
***Drosera* sp. Branched styles (S.C. Coffey 193)**	X			X	X	X	X								X	X		X	X	X
***Drummondita fulva* (P3)**															X	X		X		
Drummondita microphylla																	X			
Duma florulenta										X										
Duperreya sericea	X					X														
Dysphania glandulosa	X				X												X	X		
Dysphania melanocarpa		X																		
Ecdeiocolea monostachya				X															X	X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Echium plantagineum**	X	X				X				X										
***Ehrharta longiflora**			X			X														
Enchylaena lanata				X		X	X	X				X			X			X		
Enchylaena tomentosa* var. *tomentosa				X	X		X					X						X		
Enekbatus stowardii																	X			X
***Epitriche demissus* (P2)**														X						
Eragrostis dielsii									X				X	X						
Eragrostis falcata												X								
Eremophila clarkei				X	X	X	X								X		X	X	X	X
Eremophila compacta* subsp. *compacta	X														X				X	
Eremophila eriocalyx	X		X	X	X													X	X	X
Eremophila forrestii* subsp. *forrestii				X	X	X	X								X		X		X	
Eremophila georgei																		X		
Eremophila glabra				X						X										
Eremophila granitica				X				X												
Eremophila latrobei* subsp. *latrobei				X	X						X				X	X	X	X		
Eremophila oldfieldii* subsp. *oldfieldii					X	X	X													
Eremophila oppositifolia* subsp. *angustifolia				X			X				X									
Eremophila pantonii				X			X				X									
Eremophila serrulata						X														
Eriachne pulchella* subsp. *pulchella	X	X				X	X													
Ericksonella saccharata																				X
Eriochiton sclerolaenoides																	X			
***Erodium cicutarium**							X			X										
Erodium cygnorum	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X	X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Erymophyllum glossanthus					X		X								X					
Erymophyllum ramosum* subsp. *ramosum							X													
Erymophyllum tenellum							X													
Eucalyptus arctata															X		X	X		
Eucalyptus clelandiorum					X			X			X									
Eucalyptus ewartiana																		X		
Eucalyptus horistes				X					X											
Eucalyptus kochii* subsp. *plenissima			X	X			X									X	X	X		
Eucalyptus kochii* subsp. *amaryssia				X											X		X	X		
Eucalyptus kochii* subsp. *borealis				X			X											X		
Eucalyptus loxophleba* subsp. *supralaevis			X	X	X		X	X	X		X				X					
Eucalyptus salubris							X	X			X									
Euphorbia drummondii										X	X									
Euphorbia porcata		X				X	X													
Euphorbia tannensis* subsp. *eremophila	X																			
Exocarpos aphyllus				X			X	X		X	X									
Feldstonia nitens					X															
****Ficinia marginata***	X				X		X					X								
***Fitzwillia axilliflora* (P2)**														X						
Frankenia pauciflora													X	X						
Frankenia setosa												X								
****Galium aparine***						X									X					
Gastrolobium laytonii															X					
****Gazania linearis***		X			X	X														
Gilberta tenuifolia	X			X	X	X									X	X	X	X	X	X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Gilruthia osbornei	X		X	X	X	X	X	X			X				X	X	X	X	X	X
Glossostigma diandrum														X						
Glycine canescens						X														
Gnephosis angianthoides									X			X		X						
Gnephosis brevifolia	X		X	X	X		X					X	X		X	X	X	X	X	X
Gnephosis macrocephala									X			X								
***Gnephosis setifera* (P1)**													X							
Gnephosis tenuissima	X				X		X		X								X		X	X
Gnephosis trifida													X							
Gomphrena verecunda													X							
Gonocarpus nodulosus	X					X			X						X	X	X	X	X	X
Goodenia berardiana	X	X	X	X	X		X	X	X		X				X	X	X	X		X
Goodenia capillosa	X		X	X											X	X	X	X	X	X
Goodenia cycnopotamica	X	X		X	X	X	X				X				X	X		X	X	X
Goodenia havilandii	X	X				X	X													
Goodenia krauseana	X																			
Goodenia mimuloides	X																			
Goodenia occidentalis	X								X						X	X	X	X		
Goodenia pusilliflora	X		X		X		X								X	X	X		X	
Goodenia rosea	X	X	X	X	X	X	X		X						X	X	X	X	X	X
***Goodenia* sp. Midwest (K.A. Shepherd & C.F. Wilkins KS 1609)**				X	X		X											X		
****Gorteria personata***			X																	
Grevillea extorris	X					X									X				X	
***Grevillea globosa* (P3)**																	X			
***Grevillea granulosa* (P3)**																		X	X	X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Grevillea hakeoides* subsp. *stenophylla				X	X															
Grevillea juncifolia* subsp. *temulenta																				X
Grevillea levis	X					X														
Grevillea obliquistigma* subsp. *obliquistigma	X														X	X	X	X	X	
Grevillea paradoxa															X	X		X		
Grevillea pityophylla	X		X		X	X											X		X	
Grevillea sarissa* subsp. *sarissa							X													
***Grevillea scabrida* (P3)**						X														
***Grevillea subtiliflora* (P3)**						X														
***Gunniopsis divisa* (P3)**							X					X		X						
Gunniopsis quadrifida									X			X								
Gunniopsis rubra		X	X	X	X		X				X							X		
Gunniopsis septifraga												X		X						
Hakea invaginata																X	X		X	X
Hakea minyma			X														X	X		
Hakea preissii				X			X								X					
Hakea recurva* subsp. *arida				X	X	X	X													
Hakea recurva* subsp. *recurva	X		X	X	X	X	X	X							X	X	X	X	X	
Haloragis odontocarpa																	X		X	
Haloragis odontocarpa* forma *pterocarpa	X				X										X			X		
Haloragis trigonocarpa	X						X													
Helipterum craspedioides	X		X	X	X	X									X	X	X	X	X	
Hemigenia benthamii															X	X	X			
Hemigenia botryphylla			X	X	X												X	X		X
***Hemigenia* sp. aff. *botryphylla* (Potentially undescribed)**	X																			

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Hemigenia* sp. Yalgoo (A.M. Ashby 2624)**	X																	X	X	X
Hemigenia yalgensis	X																			
Hibbertia arcuata				X							X				X	X	X	X	X	
***Hibbertia cockertoniana* (P3)**																	X			
Hibbertia glomerosa	X														X					
Hibbertia stenophylla			X														X	X		X
Homalocalyx thryptomenoides																	X			
****Hordeum leporinum***												X		X						
Hyalochlamys globifera		X										X	X							X
Hyalosperma demissum	X	X		X	X		X								X		X		X	X
Hyalosperma glutinosum	X					X									X				X	
Hyalosperma glutinosum* subsp. *glutinosum					X		X		X											
Hyalosperma glutinosum* subsp. *venustum	X			X	X		X					X			X			X		
Hydrocotyle callicarpa															X					
Hydrocotyle glochidiata														X						
Hydrocotyle intertexta	X			X	X	X	X	X			X				X		X	X		
Hydrocotyle rugulosa	X														X					
****Hypochaeris glabra***	X		X			X	X		X			X		X	X					
Hysterobaeckea setifera* subsp. *setifera																X	X			X
Isoetopsis graminifolia	X	X			X	X	X								X				X	
Isolepis congrua	X				X	X	X					X		X						
Isotoma scapigera													X							
****Juncus bufonius***												X	X	X						
Lachnagrostis plebeia							X								X					
****Lamarckia aurea***												X			X					

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Lawrencella davenportii	X			X	X	X	X	X	X			X			X	X	X	X		X
Lawrencella rosea	X		X	X	X										X	X	X	X	X	X
Lawrencia squamata												X	X							
Lemooria burkittii				X	X	X	X								X					
****Leontodon rhagadioloides***	X								X											
Lepidium oxytrichum							X													
Lepidosperma costale									X											
***Lepidosperma* sp. Blue Hills (A. Markey & S. Dillon 3468) (P1)**						X									X	X			X	
***Leucopogon* sp. Clyde Hill (M.A. Burgman 1207)**															X	X	X	X	X	X
Levenhookia leptantha	X						X		X											
****Limonium lobatum***	X				X		X					X		X						
Lithotoma petraea															X					
Lobelia cleistogamoides	X																			
Lobelia rhytidosperma	X														X				X	
Lobelia winfridae	X			X																
****Lolium perenne***	X				X		X		X			X		X						
Lomandra effusa								X	X											
Lomandra marginata					X														X	
Lysiana casuarinae																		X		
****Lysimachia arvensis***	X														X					
Maireana amoena												X	X							
Maireana atkinsiana													X							
Maireana brevifolia										X										
Maireana carnosa			X	X	X		X	X	X	X		X	X					X		
Maireana convexa							X													

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Maireana diffusa				X																
Maireana eriosphaera												X	X	X						
Maireana georgei				X			X	X			X									
Maireana glomerifolia													X							
Maireana marginata					X		X				X				X					
Maireana planifolia	X			X	X	X	X	X							X					
Maireana planifolia* x *villosa				X																
Maireana thesioides				X	X		X				X									
Maireana tomentosa* subsp. *tomentosa				X	X		X	X				X	X				X			
Maireana trichoptera				X			X													
Maireana villosa				X			X				X				X					
Malleostemon roseus																				X
Malleostemon tuberculatus	X																X		X	X
****Medicago minima***	X		X	X	X	X	X		X											
****Medicago polymorpha***			X	X																
Melaleuca acutifolia												X								
Melaleuca cordata																				X
Melaleuca eleuterostachya			X		X							X						X		
Melaleuca fulgens* subsp. *steedmanii	X																			
Melaleuca hamata	X		X	X	X	X		X			X					X	X	X	X	X
Melaleuca leiocarpa				X				X							X		X	X		
Melaleuca nematophylla															X	X	X	X		
Melaleuca radula	X														X					
Melaleuca stereophloia	X				X				X			X								
Menkea australis	X		X	X	X	X	X	X			X							X	X	

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Menkea draboides **(P3)**					X															
****Mesembryanthemum nodiflorum***	X	X	X		X		X		X			X	X	X						
Microcorys **sp. Mt Gibson (S. Patrick 2098)**																		X		
Micromyrtus trudgenii **(P3)**															X					
Millotia dimorpha **(P1)**															X					
Millotia myosotidifolia	X			X		X	X								X					
Mirbelia microphylla	X				X	X									X			X	X	
Mirbelia ramulosa			X	X																
Mirbelia **sp. Bursarioides (T.R. Lally 760)**				X		X	X								X	X		X		
Monachather paradoxus	X		X	X	X	X	X	X	X						X	X	X	X	X	X
****Monoculus monstrosus***	X		X				X		X			X	X							
Myriocephalus gueriniae	X	X		X	X	X	X				X				X	X	X	X	X	X
Myriocephalus pygmaeus	X				X		X													
Myriocephalus rudallii															X					
Nicotiana karara	X			X	X	X	X		X											
Nicotiana rosulata **subsp.** ***rosulata***							X								X	X				
Nicotiana rotundifolia	X			X																
Nicotiana salina **(P1)**												X								
Olearia humilis	X			X			X	X							X		X	X		
Olearia muelleri											X									
Olearia pimeleoides				X			X	X			X						X	X		
Olearia **sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)**							X	X												
Omphalolappula concava							X													
Ophioglossum lusitanicum		X			X	X	X													
Panaetia lessonii	X	X	X	X	X	X	X								X	X	X	X	X	

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Parapholis incurva												X		X						
Parentucellia latifolia							X													
Parietaria cardiostegia			X	X	X	X	X								X			X		
Paspalidium clementii						X														
Pauridia glabella	X				X															
Pauridia glabella* var. *glabella					X														X	
Pentameris airoides* subsp. *airoides	X			X	X	X	X		X			X			X	X				X
Persoonia hexagona				X							X				X		X	X	X	
Persoonia manotricha						X											X		X	
***Persoonia pentasticha* (P3)**			X	X				X										X		
***Petrophile pauciflora* (P3)**															X					
Petrorhagia dubia			X						X											
Pheladenia deformis	X				X	X									X	X		X	X	
Philotheca brucei* subsp. *brucei				X											X	X	X	X	X	
Philotheca deserti* subsp. *deserti				X											X	X	X	X	X	X
Philotheca glabra																	X	X		X
Philotheca sericea				X											X	X		X		
Philotheca tomentella																	X			
Phlegmatospermum drummondii					X			X			X									
Phyllangium sulcatum	X			X		X	X								X					
Pimelea avonensis															X					
Pimelea forrestiana															X					
Pimelea microcephala* subsp. *microcephala			X	X	X	X	X											X		
Pimelea spiculigera* var. *thesioides	X			X											X				X	
Plantago debilis			X	X	X	X	X	X	X						X	X	X	X	X	

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Plantago ?drummondii															X					
Platysace trachymenioides																				X
Podolepis aristata	X		X	X	X	X	X		X						X	X	X	X	X	X
Podotheca gnaphalioides							X		X						X					
***Podotheca uniseta* (P3)**												X								
Pogonolepis muelleriana	X	X			X	X	X					X	X	X	X					X
Pogonolepis stricta							X					X		X	X					
Poranthera leiosperma																		X		
Poranthera microphylla															X					
Prostanthera althoferi* subsp. *althoferi															X			X	X	
Prostanthera campbellii																		X		
Prostanthera magnifica				X											X					
Prostanthera patens					X										X			X		
Prostanthera prostantheroides																	X			
Pterostylis setulosa	X			X	X										X				X	
Ptilotus divaricatus				X			X								X					
Ptilotus drummondii* var. *drummondii				X											X		X			
Ptilotus eremita		X																		
Ptilotus exaltatus			X	X	X		X	X			X							X		
Ptilotus gaudichaudii	X		X	X	X	X	X	X	X		X	X			X	X		X	X	
Ptilotus halophilus												X								
Ptilotus helipteroides															X					
Ptilotus humilis									X			X								
Ptilotus obovatus	X	X	X	X	X	X	X	X		X	X				X			X	X	
Ptilotus polystachyus	X				X		X		X			X			X			X		

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Ptilotus schwartzii	X			X		X														
Ranunculus sessiliflorus* var. *sessiliflorus							X													
Rhagodia drummondii			X	X	X		X	X	X		X	X			X			X		
Rhagodia preissii								X												
Rhodanthe battii						X	X								X					
Rhodanthe chlorocephala* subsp. *rosea							X													
Rhodanthe chlorocephala* subsp. *splendida	X	X	X	X	X	X	X		X			X	X	X	X	X	X	X	X	X
Rhodanthe citrina					X				X							X				
***Rhodanthe collina* (P3)**	X														X	X				
Rhodanthe laevis	X			X	X	X	X								X	X	X	X	X	X
Rhodanthe manglesii				X	X		X								X	X		X	X	
Rhodanthe maryonii	X			X	X	X	X								X			X		
Rhodanthe oppositifolia* subsp. *oppositifolia						X														
Rhodanthe polycephala			X												X				X	
Rhodanthe pygmaea						X	X													
Rhodanthe spicata	X				X		X													
Rhodanthe stricta							X													
Roebuckiella cheilocarpa	X						X	X				X	X		X		X			X
Roebuckiella ciliocarpa			X	X	X										X	X	X	X	X	
***Roebuckiella halophila* (P3)**	X				X		X					X			X	X		X		
Roepera apiculata								X												
Roepera aurantiaca* subsp. *aurantiaca							X	X		X										
Roepera eremaea				X	X		X													
Roepera fruticulosa						X														
Roepera iodocarpa				X																

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Roepera lobulata					X		X	X			X									
Roepera ovata				X			X													
Roepera similis							X													
****Rostraria pumila***	X		X				X					X	X		X					
****Rumex hypogaeus***			X																	
****Rumex vesicarius***						X	X													X
Rytidosperma caespitosum				X	X	X	X			X										
Rytidosperma setaceum					X															
***Rytidosperma* sp. Goomalling (A.G. Gunness et al. OAKP 10/63)**															X					
Salsola australis	X						X	X		X										
Santalum acuminatum				X	X			X												
Santalum spicatum				X			X								X					
Sarcozona praecox												X	X							
Scaevola spinescens	X			X	X		X	X			X	X								X
Schoenia cassiniana	X		X	X	X	X	X		X						X	X	X	X	X	
Schoenus humilis														X						
Schoenus nanus	X				X		X		X						X	X		X	X	
Schoenus sculptus														X						
Schoenus variicellae	X				X	X													X	
Scholtzia uniovulata									X											
Sclerolaena alata	X					X														
Sclerolaena densiflora			X				X													
Sclerolaena diacantha			X	X	X		X	X	X	X	X	X								
Sclerolaena drummondii					X		X													
Sclerolaena eurotioides	X				X	X	X				X									

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Sclerolaena fusiformis				X			X	X		X	X									
Sclerolaena gardneri				X			X													
Senecio glossanthus				X	X		X					X	X							
Senecio lacustrinus												X	X	X						
Senecio pinnatifolius			X				X								X					
Senna artemisioides* subsp. *filifolia				X			X				X							X	X	
Senna artemisioides* subsp. x *petiolaris				X																
Senna charlesiana				X	X	X	X	X							X			X	X	
Senna glutinosa* subsp. *chatelainiana					X	X														
Senna stowardii											X									
***Senna* sp. Austin (A. Strid 20210)**				X			X								X					
***Sida* sp. dark green fruits (S. van Leeuwen 2260)**	X	X	X	X	X	X	X	X							X		X	X	X	
***Sida* sp. Golden calyces glabrous (H.N. Foote 32)**															X					
Siemssenia capillaris		X	X	X	X	X	X	X	X			X	X	X	X					
****Silene nocturna***							X													
****Sisymbrium erysimoides***			X		X	X	X													
****Sisymbrium orientale***							X													
****Sisymbrium runcinatum***							X													
Solanum cleistogamum				X	X											X				
Solanum lasiophyllum	X	X	X	X	X	X	X				X				X		X	X	X	
Solanum nummularium	X			X	X		X	X	X	X		X								
****Sonchus oleraceus***	X		X	X	X	X	X	X	X			X	X	X					X	
Sondottia connata							X						X							
****Spergula pentandra***		X					X					X	X							
Spergularia marina		X												X						

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
***Spergularia rubra**	X													X						
Stachystemon intricatus						X											X		X	
Stenopetalum anfractum	X		X	X			X								X			X		
Stenopetalum filifolium	X	X	X	X			X		X						X			X		
Stenopetalum pedicellare							X													
Stenopetalum salicola												X	X							
Stenopetalum sphaerocarpum					X	X									X					
Stylidium perpusillum															X					
Stylidium warriedarense															X	X	X	X		X
Stylobasium australe												X								
***Styphelia serratifolia* s. lat.**	X										X				X				X	
Tecticornia disarticulata										X			X							
***Tecticornia fimbriata* (P3)**												X		X						
Tecticornia indica* subsp. *bidens													X	X						
Tecticornia loriae													X							
Tecticornia peltata													X	X						
***Tecticornia* sp. 'Karara 1' (Potentially undescribed)**														X						
***Tecticornia* sp. 'Karara 2' (Potentially undescribed)**														X						
***Tecticornia* sp. 'Karara 3'**													X							
***Tecticornia* sp. 'Karara 4'**													X							
Tecticornia syncarpa														X						
Tetragonia diptera			X	X			X		X			X								
Tetragonia eremaea					X															
Thryptomene costata	X					X									X					
Thysanotus manglesianus	X		X	X	X		X								X	X	X	X		X

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Thysanotus pyramidalis	X				X	X	X								X	X	X		X	
Thysanotus speckii				X			X				X					X				
Trachymene ceratocarpa	X								X										X	
Trachymene cyanopetala	X			X	X	X	X		X		X				X	X	X	X	X	X
Trachymene ornata	X		X	X	X	X	X								X	X	X	X	X	
Trachymene pilosa				X													X			
Trichanthodium skirrophorum				X																
Tricoryne soullierae **(P3)**									X											X
Tricoryne ?tenella																			X	
Tricoryne tuberosa																		X	X	X
Triglochin isingiana	X	X				X	X		X			X	X							
Triglochin longicarpa												X	X	X						
Triglochin mucronata												X	X	X						
Triglochin nana													X							
Triglochin **sp. A Flora of Australia (G.J. Keighery 2477)**	X																			
Triodia danthonioides									X											
Tripogonella loliiformis		X				X														
****Ursinia anthemoides*** **subsp.** ***anthemoides***						X														
Vincetoxicum lineare				X	X	X	X								X		X		X	
****Vulpia myuros*** **forma** ***myuros***	X				X		X		X			X		X						
Wahlenbergia gracilenta					X		X								X					
Wahlenbergia preissii	X				X				X						X			X		
Waitzia acuminata **var.** ***acuminata***	X			X	X		X	X	X						X	X	X	X	X	X
Waitzia nitida	X				X		X									X				
Walshia kendallii	X					X														

Taxon	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Wurmbea densiflora	X	X			X	X									X				X	
Wurmbea dilatata					X															
Wurmbea flavanthera	X				X													X		
Wurmbea tenella																X	X		X	
Xanthosia kochii											X				X	X				
Xerolirion divaricata											X									

Vegetation types defined by structural composition classification (species data from all sample site types)

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
Acacia acanthoclada* subsp. *glaucescens			X	X	X				X						
Acacia acuminata							X		X	X	X	X	X	X	
Acacia aestivalis												X			
Acacia andrewsii						X									
Acacia anthochaera					X	X			X	X					
Acacia assimilis* subsp. *assimilis			X	X											
Acacia burkittii			X												
Acacia colletioides													X		
Acacia daphnifolia												X			
Acacia dielsii									X						
Acacia ericksoniae											X				
Acacia ?inceana* subsp. *conformis										X					
Acacia kochii		X	X												
Acacia longispinea					X										
Acacia ?nigripilosa* subsp. *nigripilosa			X												
Acacia prainii			X						X						
Acacia quadrimarginea		X													
Acacia ramulosa* var. *ramulosa		X	X		X	X									
Acacia restiacea							X								
Acacia rostellifera										X	X				
***Acacia saligna* subsp. Wheatbelt (B.R. Maslin 8602)**											X				
Acacia sibina									X						
Acacia stereophylla* var. *stereophylla			X	X	X										

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
Acacia tetragonophylla		X			X		X				X	X			
****Aira ?caryophyllea***										X					
Allocasuarina campestris							X				X				
Allocasuarina dielsiana		X													
Allocasuarina huegeliana		X		X											
Aluta aspera* subsp. *hesperia			X	X											
Alyogyne ?pinoniana									X						
Alyxia buxifolia		X													
Amphipogon caricinus* var. *caricinus			X	X											
Amyema fitzgeraldii												X			
****Arctotheca calendula***											X				
Aristida contorta		X								X					
Arthropodium dyeri														X	
Atriplex ?bunburyana						X		X							
Atriplex ?lindleyi* subsp. *inflata													X		
Atriplex semibaccata													X		
Atriplex semilunaris													X		
Atriplex vesicaria											X				
***Atriplex* sp.**									X						
Austrostipa elegantissima		X		X	X	X	X		X	X	X	X	X		
Austrostipa nodosa										X					
****Avena barbata***											X	X	X		
****Avena ?sativa***													X		
***Baeckea* sp. Perenjori (J.W. Green 1516) (P2)**							X								
Borya sphaerocephala		X													

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
**Briza maxima*											X				
**Bromus diandrus*											X	X	X		
Burchardia congesta														X	
Bursaria occidentalis						X									
Calotis hispidula														X	
Calycopeplus paucifolius		X													
**Carthamus lanatus*											X				
Cephalipterum drummondii											X				
Cheilanthes ?sieberi subsp. *sieberi*							X								
Cheiranthera simplicifolia									X						
Chenopodium gaudichaudianum		X			X	X						X	X		
Chrysitrix distigmatosa									X						
Comesperma integerrimum		X		X										X	
Cryptandra apetala var. *apetala*			X												
**Cynodon dactylon*											X				
Cyperus gymnocaulos											X				
Dampiera lavandulacea									X						
Darwinia capitellata									X						
Daviesia benthamii subsp. *benthamii*					X				X						
Dianella revoluta var. *divaricata*					X	X			X						
Dioscorea hastifolia							X								
Dodonaea inaequifolia		X	X											X	
Dodonaea viscosa subsp. *angustissima*	X														
Drosera glanduligera														X	
Ecdeiocolea monostachya									X						

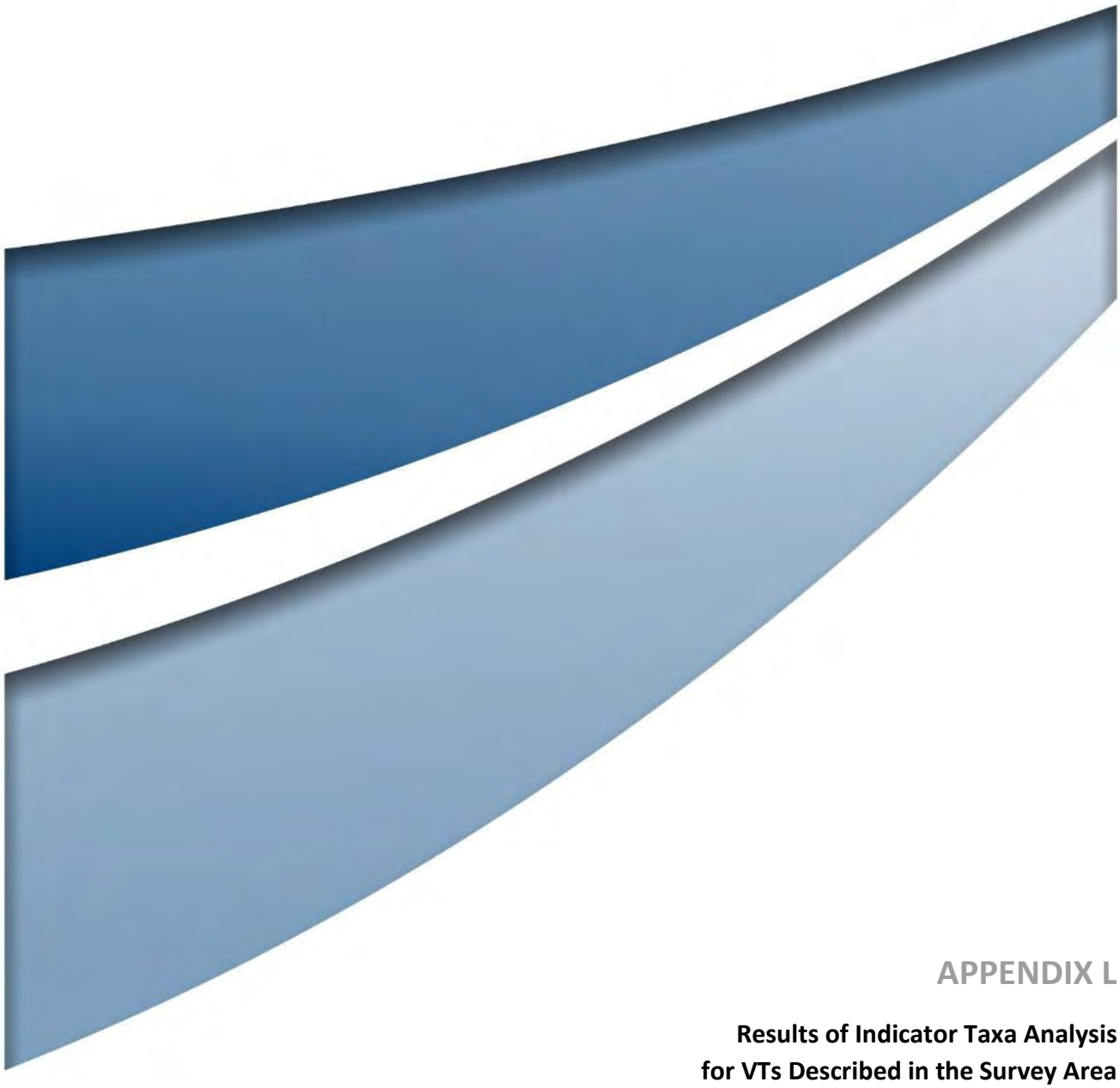
Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
***Echium plantagineum**											X	X	X		
***Ehrharta calycina**											X			X	
***Ehrharta longiflora**														X	
?*Enchylaena lanata*										X	X	X	X		
Enchylaena tomentosa* var. *tomentosa					X	X		X		X	X	X		X	
Eremophila clarkei		X	X	X										X	
Eremophila ?decipiens* subsp. *decipiens								X							
Eremophila pantonii	X														
Erodium cygnorum														X	
Eucalyptus arctata				X	X				X						
Eucalyptus camaldulensis															X
Eucalyptus camaldulensis* subsp. *arida											X				
Eucalyptus camaldulensis* subsp. *obtusa											X				
Eucalyptus clelandiorum	X														
Eucalyptus ebbanoensis* subsp. *ebbanoensis			X		X	X									
Eucalyptus gomphocephala															X
Eucalyptus kochii* subsp. *plenissima						X									
Eucalyptus loxophleba* subsp. *loxophleba											X	X	X		X
Eucalyptus loxophleba* subsp. *supralaevis						X	X				X				
Eucalyptus ?redunca* subsp. *pluricaulis															X
Eucalyptus rigidula															X
Eucalyptus ?sargentii															X
Eucalyptus todtiana															X
***Eucalyptus* sp.**															X
Gahnia drummondii									X						

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
Glischrocaryon ?flavescens									X						
Goodenia rosea				X											
Grevillea extorris									X						
Grevillea ?levis									X						
Grevillea obliquistigma* subsp. *obliquistigma			X	X	X				X						
Grevillea paradoxa		X		X											
Hakea minyma									X						
Hakea multilineata				X											
Hakea preissii											X	X			
Hakea recurva* subsp. *recurva		X			X	X					X	X		X	
Hakea scoparia							X								
Halgania ?cyanea* var. *cyanea				X											
Hemigenia botryphylla				X					X						
****Hordeum ?glaucum***											X		X		
****Hordeum leporinum***											X				
Hyalosperma glutinosum* subsp. *glutinosum														X	
****Hypochaeris glabra***					X										
Jacksonia ?acicularis									X						
Juncus radula											X				
****Lamarckia aurea***											X				
***Lawrencia* sp.**	X														
Lepidosperma costale											X				
***Lepidosperma* sp.**		X													
****Lolium ?rigidum***													X		
****Lupinus cosentinii***											X	X			

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
***Lysimachia arvensis**											X				
Maireana brevifolia						X		X	X	X	X	X	X		
Maireana carnosa	X														
Maireana georgei						X									
Maireana ?planifolia					X	X									
Maireana thesioides	X														
Maireana tomentosa* subsp. *tomentosa											X				
Melaleuca ?atroviridis									X						
Melaleuca concreta											X			X	
Melaleuca cordata				X	X										
Melaleuca eleuterostachya	X						X		X	X					
Melaleuca hamata		X													
Melaleuca marginata											X				
Melaleuca nematophylla							X								
Mesembryanthemum nodiflorum						X		X			X		X		
Mirbelia microphylla		X		X											
Monachather paradoxus			X		X		X		X						
***Olearia* sp. Kennedy Range (G. Byrne 66)**											X	X			
Paspalidium basicladum								X							
****Pentameris airoides* subsp. *airoides***		X										X	X		
****Phalaris ?minor***													X		
Philotheca brucei* subsp. *brucei		X													
?Pigea floribunda							X								
Pimelea microcephala* subsp. *microcephala					X							X			
***Pityrodia viscida* (P4)**									X						

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
Plantago coronopus* subsp. *commutata													X		
Platysace trachymenioides									X						
Polypogon monspeliensis											X				
Ptilotus exaltatus	X														
Ptilotus obovatus		X		X		X	X								
Ptilotus schwartzii					X										
Raphanus raphanistrum											X				
Rhagodia drummondii					X				X	X		X	X	X	
Ricinocarpos velutinus				X	X		X								
Rytidosperma caespitosum											X				
Rytidosperma setaceum												X			
Salsola australis								X		X	X	X	X		
Scholtzia uniovulata														X	
Sclerolaena diacantha	X										X				
Senna artemisioides* subsp. *filifolia										X					
Senna charlesiana		X	X	X	X	X									
Senna glutinosa* subsp. *chatelainiana			X		X	X									
Seringia velutina									X						
***Sida* ?sp. dark green fruits (S. van Leeuwen 2260)**								X							
Sisymbrium* ?*orientale											X		X		
Solanum ellipticum		X					X								
Solanum lasiophyllum		X			X				X						
Solanum nummularium							X								
Sonchus oleraceus											X		X		
***Styphelia serratifolia* s. lat.**		X													

Taxon	U	V	W	X	Y	Z	AA	HMVT A	HMVT B	HMVT C	HMVT D	HMVT E	HMVT F	HMVT G	PL
Tecticornia pergranulata* subsp. *pergranulata								X							
Thryptomene hyporhytis														X	
Thysanotus manglesianus														X	
Thysanotus patersonii					X										
***Thysanotus* sp.**				X											
Trachymene cyanopetala														X	
Typha orientalis											X				
Waitzia acuminata				X											



APPENDIX L

Results of Indicator Taxa Analysis for VTs Described in the Survey Area

Note: INDVAL values are only shown for taxa that are significant at $p < 0.05$, and for VTs that are sampled by more than one quadrat.

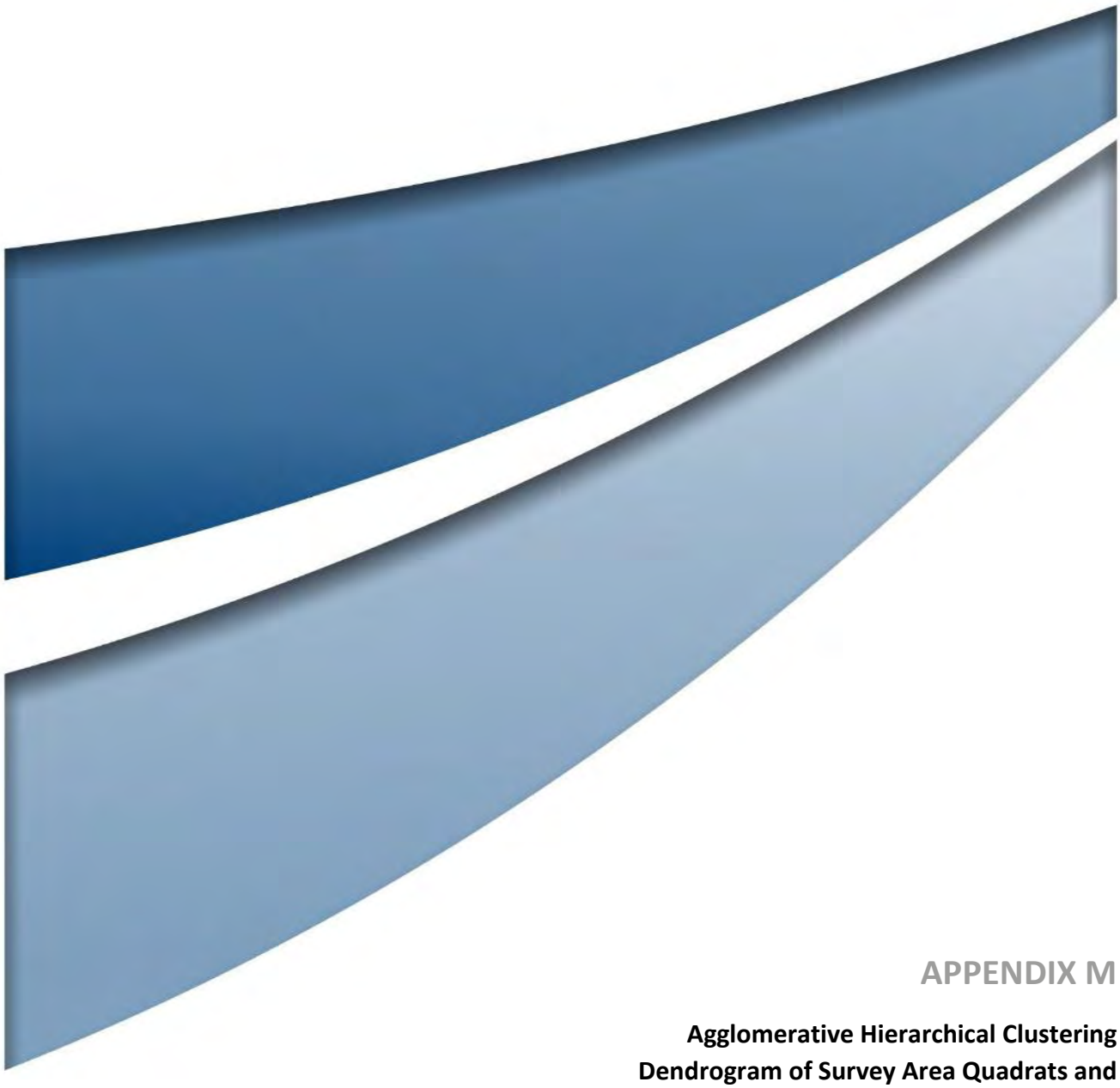
p values are indicated by:

* = $p < 0.05$
** = $p < 0.01$
*** = $p < 0.001$.

VT	Taxon	INDVAL (%)	*p* Value	Significance
A	*Mirbelia microphylla*	0.3390	0.0068	**
	Thryptomene costata	0.2966	0.0136	*
B	*Borya sphaerocephala*	0.2695	0.0226	*
	Tripogonella loliiformis	0.8667	0.0002	***
C	*Acacia colletioides*	0.2365	0.0434	*
	Monachather paradoxus	0.1498	0.0002	***
D	*Callitris columellaris*	0.2125	0.0464	*
	Eucalyptus kochii, *Eucalyptus kochii* subsp. *amaryssia*, *Eucalyptus kochii* subsp. *borealis*, *Eucalyptus kochii* subsp. *plenissima*	0.2488	0.0236	*
	Olearia humilis	0.2844	0.0166	*
E	*Acacia ramulosa*, *Acacia ramulosa* var. *linophylla*, *Acacia ramulosa* var. *ramulosa*	0.1397	0.0066	**
	Maireana planifolia	0.4329	0.0002	***
F	*Acacia umbraculiformis*	0.5068	0.0012	***
	Acacia tetragonophylla	0.1646	0.0002	***
G	*Eucalyptus loxophleba* subsp. *supralaevis*	0.3459	0.0058	**
	Maireana trichoptera	0.2856	0.0172	*
	Senna artemisioides subsp. *filifolia*	0.2652	0.0244	*
H	*Acacia obtecta*	0.2797	0.0104	*
J	*Atriplex semilunaris*	0.2966	0.0240	*
	Corchorus sp.	1.0000	0.0002	***
	Duma florulenta	0.5000	0.0054	**
	Eremophila glabra	0.4444	0.0028	***
	Maireana brevifolia	0.5000	0.0080	**
	Maireana carnosa	0.3515	0.0082	**
	Roepera aurantiaca subsp. *aurantiaca*	0.3356	0.0242	*
	Sclerolaena diacantha	0.3279	0.0110	*
	Sclerolaena fusiformis	0.3197	0.0124	*
	Tecticornia disarticulata	0.6000	0.0010	***

VT	Taxon	INDVAL (%)	*p* Value	Significance
K	*Acacia erinacea*	0.6957	0.0008	***
	Eremophila oppositifolia subsp. *angustifolia*	0.6514	0.0010	***
	Eremophila pantonii	0.4521	0.0012	***
	Eucalyptus clelandiorum	0.4520	0.0026	***
	Maireana thesioides	0.3427	0.0098	**
	Senna stowardii	0.6000	0.0014	***
L	*Acacia eremaea*	0.3333	0.0440	*
	Acanthocarpus canaliculatus	0.3333	0.0446	*
	Atriplex vesicaria	0.4706	0.0024	***
	Didymanthus roei	0.3810	0.0148	*
	Enchylaena tomentosa var. *tomentosa*	0.3279	0.0070	**
	Frankenia setosa	0.3333	0.0424	*
	Gunniopsis quadrifida	1.0000	0.0002	***
	Maireana amoena	0.4444	0.0038	***
	Maireana eriosphaera	0.4444	0.0036	***
	Maireana tomentosa subsp. *tomentosa*	0.2809	0.0198	*
	Melaleuca acutifolia	0.6667	0.0002	***
	Ptilotus halophilus	0.6667	0.0004	***
	Rhagodia drummondii	0.2293	0.0042	***
M	*Lawrencia squamata*	0.4444	0.0026	***
	Maireana atkinsiana	0.3333	0.0426	*
	Maireana glomerifolia	0.6667	0.0004	***
N	*Frankenia pauciflora*	0.3000	0.0224	*
	Tecticornia ?*halocnemoides*, *Tecticornia* sp. 'Karara 1' (Potentially undescribed)	0.7500	0.0002	***
	Tecticornia indica subsp. *bidens*	0.5192	0.0018	***
O	*Eremophila clarkei*	0.2404	0.0002	***
	Eremophila latrobei subsp. *latrobei*	0.4409	0.0002	***
	Mirbelia sp. Bursarioides (T.R. Lally 760)	0.2546	0.0230	*
	Philotheca brucei subsp. *brucei*	0.4323	0.0002	***
	Philotheca sericea	0.2538	0.0146	*
	Prostanthera magnifica	0.3827	0.0046	***
	Xanthosia kochii	0.2610	0.0160	*
P	*Aluta aspera* subsp. *hesperia*	0.3122	0.0002	***
	Melaleuca nematophylla	0.2970	0.0196	*
Q	*Acacia coolgardiensis*, *Acacia effusifolia*, *Acacia incognita*	0.1967	0.0002	***
	Eucalyptus arctata	0.2662	0.0226	*
R	*Philotheca deserti* subsp. *deserti*	0.1968	0.0314	*

VT	Taxon	INDVAL (%)	*p* Value	Significance
S	*Amphipogon caricinus* var. *caricinus*	0.2309	0.0002	***
	Eremophila forrestii subsp. *forrestii*	0.2769	0.0214	*
	Pimelea spiculigera var. *thesioides*	0.3474	0.0096	**
T	*Darwinia capitellata*	0.2691	0.0330	*
	Ecdeiocolea monostachya	0.8034	0.0002	***
	Grevillea granulosa (P3)	0.4997	0.0016	***
	Hakea invaginata	0.2788	0.0390	*
	Hibbertia stenophylla	0.4251	0.0020	***

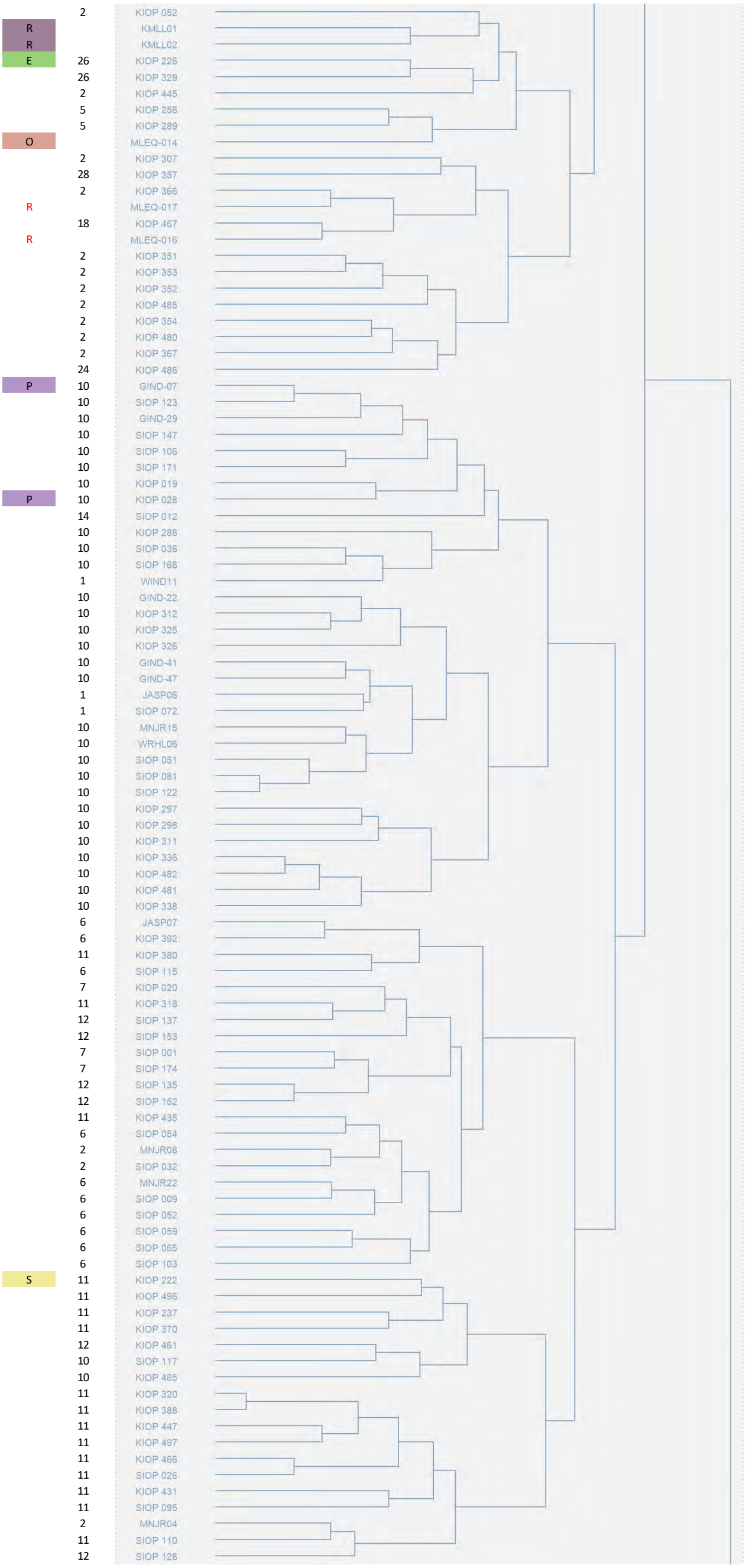


APPENDIX M

Agglomerative Hierarchical Clustering Dendrogram of Survey Area Quadrats and Quadrats from Regional Mapping Assessment

Including Survey Area VT allocations, as well as FCT allocations from the Regional Mapping Assessment

Survey Area VT	Regional FCT	
	1	CHUL01
	1	KIOP 073
	1	GIND-39
O	6	KARA06
O		KARA09
R		MLEC04
	2	GSN-05
	2	KIOP 319
	2	KIOP 339
	1	SIOP 033
	10	KIOP 420
	10	KIOP 211
	10	KIOP 429
P	2	GIND-23
	2	KIOP 498
	2	KIOP 337
	2	KIOP 477
	10	SIOP 101
	2	KIOP 292
	2	KIOP 492
R		MLEQ-008
	2	KIOP 464
	2	KIOP 489
	2	KIOP 500
O	12	GIND-44
	2	KIOP 395
	1	SIOP 180
	2	GINM-08
	2	SIOP 108
	1	WIND20
	2	SIOP 139
	2	KIOP 299
	2	SIOP 073
	1	SIOP 015
	1	WRHL05
	1	MNJR18
	12	SIOP 172
	2	SIOP 024
	1	SIOP 030
	1	SIOP 136
	1	SIOP 158
O	1	GIND-55
	1	SIOP 071
	1	SIOP 111
	1	GIND-91
	1	SIOP 003
	2	SIOP 070
	1	MNJR21
	1	MNJR26
	1	SIOP 060
O		KARA08
O		KARA11
	1	WIND01
	1	WIND06
	1	WIND17
	1	KIOP 002
	1	WIND07
O	2	GINM-02
	2	SIOP 045
	1	PINY07
	1	WRHL08
	2	GLI-04
	2	SIOP 057
	1	JASP02
	2	SIOP 044
	2	GSN-03
	2	SIOP 027
	2	SIOP 048
	2	SIOP 063
O	7	GIND-18
	6	KIOP 079
O		MLED21
P	26	GIND-25
	2	GIND-42
	2	KIOP 345
	2	SIOP 116
	12	SIOP 173
	12	GIND-50
	12	MNJR09
	12	GIND-72
O	12	GINM-06
	2	SIOP 016
	12	SIOP 150
	12	SIOP 159
	12	SIOP 149
	12	SIOP 132
	12	SIOP 138


R
R
E
O
R
R
P
P
S
2 KIOP 052
KMLL01
KMLL02
26 KIOP 226
26 KIOP 329
2 KIOP 445
5 KIOP 258
5 KIOP 289
MLEQ-014
2 KIOP 307
28 KIOP 357
2 KIOP 366
MLEQ-017
18 KIOP 467
MLEQ-016
2 KIOP 351
2 KIOP 353
2 KIOP 352
2 KIOP 485
2 KIOP 354
2 KIOP 480
2 KIOP 367
24 KIOP 486
10 GIND-07
10 SIOP 123
10 GIND-29
10 SIOP 147
10 SIOP 106
10 SIOP 171
10 KIOP 019
10 KIOP 028
14 SIOP 012
10 KIOP 288
10 SIOP 036
10 SIOP 168
1 WIND11
10 GIND-22
10 KIOP 312
10 KIOP 325
10 KIOP 326
10 GIND-41
10 GIND-47
1 JASP06
1 SIOP 072
10 MNJR15
10 WRHL06
10 SIOP 051
10 SIOP 081
10 SIOP 122
10 KIOP 297
10 KIOP 298
10 KIOP 311
10 KIOP 336
10 KIOP 482
10 KIOP 481
10 KIOP 338
6 JASP07
6 KIOP 392
11 KIOP 380
6 SIOP 115
7 KIOP 020
11 KIOP 318
12 SIOP 137
12 SIOP 153
7 SIOP 001
7 SIOP 174
12 SIOP 135
12 SIOP 152
11 KIOP 435
6 SIOP 054
2 MNJR08
2 SIOP 032
6 MNJR22
6 SIOP 009
6 SIOP 052
6 SIOP 059
6 SIOP 065
6 SIOP 103
11 KIOP 222
11 KIOP 496
11 KIOP 237
11 KIOP 370
12 KIOP 461
10 SIOP 117
10 KIOP 465
11 KIOP 320
11 KIOP 388
11 KIOP 447
11 KIOP 497
11 KIOP 466
11 SIOP 026
11 KIOP 431
11 SIOP 095
2 MNJR04
11 SIOP 110
12 SIOP 128

	1	CHUL02
O	1	GIND-43
	1	JASP01
	2	SIOP 061
	7	GIND-75
	1	GIND-94
O	1	GIND-04
	1	GIND-49
	1	GIND-48
O	1	GIND-28
	1	WIND02
O	1	FAC-02
O		KARA12
O	1	GIND-53
	1	SIOP 004
	1	CHUL05
O	1	KARA16
O	1	KARA17
	1	JASP03
O		KARA02
O		KARA07
	1	SIOP 005
	1	SIOP 053
	1	SIOP 006
	1	MNJR20
O	1	GIND-54
	1	WRHL04
	1	PINY01
	1	PINY05
	1	KIOP 082
	1	WIND04
	1	PINY02
	29	KIOP 069
	29	KIOP 078
	2	KIOP 283
	2	KIOP 377
	2	SIOP 077
	2	SIOP 028
	2	SIOP 145
	29	KIOP 086
	2	KIOP 140
E		MLED20
	1	CHUL03
	1	GIND-32
	1	WIND15
	1	GIND-34
	1	GIND-35
	1	WIND09
	1	JASP05
	1	WIND19
	1	WIND14
	1	WIND18
	3	GINM-14
	3	KIOP 484
	3	KIOP 483
	3	KIOP 493
O	3	KIOP 213
	3	KIOP 347
	3	KIOP 408
	1	WIND08
	1	WIND12
	1	WRHL01
	3	SIOP 056
	3	SIOP 068
	1	GLI-03
	3	MNJR24
	3	MNJR01
	3	MNJR07
	1	MNJR02
	1	MNJR23
	3	GSN-04
	3	SIOP 121
	1	MNJR14
	1	MNJR16
	3	SIOP 164
	3	SIOP 169
	3	SIOP 165
	3	SIOP 183
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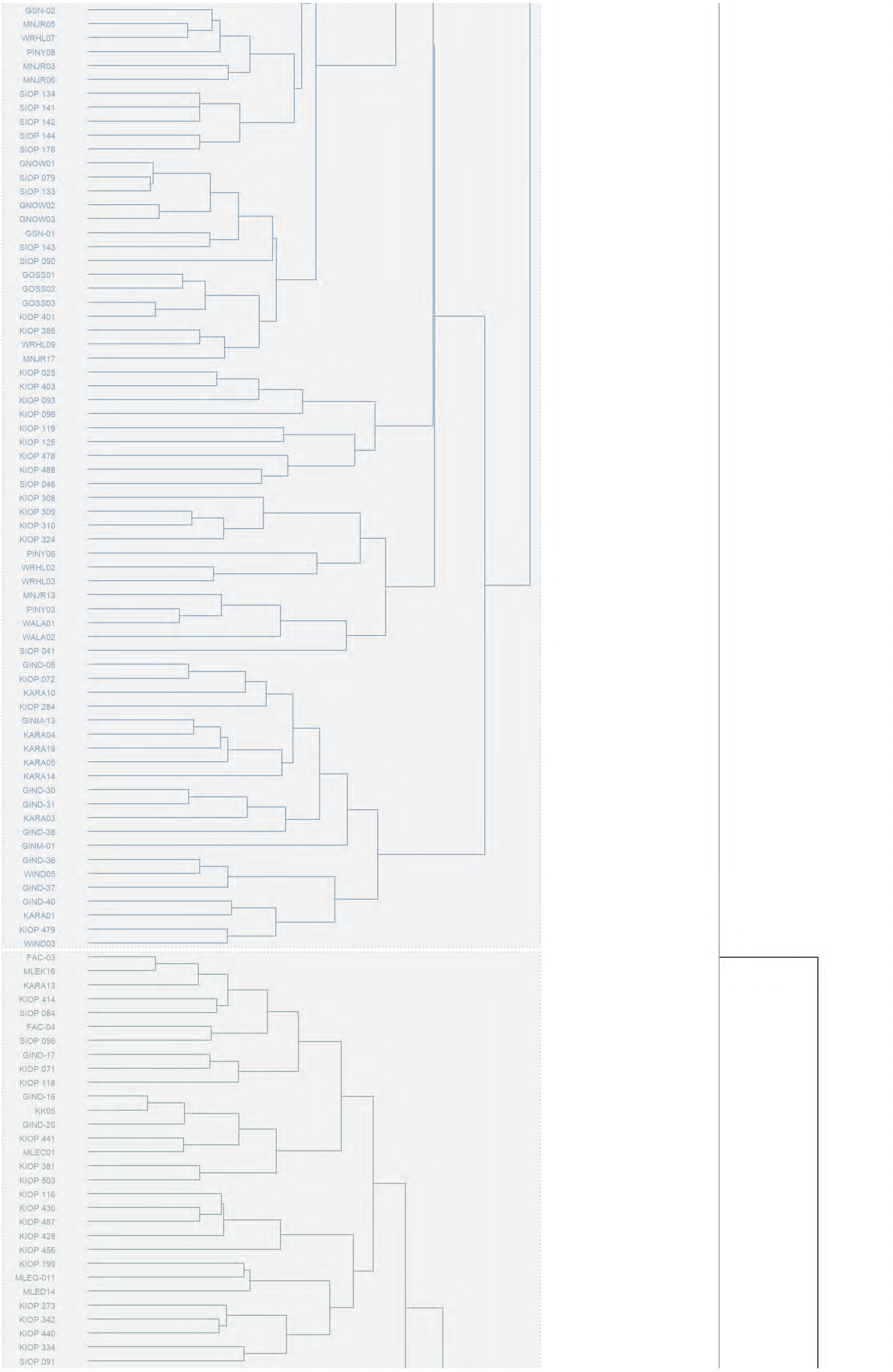
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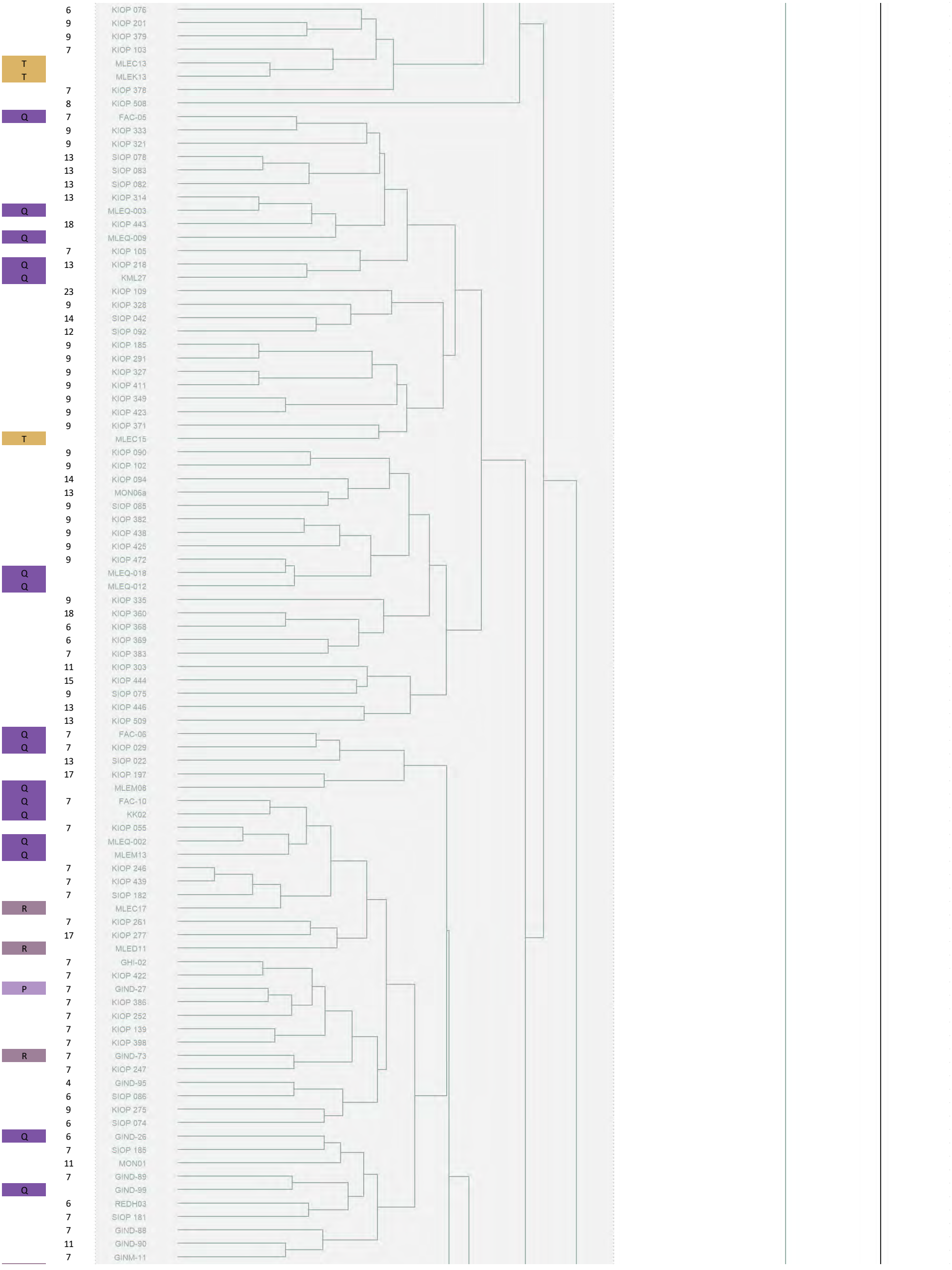
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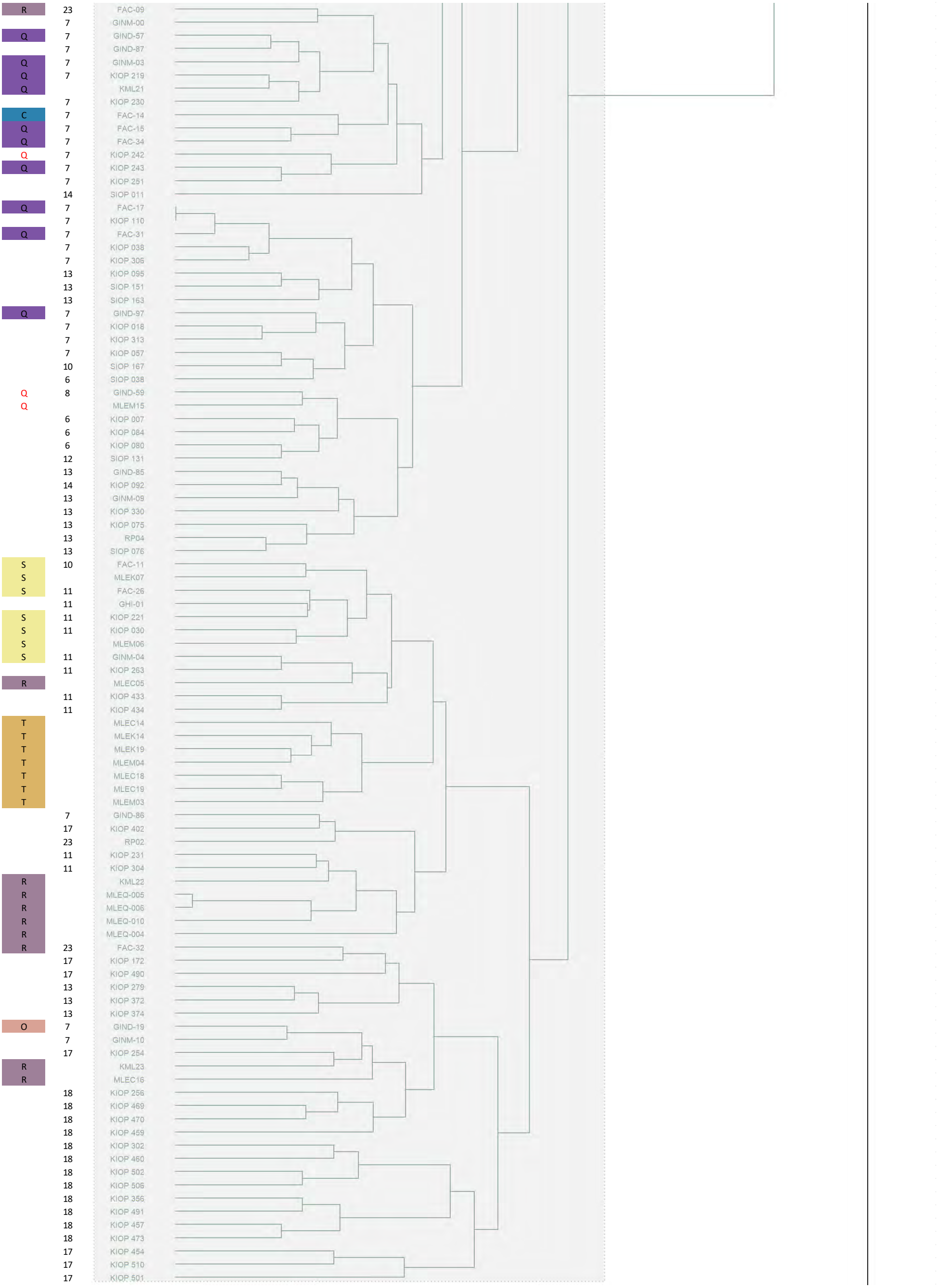
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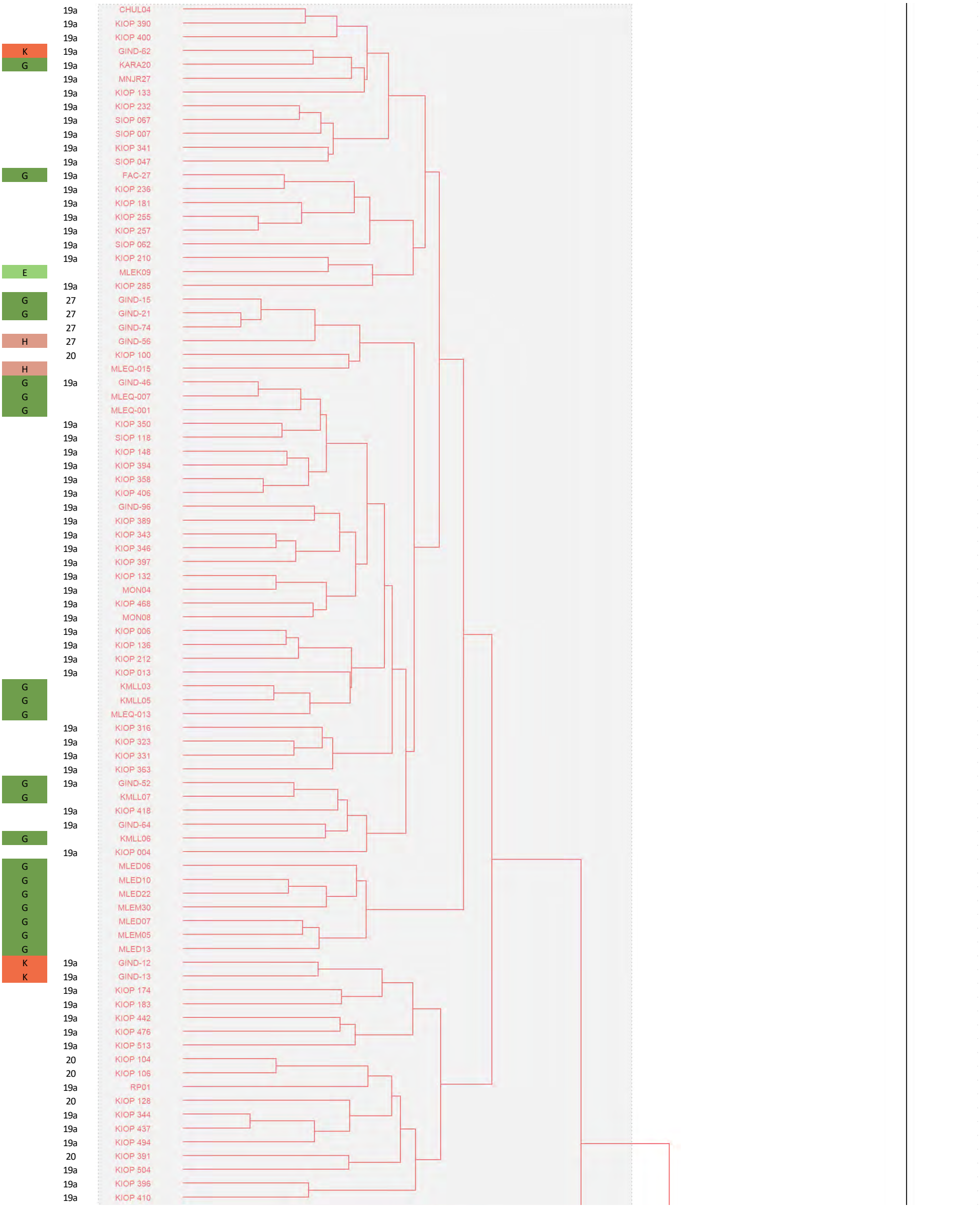
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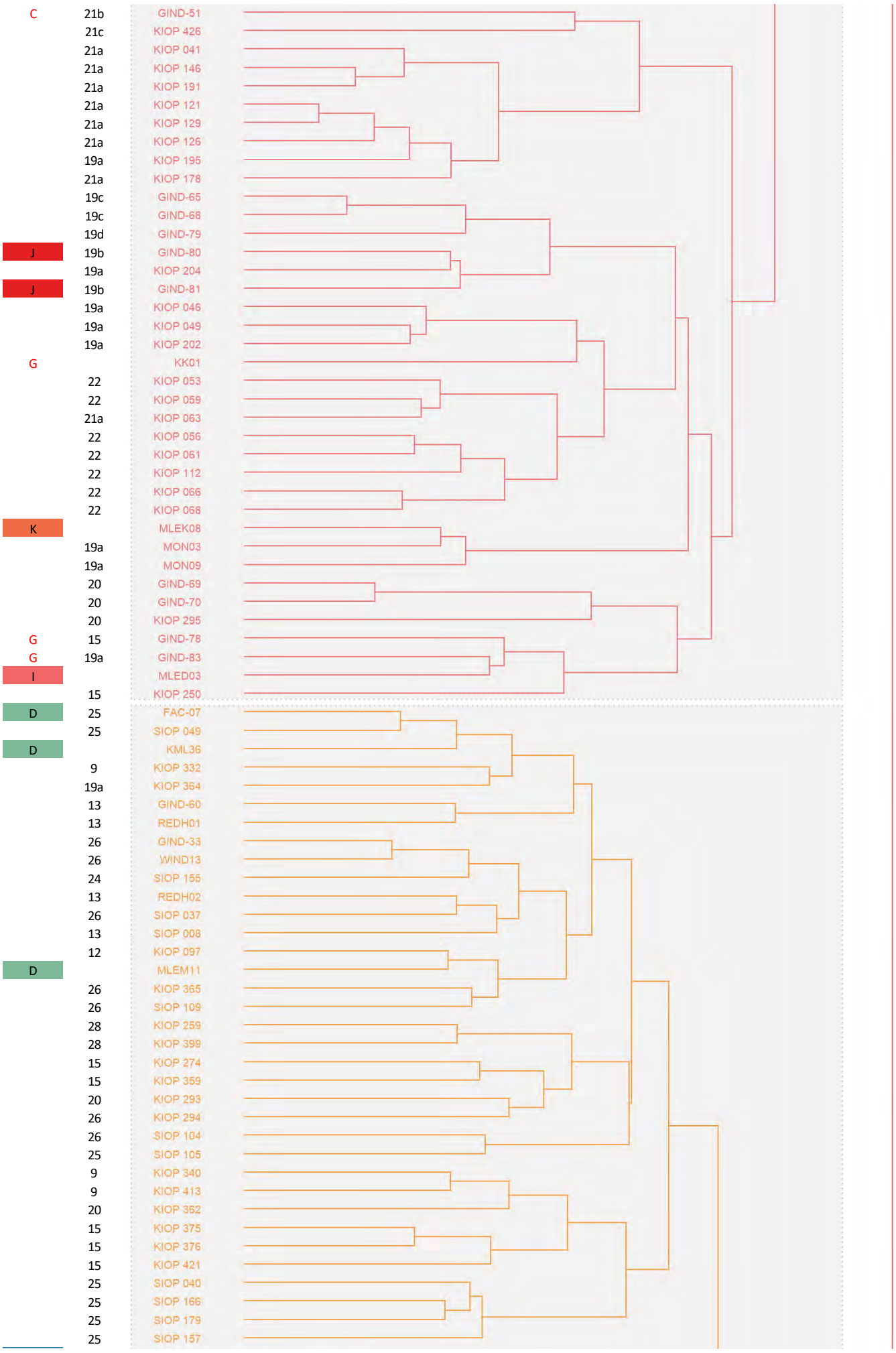
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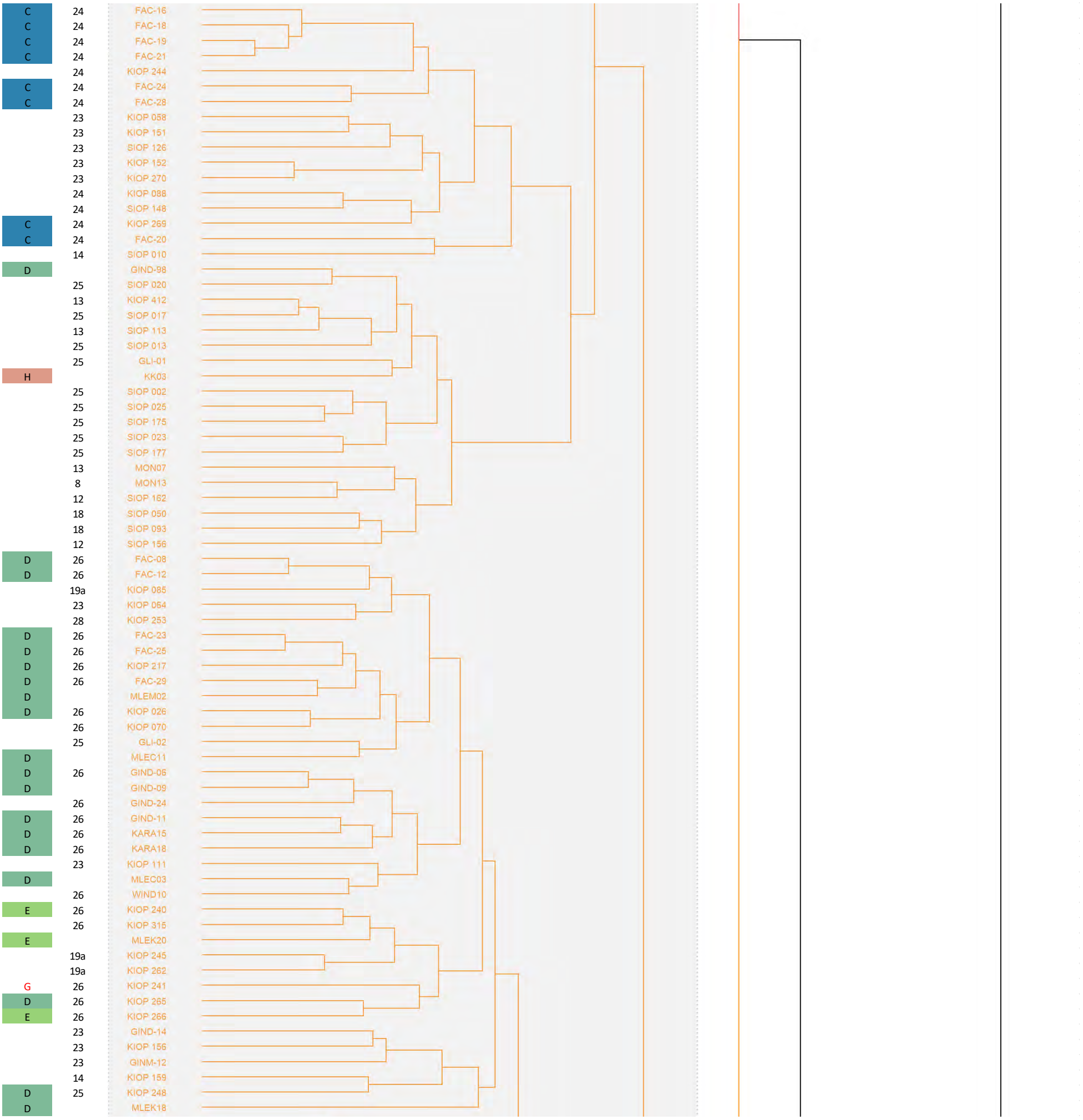
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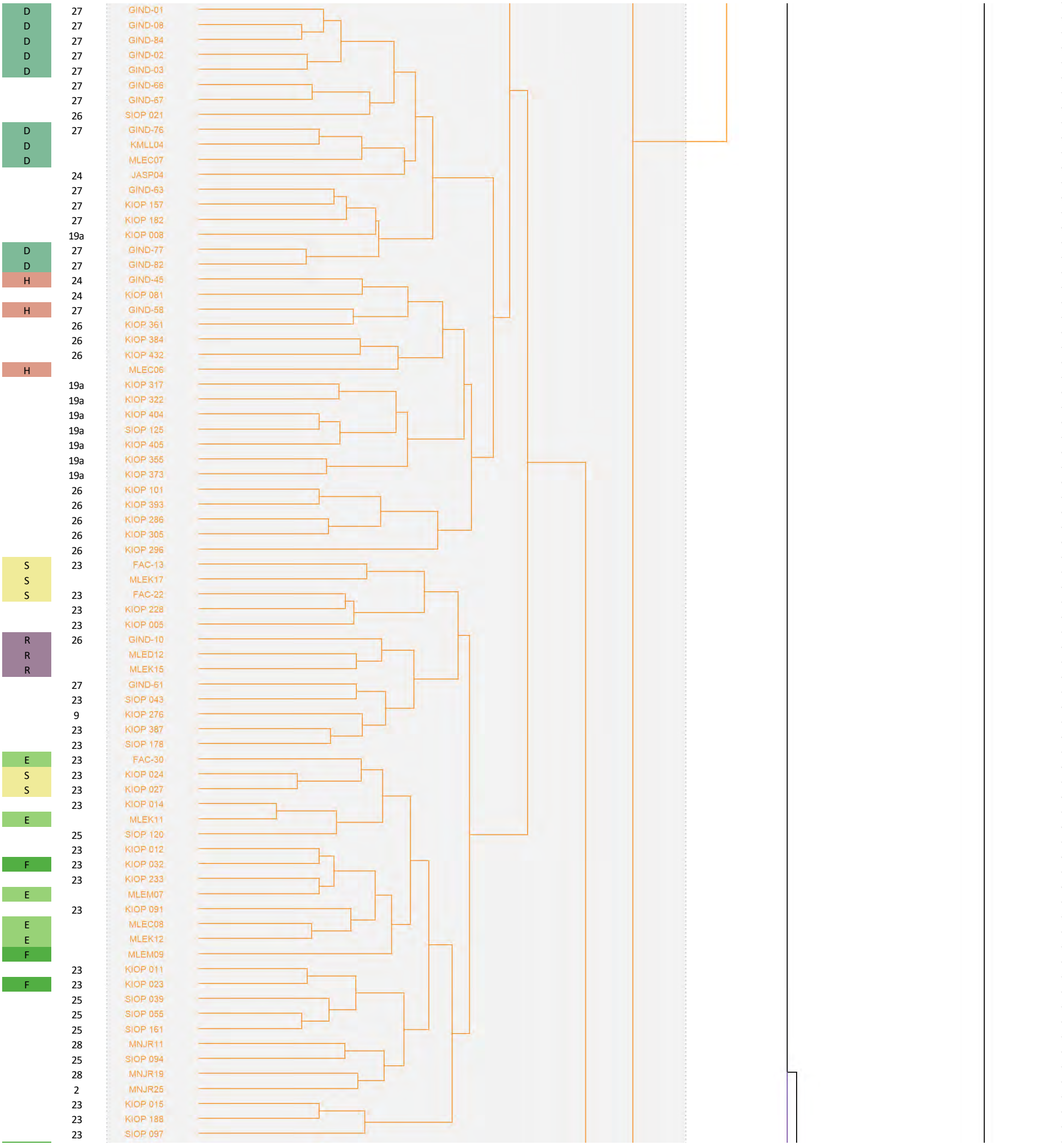
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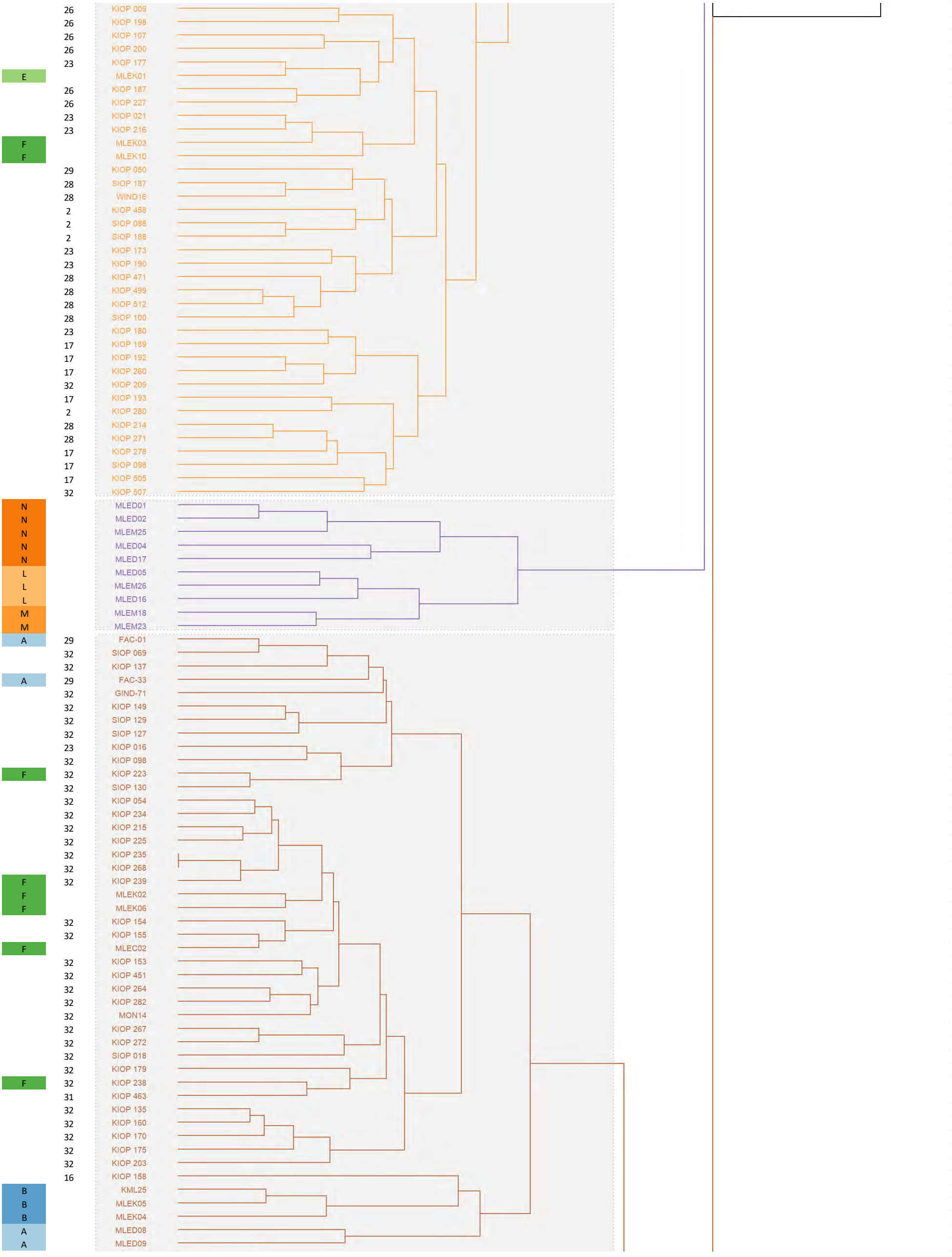
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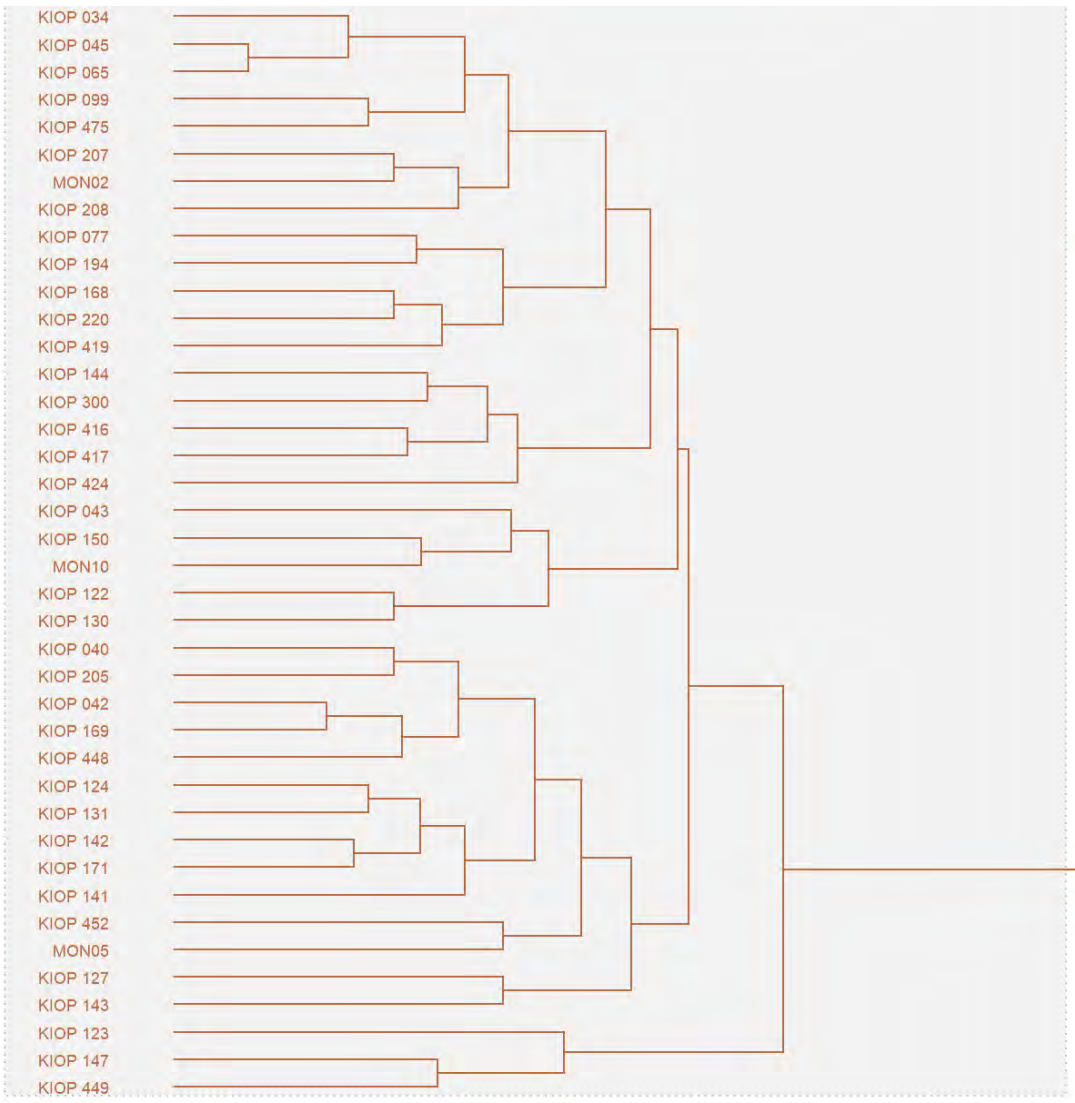

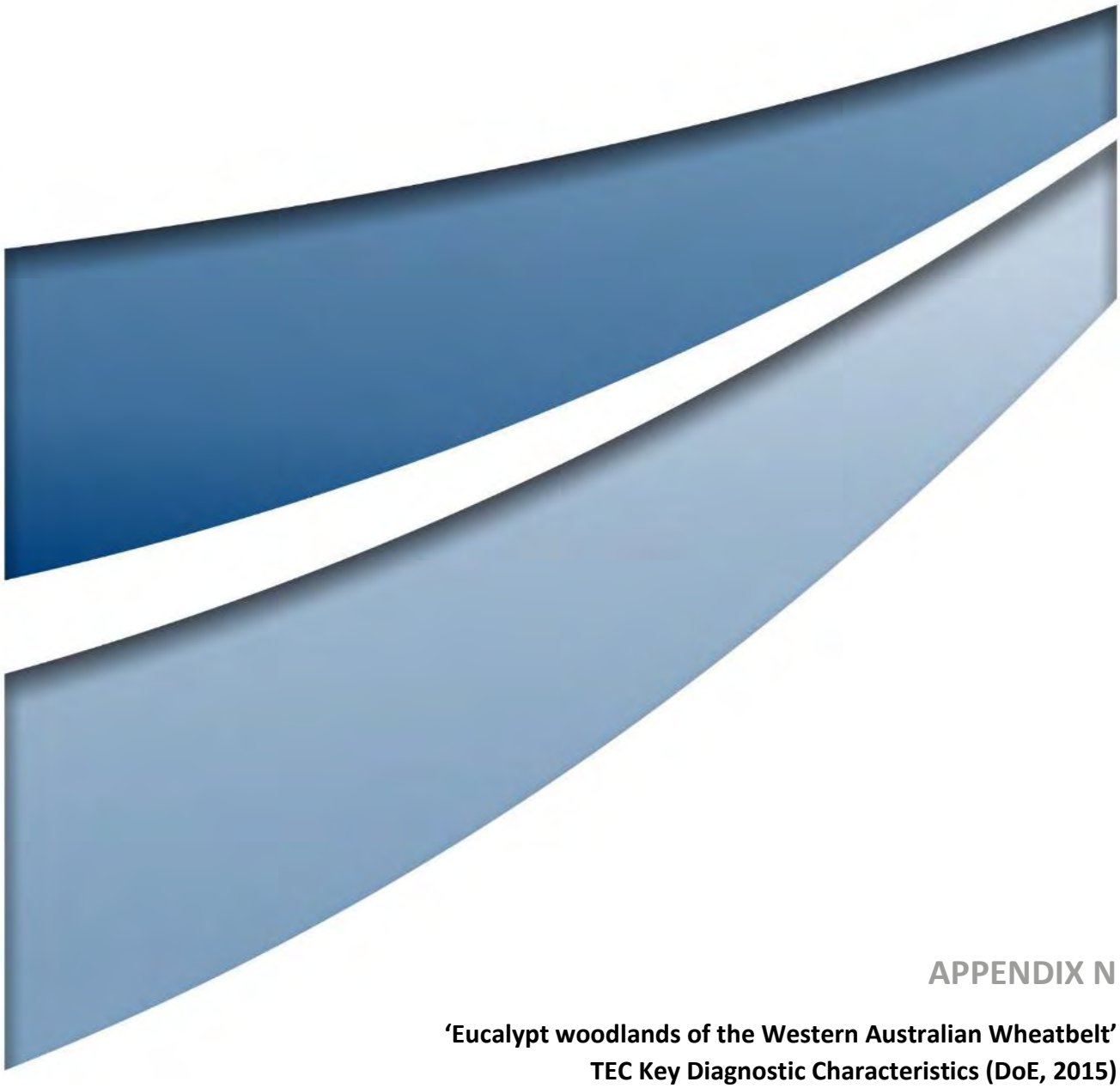

APPENDIX N

'Eucalypt woodlands of the Western Australian Wheatbelt'
TEC Key Diagnostic Characteristics (DoE, 2015)

The following text and key diagnostic characteristics of the 'Eucalypt woodlands of the Western Australian Wheatbelt' TEC have been taken from the Approved Conservation Advice (DoE, 2015). With this conservation advice document in mind, as stated on page 19 of DoE (2015):

- 'For EPBC Act referral, assessment and compliance purposes, the national ecological community is limited to patches that meet the key diagnostic characteristics in Section 3.2. PLUS the condition thresholds in Section 3.3. The additional factors noted in Section 3.4. and critical areas noted in Section 3.5 also should be taken into consideration.'
- The key diagnostic characteristics are based on location, structure of the upper stratum, species in the upper stratum, and understorey components.

The distribution of the ecological community is limited to the below IBRA bioregions and subregions:

- Avon Wheatbelt - subregions AVW01 Merredin and AVW02 Katanning.
- Mallee - MAL02 Western Mallee only.
- Jarrah Forest - outlying patches in the eastern parts of JAF01 Northern Jarrah Forests and JAF02 Jarrah Forests adjacent to the Avon Wheatbelt, that are off the Darling Range, and receive less than 600 mm mean annual rainfall. These areas are effectively an extension of the Avon Wheatbelt landscape in that they comprise vegetation subject to similar climate, landscape and threats.

The ecological community generally occurs within the 300–600 mm rainfall isohyets. Within the Jarrah Forest bioregion, the ecological community occurs on landscapes that fall below the 600 mm isohyet, are off the Darling Range, associated with the Yilgarn Craton geology, and are generally heavily cleared.

The structure of the ecological community is a woodland in which the minimum crown cover of the tree canopy in a mature woodland is 10 % (crowns measured as if they are opaque).

Note: The maximum tree canopy cover is typically up to 40 %. It may be higher in certain circumstances, for instance: trees with a mallet growth form may be more densely spaced; or disturbances such as fire may result in an increased cover of canopy species during regeneration.

Recent disturbances such as fire may cause the loss of a mature tree canopy and a shift to a different, regenerative state for a woodland. Under these circumstances, the loss of a tree canopy is likely to be a temporary phenomenon, if natural regeneration is not interrupted. There should be evidence that: (1) the key eucalypt species typical of the ecological community were formerly present at a site by the presence of stumps, logs, photos, past surveys/knowledge; and (2) that the tree canopy will regenerate from seedlings, saplings or epicormic regrowth. Some wheatbelt woodland eucalypts, including the mallets, gimlet and salmon gum, are killed by fire and regenerate from seeds only, so it may take decades for a mature woodland structure to re-establish (Gosper et al., 2013). This temporary regenerative state is included as part of the ecological community where seedling and sapling eucalypts are clearly present, and the other diagnostic features and condition thresholds are met.

The key species of the tree canopy of the TEC are species of *Eucalyptus* as identified in **Table M.1**. These are species that typically have a single trunk. One or more of the tree species in **Table M.1** must be dominant or co-dominant within a patch of the ecological community. If other species are present in the tree canopy (e.g. species in **Table M.2** or other taxa), then these collectively must not occur as dominants in the tree canopy.

Note: Some woodlands may have a lower tree layer of mallee or non-eucalypt tree species. In this case, the upper tree canopy must comprise mainly of key woodland species in **Table M.1** and have an upper canopy cover of 10 % or more. This helps distinguish woodland with a mallee subcanopy, from true mallee communities which may have woodland trees as sparse or occasional emergents.

A native understorey is present but is of variable composition, being a combination of grasses, other herbs and shrubs, as specified in section 2.3.2 of DoE (2015), and in **Table M.1**.

Note: Given the WA wheatbelt is a region of high natural biodiversity, this plant species list does not include all plant species that may be encountered in the WA Wheatbelt Woodland ecological community.

Contra-indicators: the presence of the following features in the vegetation indicates that the ecological community is not likely to be present:

- A dominant presence of eucalypts with a mallee growth form. However, mallee species can occur as an understorey or minor canopy component of the ecological community, as noted in the diagnostic features, above.
- A dominant presence of non-eucalypt species in the tree canopy, for instance *Acacia acuminata* (Jam) or *Allocasuarina huegeliana* (Rock sheoak). However, these non-eucalypt species can be present as an understorey or minor canopy component of the ecological community.
- Shrublands or herblands in which the tree canopy layer is very sparse to absent, either naturally or maintained so through long-term disturbance. Native vegetation where a tree canopy was formerly present is often referred to as ‘derived’ or ‘secondary’ vegetation. These sites would fall below the 10 % minimum canopy cover threshold for a woodland, noted in the diagnostic features, above.
- Woodlands that have the same key eucalypt species but occur in adjacent bioregions, notably the Coolgardie, Esperance Sandplains, Yalgoo and Geraldton Sandplains bioregions. These are not part of the national ecological community. All woodlands that occur in bioregions outside the wheatbelt, as defined in this conservation advice, are not part of the WA Wheatbelt Woodland ecological community.
- Woodlands dominated by eucalypts that are restricted to granite outcrops and rocky rises, for instance *Eucalyptus caesia* (Caesia or Gungurru). However, some woodlands occur on the base around rock outcrops, but not on the actual outcrop, and these may be part of the ecological community; for instance, York gum – jam woodlands.

Condition thresholds: Minimum condition thresholds for patches of the WA Wheatbelt Woodlands ecological community (as per Table 3 of DoE (2015)) are presented in **Table M.3**.

Table M.1 Key Eucalypt Species (presented as Table 2a in DoE (2015))

One or more of these species are dominant or co-dominant within a given patch of the ecological community

Scientific Name	Common Name(s)
Eucalyptus accedens	Powder-bark; powder-bark wandoo
Eucalyptus aequioperta	Welcome Hill gum
Eucalyptus alipes	Hyden mallet
Eucalyptus astringens* subsp. *astringens	Brown mallet
Eucalyptus capillosa	Wheatbelt wandoo
Eucalyptus densa* subsp. *densa	Narrow-leaved blue mallet
Eucalyptus extensa	Yellow mallet
Eucalyptus falcata	Silver mallet
Eucalyptus gardneri* subsp. *gardneri	Blue mallet
Eucalyptus goniocarpa	Lake King mallet
Eucalyptus kondininensis	Kondinin blackbutt
Eucalyptus longicornis	Red morrel
Eucalyptus loxophleba* subsp. *loxophleba	York gum
Eucalyptus melanoxylon	Black morrel
Eucalyptus mimica* subsp. *continens	Hooded mallet
Eucalyptus mimica* subsp. *mimica	Newdegate mallet
Eucalyptus myriadena	Small-fruited gum; blackbutt
Eucalyptus occidentalis	Flat-topped yate
Eucalyptus ornata	Ornamental silver mallet; ornate mallet
Eucalyptus recta	Mt Yule silver mallet; Cadoux mallet
Eucalyptus rudis* subsp. *rudis	Flooded gum
Eucalyptus salicola	Salt gum; salt salmon gum
Eucalyptus salmonophloia	Salmon gum
Eucalyptus salubris	Gimlet
Eucalyptus sargentii* subsp. *sargentii	Salt river gum
Eucalyptus singularis	Ridge-top mallet
Eucalyptus spathulata* subsp. *spathulata	Swamp mallet
Eucalyptus spathulata* subsp. *salina	Salt River mallet
Eucalyptus urna	Merrit
Eucalyptus wandoo* subsp. *pulverea	Wandoo
Eucalyptus wandoo* subsp. *wandoo	Wandoo

Table M.2 Associated Canopy Species (presented as Table 2b in DoE (2015))

May be present within the ecological community but are not dominant or co-dominant

Scientific Name	Common Name(s)
Acacia acuminata	Jam
Allocasuarina huegeliana	Rock sheoak
Corymbia calophylla	Marri
Eucalyptus annulata	Prickly-fruited mallee
Eucalyptus arachnaea* subsp. *arachnaea	Black-stemmed mallee

Scientific Name	Common Name(s)
Eucalyptus arachnaea* subsp. *arrecta	Black-stemmed mallet
Eucalyptus armillata	Flanged mallet
Eucalyptus calycogona* subsp. *calycogona	Square-fruited mallee
Eucalyptus camaldulensis* subsp. *arida	River red gum
Eucalyptus celastroides* subsp. *virella	Wheatbelt mallee
Eucalyptus cylindrifolia	Goldfields white mallee
Eucalyptus decipiens	Redheart; moit
Eucalyptus drummondii	Drummond's mallee
Eucalyptus eremophila	Sand mallee
Eucalyptus erythronema* subsp. *erythronema	Red-flowered mallee
Eucalyptus eudesmioides	Kalbarri mallee
Eucalyptus flocktoniae* subsp. *flocktoniae	Flockton's mallee
Eucalyptus gittinsii* subsp. *illucida	Northern sandplain mallee
Eucalyptus incrassata	Ridge-fruited mallee
Eucalyptus kochii* subsp. *plenissima	Trayning mallee
Eucalyptus leptopoda* subsp. *leptopoda	Merredin mallee; Tammin mallee
Eucalyptus loxophleba* subsp. *gratiae	Lake Grace mallee
Eucalyptus loxophleba* subsp. *lissophloia	Smooth-barked York gum
Eucalyptus loxophleba* subsp. *supralaevis	Blackbutt York gum
Eucalyptus macrocarpa	Mottlecah
Eucalyptus marginata	Jarrah
Eucalyptus moderata	Redwood mallee
Eucalyptus obtusiflora	Dongara mallee
Eucalyptus olivine	Olive-leaved mallee
Eucalyptus orthostemon	Diverse mallee
Eucalyptus perangusta	Fine-leaved mallee
Eucalyptus phaenophylla	Common southern mallee
Eucalyptus phenax* subsp. *phenax	White mallee
Eucalyptus pileata	Capped mallee
Eucalyptus platypus* subsp. *platypus	Moort
Eucalyptus polita	Parker Range mallet
Eucalyptus sheathiana	Ribbon-barked mallee
Eucalyptus sporadica	Burngup mallee
Eucalyptus subangusta* subsp. *subangusta	Grey mallee
Eucalyptus tenera	Glazed mallee
Eucalyptus tephroclada	Holleton mallee
Eucalyptus thamnoides	Brown mallee
Eucalyptus transcontinentalis	Redwood
Eucalyptus vegrandis	Ongerup mallee; Cranbrook mallee
Eucalyptus wubinensis	Wubin mallee
Eucalyptus yilgarnensis	Yorrel

Table M.3 Minimum Condition for Patches of the WA Wheatbelt Woodlands Ecological Community

For each category, both the weed cover and mature tree presence criteria must apply plus one of either patch size or patch width, depending on whether the patch is a roadside remnant or not

Cover of exotic plants (weeds) AND	Mature trees[1] AND	Minimum patch size (non-roadside patches)[2] OR	Minimum patch width (roadsides only)[3]
Category A: Patches likely to correspond to a condition of Pristine / Excellent / Very Good (B. J. Keighery, 1994) or a High RCV (RCC, 2015)			
Exotic plant species account for 0 to 30 % of total vegetation cover in the understorey layers (i.e. below the tree canopy)	Mature trees may be present or absent	2 ha or more	5 m or more
Category B: Patches likely to correspond to a condition of Good (B. J. Keighery, 1994) or a Medium-High RCV (RCC, 2015), AND retains important habitat features			
Exotic plant species account for more than 30, to 50 % of total vegetation cover in the understorey layers (i.e. below the tree canopy)	Mature trees are present with at least 5 trees per 0.5 ha	2 ha or more	5 m or more
Category C: Patches likely to correspond to a condition of Good (B. J. Keighery, 1994) or a Medium-High RCV (RCC, 2015)			
Exotic plant species account for more than 30, to 50 % of total vegetation cover in the understorey layers (i.e. below the tree canopy)	Mature trees either absent or less than 5 trees per 0.5 ha are present	5 ha or more	5 m or more
Category D: Patches likely to correspond to a condition of Degraded to Good (B. J. Keighery, 1994) or a Medium-Low to Medium-High RCV (RCC, 2015) BUT retains important habitat features			
Exotic plant species account for more than 50 to 70 % of total vegetation cover in the understorey layers (i.e. below the tree canopy)	Mature trees are present with at least 5 trees per 0.5 ha	5 ha or more	5 m or more

Note:

[1]: Mature trees have a diameter at breast height (DBH) of 30 cm or above. The DBH for mature trees aligns with the EPBC referral guidelines for the breeding habitat of threatened black cockatoo species (DSEWPaC, 2012). These note that, for salmon gum and wandoo trees, suitable nest hollows can develop in trees with a DBH of 30 cm or more. Note that larger trees may be killed by factors such as intense fire or flood, but the patch may still be in reasonable condition if there are immature trees regenerating.

[2]: The minimum patch size thresholds apply to native vegetation remnants that do not occur along roadsides.

[3]: Minimum patch width applies only to vegetation remnants along roadsides and tend to be long but narrow. The width here is based on the native understorey component rather than width of the tree canopy. Some allowance must be made for small breaks or variations in native species cover along linear patches. Given the generally open nature of the tree canopy and some understorey structures, a break in the continuity of native vegetation cover of 50 m or more, is likely to indicate that separate patches are present. An exception is for main, often bitumen-covered, roads that bisect otherwise continuous vegetation; most local government roads in the wheatbelt have a road reserve of 20 m. In these cases, native vegetation along either side of the road is considered to be a separate patch.

Further information to assist in determination of presence of ecological community

As per section 3.4 of DoE (2015), the following further information will apply:

Patch: A patch is defined as a discrete and mostly continuous area of the ecological community. A patch may include small-scale variations and disturbances, such as tracks or breaks, watercourses/drainage lines or localised changes in vegetation that do not act as a permanent barrier or significantly alter its overall functionality. A large break in native vegetation cover, for instance a gap dominated by non-native weed or crop species, is considered to indicate that separate patches occur.

Buffer zone: A buffer zone is the area that lies immediately outside the edge of a patch but is not part of the ecological community. The recommended minimum buffer zone for the ecological community is 40 metres from the edge of a patch as determined from the outer edge of the tree canopy.

Revegetated areas: Revegetated or replanted sites or areas of regrowth are not excluded from the listed ecological community so long as the patch meets the key diagnostic characteristics and condition thresholds.

Sampling protocols: Thorough and representative on-ground surveys are essential to accurately assess the extent and condition of the ecological community. Sampling should begin with a quick reconnaissance to determine the key variations in vegetation, landscape qualities and management history (where possible) across the site. The site should then be thoroughly sampled on a representative basis for vegetation cover and plant species diversity. Sampling based upon an area of at least 10 m x 10 m, or an equivalently sized shape (i.e. 100 m^2 = 0.01 ha) would be suitable. Larger and more variable areas of vegetation will need more samples or quadrats to assess a site accurately. Recording the sampling effort (identifying the number of person hours spend per plot across the patch, along with the surveyors' level of expertise) is recommended for referral.

Timing of surveys: Whilst identifying the ecological community and its condition is possible at most times of the year, consideration must be given to the role that season and disturbance history may play in an assessment. For example, flowering may be necessary to identify shrub species; native herbaceous species may not be evident in summer, autumn, or particularly dry winter and spring seasons; and active growth will indicate population sizes of annual weeds. Immediately after a fire, one or more vegetation layers, or groups of species (e.g. obligate seeders), may not be evident for a time. Timing of surveys should allow for a reasonable interval after a disturbance (natural or human-induced) to allow for regeneration of species to become evident, and be timed to enable diagnostic species to be identified. At a minimum, it is important to note climate conditions and what kind of disturbance may have happened within a patch, and when that disturbance occurred, as far as possible.

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