

DETAILED FLORA AND VEGETATION SURVEY OF THE LEONORA PROJECT-

September 2022

Prepared for: St Barbara

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EXECUTIVE SUMMARY

St Barbara Limited (ASX: SBM), an Australian based company, has three gold mining operations, including their Leonora Operation/Project. The Leonora Project consists of the Gwalia mine, located just south of Leonora, approximately 235 kilometres (km) north of Kalgoorlie, Western Australia (WA).

SBM plan to expand their existing Leonora Project to include additional railway facilities, solar and wind farms, as well as open pit and waste landform expansions.

Talis Consultants (Talis) provided Native Vegetation Solutions (NVS) with a survey area encompassing the proposed disturbances. The Leonora Project expansion consists of three distinct areas: Gwalia (2,015 ha), Tower Hill (1,143 ha) and Harbour Lights (400 ha). The location of these survey areas is within the Murchison Bioregion of Western Australia (Figure 1), totalling approximately 3,558 hectares. At this stage, the final footprint of proposed disturbances is yet to be finalised, however, these disturbances are anticipated to be wholly contained within the survey area.

A previous comprehensive desktop assessment of the flora and vegetation within the same survey area was completed by Spectrum Ecology in November 2021 (Spectrum, 2022). The findings of the desktop assessment identified the potential occurrence of conservation significant flora, and hence a detailed flora and vegetation survey was recommended.

The survey area is located within the Eastern Murchison Interim Biogeographic Regionalisation for Australia (IBRA) subregion. The vegetation of the Eastern Murchison botanical subregion consists of Mulga woodlands often rich in ephemerals. Vegetation is dominated by hummock grasslands, saltbush and *Tecticornia* shrublands (CALM, 2002).

The Protected Matters Search Tool (PMST) provided information under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 and indicated no Threatened Ecological Communities (TECs) or Commonwealth Reserves occur within the requested search area.

The Western Australian Department of Biodiversity Conservation and Attractions (DBCA) database searches revealed a potential for no Threatened and 3 Priority Flora species to occur within a 20 km radius of the survey area (DBCA, 2023a). No known locations of Threatened or Priority Flora occur within the survey area, with the closest Priority Flora located approximately 8.6 km south of the survey area.

The Threatened Ecological Communities (TEC) search revealed no TECs within the survey area (DBCA, 2023).

The search identified two Priority Ecological Communities (PEC) within 50 km of the Survey Area; both listed as Priority 1. One of PECs intersects the Survey Area at both Gwalia and Tower Hill: The Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station (Appendix A). It is known for its unique assemblages of invertebrates in the groundwater calcretes and is threatened by hydrological changes associated with mining. The remaining PEC is located 25 km to the west of the Survey Area. It was assigned a 'Low likelihood' to occur within the survey area based on the restriction to a palaeodrainage system on Sturt Meadows Station.

No Environmentally Sensitive Areas (ESAs) are located within the survey area.

No water bodies were identified within the survey area via the Clearing Permit System (CPS) Map Viewer (DWER, 2023).



The survey area lies south of the 26th parallel, however receives average annual rainfall of approximately 236.4 mm (BOM, 2023). There is no record of *Phytophthora cinnamomi* (Dieback) establishing in natural ecosystems in regions receiving <400mm rainfall per annum (CALM, 2003). However, as indicated within the new Dieback guidelines (DBCA, 2020), other species of *Phytophthora* may persist east of the 400mm isohyet in unusually wet conditions. It is therefore recommended to conduct a risk assessment as per these guidelines.

Additionally if clearing is to occur within the survey area, all measures should be taken to prevent any possible soil contamination (seeds of non-native species *etc.*) which poses a risk in the survey area during seasonally favourable conditions.

Sixteen vegetation groups were identified during this survey, largely following topographical features and dominant species. Mapping of the 16 vegetation groups, as well as the quadrat locations can be seen in Appendix C. Photographs of each quadrat and the relevant vegetation group can be seen in Appendix F.

Two-hundred and one species were recorded within the survey area with 176 species recorded within quadrats. Forty-two families and 95 genera were recorded overall. These are listed in Appendix E, per Quadrat as well as per vegetation group. Of the native species, Asteraceae had the highest representation, with 31 species from 21 genera. The next best represented families were Chenopodiaceae and Fabaceae with 30 and 25 species respectively.

The most common and widespread species was *Ptilotus obovatus* which was recorded in 41 quadrats. The next most common were *Erodium cygnorum* and *Maireana pyramidata*, both occurring in 35 quadrats.

Quadrats Q53 and Q59 had the richest species list with 34 taxa recorded in both.

There were no Threatened or Priority Flora recorded during the survey.

Eighteen introduced weed species were detected within the survey area. Three of these are considered Declared Pests (DPIRD, 2023), *Cylindropuntia imbricata*- s22(2) C3 Restricted, *Opuntia stricta*- s22(2) C3 Restricted and *Rumex vesicarius*- Prohibited s12 C1 Prohibited.

Vegetation condition was generally 'Good' to 'Very Good' (Keighery 1994). Disturbance was present within the survey area mostly attributed to, access tracks and exploration related activities, as well as open pit mines and waste landforms.

The Environmental Protection Authority's (EPA) objective for flora and vegetation is to maintain the abundance, species diversity and geographical distribution of flora and vegetation as well as protect Threatened flora, consistent with the provisions of the *Biodiversity Conservation Act 2016*.

Most of the species and communities recorded during this survey are widespread throughout the Eastern Murchison subregion and adjoining regions. At this stage, the final footprint of mining related disturbances is yet to be finalised, however, these disturbances are not anticipated to occur within the survey area.

This report summarises the results of a detailed flora and vegetation survey. This detailed flora and vegetation report will support numerous applications including mining proposals and clearing permits submitted to relevant Government Departments.



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1 INTRODUCTION

1.1 BACKGROUND

St Barbara Limited (ASX: SBM), an Australian based company, has three gold mining operations, including their Leonora Operation/Project. The Leonora Project consists of the Gwalia mine, located just south of Leonora, approximately 235 kilometres (km) north of Kalgoorlie, Western Australia (WA).

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A previous comprehensive desktop assessment of the flora and vegetation within the same survey area was completed by Spectrum Ecology in November 2021 (Spectrum, 2022). The findings of the desktop assessment identified the potential occurrence of conservation significant flora, and hence a detailed flora and vegetation survey was recommended.

This detailed flora and vegetation report will support numerous applications including mining proposals and clearing permits submitted to relevant Government Departments.



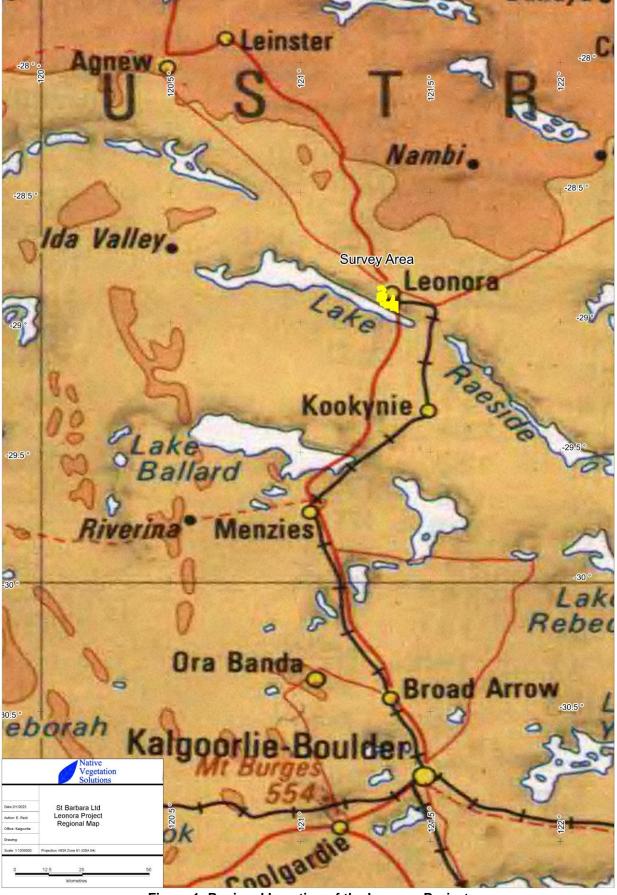


Figure 1: Regional Location of the Leonora Project



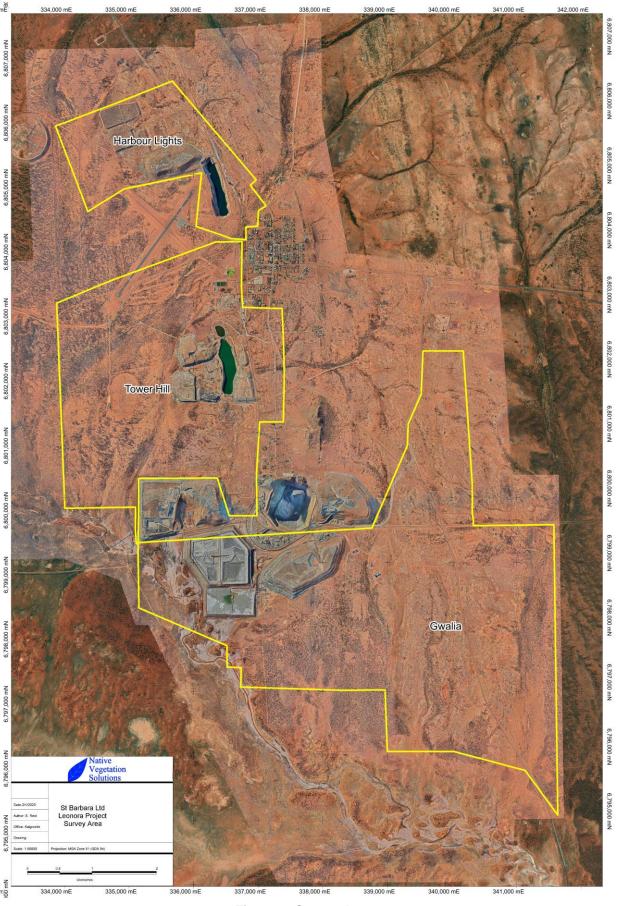


Figure 2: Survey Areas



1.2 PURPOSE AND SCOPE

The objective of this report is to record and analyse the results of the flora and vegetation component of a Detailed assessment conducted in accordance with the following documents:

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

A Detailed Flora and Vegetation Survey has two components:

- 1) Reconnaissance Survey
 - a) Desktop study which includes a literature review and a search of the relevant databases; and
 - b) Reconnaissance survey of the subject area to verify the desktop survey, undertake low impact sampling, define vegetation groups present in the area, search for species of conservation significance and to determine potential sensitivity to impact.

2) Detailed Plot Based Survey

- a) Detailed survey, comprising multiple visits in main flowering seasons or other seasons and replication of plots in vegetation units incorporating greater coverage than a reconnaissance survey; and
- b) Comprehensive survey when necessary to: enhance the level of knowledge at the locality or sub-regional scale, in order to provide wider context for the local scale.

Therefore, the scope of work for the Detailed flora and vegetation survey was to:

- Conduct a desktop study that included a literature review and search of relevant databases
- Conduct a plot-based survey within the survey area (incorporating 20m x 20m quadrats)
- Prepare an inventory of species occurring in the study area
- Conduct PATN[©] analysis of quadrat-based presence/absence data
- Quantify survey intensity via a Species Accumulation Curve
- Describe the vegetation associations in the survey area
- Identify any vegetation communities or flora species of particular conservation significance
- Map broad-scale vegetation groups found within the survey area, including vegetation condition; and
- Provide recommendations, including the management of perceived impacts to flora and vegetation, particularly flora of conservation significance, within the study area.

1.3 STATUTORY FRAMEWORK AND GUIDANCE

This assessment took into account relevant sections of Commonwealth and State legislation and guidelines:

- Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
- Environmental Protection Act 1986 (EP Act)
- Biodiversity Conservation Act 2016 (BC Act)
- Biosecurity and Agriculture Management Act 2007 (BAM Act)

The Minister for the Environment publishes lists of flora species in need of special protection because they are considered rare, likely to become extinct, or are presumed extinct. The current listings were published in the Government Gazette on 5 December 2018 (Smith and Jones, 2018) and were taken into account.



As well as those listed above, the assessment took into account relevant sections of:

- EPA (2016) Statement of Environmental Principles, Factors and Objectives; and
- EPA (2016a) Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment, known as Flora and Vegetation Technical Guidance

1.3.1 Western Australian Biodiversity Conservation Act 2016

The Western Australian *Biodiversity Conservation Act 2016* (BC Act, the Act) provides for the conservation, protection and ecologically sustainable use of biodiversity and biodiversity components in Western Australia. The BC Act replaced the *Wildlife Conservation Act 1950*.

Threatened species (both flora and fauna) that meet the categories listed within the Act are highly protected and require authorisation by the Ministerial to take or disturb. These are known as Threatened Flora and Threatened Fauna. The conservation categories of Critically Endangered, Endangered and Vulnerable have been aligned with those detailed in the EPBC Act, as below.

Flora and fauna species may be listed as being of special conservation interest if they have a naturally low population, restricted natural range, are subject to or recovering from a significant population decline or reduction of range or are of special interest, and the Minister considers that taking may result in depletion of the species. Migratory species and those subject to international agreement are also listed under the Act. These are known as specially protected species in the Act.

Threatened Ecological Communities (TECs) are also protected under the Act and are categorised using the same criteria as threatened species.

1.3.2 Environmental Protection Act 1986

The *EP Act 1986* was created to provide for an Environmental Protection Authority (the EPA) that has the responsibility for:

- prevention, control and abatement of pollution and environmental harm
- conservation, preservation, protection, enhancement and management of the environment
- matters incidental to or connected with the above.

The EPA is responsible for providing the guidance and policy under which environmental assessments are conducted. It conducts environmental impact assessments (based on the information included in environmental assessments and provided by the proponent), initiates measures to protect the environment and provides advice to the Minister responsible for environmental matters.

1.3.3 Environment Protection and Biodiversity Conservation Act 1999

At a Commonwealth level, Threatened taxa are protected under the EPBC Act, which lists species and ecological communities that are considered Critically Endangered, Endangered, Vulnerable, Conservation Dependent, Extinct, or Extinct in the Wild (Section 6 below).

1.3.4 Flora

1.3.4.1 Threatened and Priority Flora

Conservation significant flora species are those that are listed as TF (Threatened Flora) and (within Western Australia) as PF (Priority Flora). TF species are listed as threatened by the



Western Australian Department of Biodiversity Conservation and Attractions (DBCA) and protected under the provisions of the BC Act. Some State-listed TF are provided with additional protection as they are also listed under the Commonwealth EPBC Act.

Flora are listed as PF where populations are geographically restricted or threatened by local processes, or where there is insufficient information to formally assign them to TF categories. Whilst PF are not specifically listed in the BC Act, some may qualify as being of special conservation interest and these may require a greater level of protection than unlisted species. Generally though, PF have no statutory protection. They are generally considered in environmental impact assessments under the state approval processes by Department of Mines, Industry Regulation and Safety (DMIRS) under the Mining Act and DBCA under the EP Act. Under this approval process measures are usually taken to protect and avoid PF.

There are seven categories covering State-listed TF and PF species (DBCA, 2019) which are defined in Section 8 below. PF for Western Australia are regularly reviewed by DBCA whenever new information becomes available, with species status altered or removed from the list (Smith and Jones, 2018) when data indicates that they no longer meet the requirements outlined in Section 8 below.

1.3.4.2 Other Significant Flora

According to the Flora and Vegetation Technical Guidance (EPA 2016a) other than being listed as Threatened or Priority Flora, a species can be considered as significant if it is considered to be:

- locally endemic or association with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems)
- a new species or has anomalous features that indicate a potential new species
- at the extremes of range, recently discovered range extensions (generally considered greater than 100 km or in a different bioregion), or isolated outliers of the main range
- unusual species, including restricted subspecies, varieties or naturally occurring hybrids and
- relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.

1.3.5 Ecological Communities and Vegetation

1.3.5.1 Threatened and Priority Ecological Communities

Nationally Listed Threatened Ecological Communities

An ecological community is a naturally occurring group of plants, animals and other organisms interacting in a unique habitat. The complex range of interactions between the component species provides an important level of biological diversity in addition to genetics and species. At Commonwealth level, Threatened Flora and Threatened Ecological Communities (TECs) are protected under the Commonwealth EPBC Act. An ecological community may be categorised into one of the three subcategories:

- Critically Endangered, if it is facing an extremely high risk of extinction in the wild in the immediate future
- Endangered, if it is not critically endangered and is facing a very high risk of extinction in the wild in the near future and
- Vulnerable, if it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium-term future.



State Listed Threatened Ecological Communities

The Western Australian DBCA also maintains a list of TECs, protected under the BC Act, which are further categorised into three subcategories much like those of the EPBC Act.

State Listed Priority Ecological Communities

DBCA maintains a list of Priority Ecological Communities (PECs). PECs include potential TECs that do not meet survey criteria, or that are not adequately defined.

1.3.5.2 Other Significant Vegetation

According to the Flora and Vegetation Technical Guidance (EPA 2016a), other than being listed as a TEC or PEC, vegetation can be considered as significant if it is considered to have:

- restricted distribution
- a degree of historical impact from threatening processes
- a role as a refuge; and/or
- provides an important function required to maintain ecological integrity of a significant ecosystem.

1.3.5.3 Declared Pest Plants

The Western Australian Organism List (WAOL) details organisms listed as Declared Pests under the BAM Act). Under the BAM Act, Declared Pests are listed as one of the three categories, or exempt:

- C1 (exclusion), that applies to pests not established in Western Australia; control measures are to be taken to prevent their entry and establishment
- C2 (eradication), that applies to pests that are present in Western Australia but in low numbers or in limited areas where eradication is still a possibility
- C3 (management), that applies to established pests where it is not feasible or desirable to manage them in order to limit their damage; or
- Exempt (no category).



2 EXISTING ENVIRONMENT

2.1 CLIMATE

The subregion climate is Arid with an annual average of 200 mm of rainfall, sometimes in summer but usually in winter (CALM, 2002). The nearest official meteorological weather station with the most complete and up to date information is Leonora weather station, which is located less than 5 km of the survey area. Recordings of the local climatic conditions commenced at Leonora in 1994 (BOM, 2023) and data collected at stations 012046 and 012241 were used for this report.

2.1.1 Temperature

Mean annual minimum temperature at Leonora is 14.0°C and mean annual maximum temperature is 27.9°C. The coldest temperatures occur in July (mean minimum temperature 6.1°C), the hottest is January (mean maximum temperature 37.0°C) and diurnal temperature variations are relatively consistent throughout the year (Figure 2).

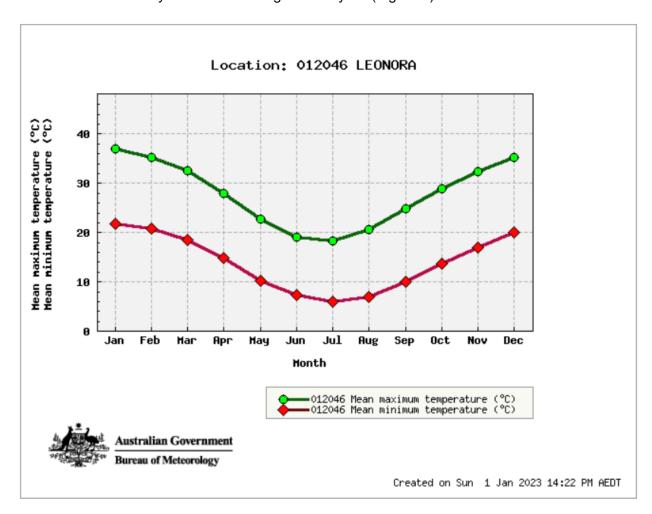


Figure 3: Mean temperature ranges for Leonora Meteorological Station (BOM, 2023)

2.1.2 Rainfall

The annual average rainfall at Leonora is 236.4 mm over an average of 28.9 days above 1mm of rain (BOM, 2023). Average rainfall varies across the months, with larger rainfall events falling between December to June (Figure 4). Rainfall for 2022 was above average for the months of April, July and September and below average for all other months prior to the survey (Figure 5). September 2022 rainfall was more than 5 times higher than the average monthly rainfall amount (Figure 5), invigorating and extending the flowering season beyond normal circumstances.



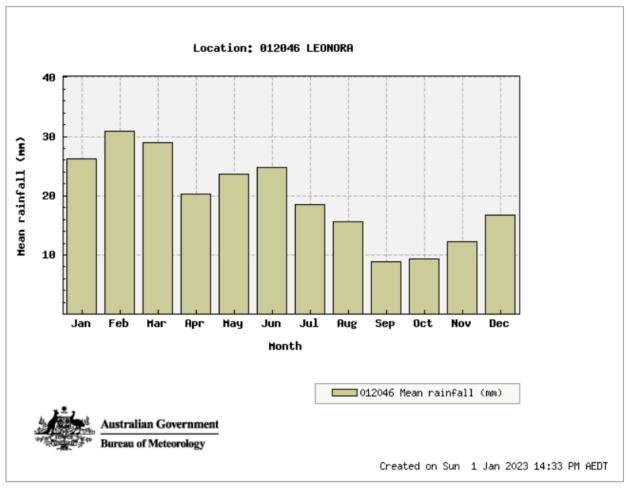


Figure 4: Average rainfall data for the Leonora Meteorological Station (BOM, 2023)

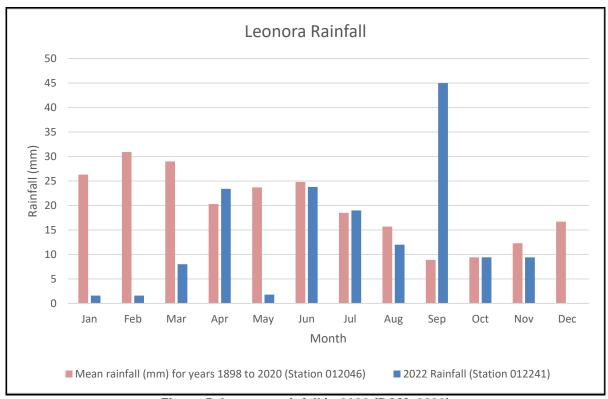


Figure 5: Leonora rainfall in 2022 (BOM, 2023)



2.2 INTERIM BIOGEOGRAPHIC REGIONALISATION OF AUSTRALIA (IBRA) REGION

The IBRA recognises 89 bioregions within Australia and 419 subregions (DCCEEW, 2023). The project is located within the Eastern Murchison IBRA subregion (MUR01) which totals over 7 million hectares (CALM, 2002). The Eastern Murchison subregion is characterised by extensive areas of elevated red desert sandplains with minimal dune development and internal drainage. (CALM 2002).

2.3 LANDFORMS AND SOILS

The Eastern Murchison comprises the northern parts of the 'Southern Cross' and 'Eastern Goldfields' Terrains of the Yilgarn Craton. The occluded Paleodrainage system generates Salt Lake systems. Other features include broad plains of red-brown soils, breakaway complexes, and red sandplains (CALM 2002).

2.4 BOTANICAL SUBREGION AND EXISTING VEGETATION

The vegetation of the Eastern Murchison botanical subregion consists of Mulga woodlands often rich in ephemerals. Vegetation is dominated by hummock grasslands, saltbush and *Tecticornia* shrublands (CALM, 2002).

3 METHODS

3.1 PERSONNEL AND REPORTING

The following personnel were involved in the single season detailed flora and vegetation survey (September 2022):

- Mr Eren Reid (BSc- Biological Science), Principal Botanist, Native Vegetation Solutions (NVS), undertook field work of the detailed survey in September 2022, vegetation mapping, data collation, identification of flora during field work and preparation and review of the report; and
- Mr Frank Obbens (BSc) Consultant Botanist, Bushtech Consultancy, undertook the identification of unknown flora samples collected by NVS in the field, made recommendations regarding Threatened flora, range extensions and new locations requiring submission to the WAHERB as per the EPA Technical Guidelines (EPA 2016a).

3.2 PRELIMINARY DESKTOP STUDY

A preliminary assessment of the survey area and its potential constraints was undertaken by reviewing relevant government agency managed databases (Sections 3.2.2 to 3.2.8, and Appendices A & D) and consulting with government agencies where necessary. The following sections provide a summary of desktop searches undertaken for the project.

3.2.1 Previous Flora Surveys

Multiple surveys have been conducted in the general vicinity of the current survey area, however, most of these surveys occurred prior to 2011. One previous desktop assessment of flora vegetation was completed in the current survey area in November 2021 (Spectrum, 2022).

All surveys previously conducted in the vicinity of the survey area were reviewed for significant flora and vegetation. Reports were incorporated if they were provided by the client or publicly available. The reports included in the desktop assessment are listed in Table 1.



Table 1: Previous Flora and Vegetation Surveys

Report	Reference	Location from current survey area	Survey Summary
Comprehensive desktop assessment of flora and vegetation, with site visit in November 2021	Spectrum, 2022	Overlaps current Survey Area	A total of 86 significant flora taxa were identified during the flora desktop searches. Of these, five were assigned a High Likelihood of occurrence, while ten were assigned a Medium Likelihood of occurrence. No Threatened Ecological Communities (TEC) were recorded within 50 km of the Survey Area. However, the desktop assessment recorded two Priority Ecological Communities (PEC) within 50 km of the Survey Area which are both listed as Priority 1. One of PECs intersects the Survey Area at both Gwalia and Tower Hill: The Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station
Assessment of Flora and Vegetation Values- King of the Hills Mine	Mattiske Consulting Pty Ltd, 2020	5km North	One Priority 1 species, <i>Frankenia georgei</i> , was recorded. No other threatened species were recorded. Five vegetation communities were recorded, with no TECs or PECs identified.
Flora and Vegetation Survey of the Kallis – Trump and Poker – Forrest Lease Areas	Mattiske Consulting Pty Ltd, 2008	Overlaps a small portion of the current Survey Area	No species of conservation significance were recorded. Six vegetation communities were defined and affected by grazing and previous mining activities.
Flora and Vegetation Survey and Establishment of Baseline Transects for a Creek Diversion at Tower Hill	Mattiske Consulting Pty Ltd, 2007	Overlaps current Survey Area	Three vegetation communities were recorded; none are considered regionally or locally significant. Two 50 m monitoring transects were established.
Flora and Vegetation Survey of St Barbara, Leonora Pipeline Site	Mattiske Consulting Pty Ltd, 2006	Overlaps current Survey Area	No Declared Rare Flora or Priority species were recorded during the survey. Four plant communities were defined, no TECs were located.
Declared Rare and Priority Flora Search of Proposed Mining Areas at Ulysses and Gwalia Deeps	Mattiske Consulting Pty Ltd, 2000	Overlaps current Survey Area	Fifty-nine rare and endangered taxa identified as potentially occurring. No Declared Rare Flora or Priority species were recorded during the survey.

3.2.2 Environment Protection and Biodiversity Conservation Act Protected Matters

The *EPBC Act* Protected Matters Search tool was utilised to provide results for matters of National Environmental Significance within the survey area using the shapefiles of the survey area (Appendix A) with a 10 km buffer (DCCEEW, 2023a).

3.2.3 Threatened Flora and Communities

The Threatened and Priority Flora Database managed by the Department of Biodiversity, Conservation and Attractions (DBCA) was searched for threatened and priority flora within a 20 km radial area of the survey area shapefile (DBCA, 2023a).

The presence of Threatened and Priority Ecological Communities (TECs & PECs) was determined by examining Geographic Information System (GIS) data supplied by the DBCA upon request within a 20 km buffer of the survey area shapefile (DBCA, 2023).

3.2.4 Environmentally Sensitive Areas (ESAs) and Conservation Reserves

The Department of Water and Environmental Regulation (DWER) Clearing Permit System (CPS) Map Viewer was used to determine the location of any ESAs and Conservation Reserves (DWER, 2023).

3.2.5 Land Systems

As part of the Rangeland resource surveys, the Department of Agriculture mapped the Land Systems of Western Australia (DPIRD, 2017). The purpose of the survey was to provide comprehensive description and mapping of the biophysical resources of the region, together with an evaluation of the condition of the soils and vegetation throughout. The report and the accompanying series of maps at 1:250,000 scale, are primarily intended as a reference for land managers, land management advisers and land administrators, that is, the people most involved in planning and implementing land management practices. The report and complementary maps



also provide researchers and the public with a basic reference on the landscape resources in Western Australia.

3.2.6 Vegetation Type, Extent and Status

Vegetation extent and status data was sourced from the Department of Agriculture and Food (DAFWA) report and its associated GIS file (Shepherd *et al*, 2002). This data comprises Beard's Pre-European vegetation groups.

DBCA's Statewide Vegetation Statistics (DBCA, 2019) was also referenced for the current extent of Beard's Vegetation Groups. The purpose of examining this information is to determine if the survey area lies within any vegetation groups defined by Beard that may have been subjected to widescale clearing for European settlement. The national objectives and targets for biodiversity conservation recognise that the retention of 30% or more of the pre-clearing extent of a Beard vegetation association is necessary if Australia's biological diversity is to be protected.

3.2.7 Wetlands

The potential of wetlands within the project area was determined by examining DWER's Clearing Permit System Map Viewer (DWER, 2023).

3.2.8 Dieback

Under normal circumstances Dieback is only considered a potential issue for any project if the project area lies within the Southwest Land Division and the mean annual rainfall of the area is greater than 400 mm. There is no record of *Phytophthora cinnamomi* (Dieback) establishing in natural ecosystems in regions receiving <400mm rainfall per annum (CALM, 2003). However, as indicated within the more recent Dieback guidelines (DBCA, 2020), other species of *Phytophthora* may persist east of the 400mm isohyet in unusually wet conditions. It is therefore recommended to conduct a risk assessment as per these guidelines.

3.3 SITE INVESTIGATION

The field survey was conducted by Mr. Eren Reid, Botanist of Native Vegetation Solutions (NVS), from the 12th to 16th of September 2022. NVS established 59 quadrats within the survey area, recording 176 vascular plant species within 16 vegetation groups. A further 440 Relevé sample sites were also recorded within and around the survey area, determining vegetation units for mapping and species present.

A total of 60 hours was spent on site traversing the survey area in September 2022.

While a vehicle was used to reach the site, all traverses were made on foot or via a Yamaha Viking (All Terrain Vehicle).

The survey was conducted in accordance with relevant EPA's Statements and Guidelines (Section 1.2).

The EPA uses the Interim Biogeographic Regionalisation of Australia (IBRA) as the largest unit for Environmental Impact Assessment decision making in relation to the conservation of biodiversity. Given the scale and nature of the proposed disturbance as well as the existing disturbance, and that the survey area is located within the Murchison IBRA region, a detailed flora and vegetation survey was deemed appropriate.

3.3.1 Licenses

Flora was collected for identification under the Scientific Collection License FB62000171, held by Mr Eren Reid with expiry 08/10/2023.



3.3.2 Field Methods

Prior to the field work, the aerial photography was examined and representative sample sites for quadrat locations were chosen to provide coverage over all viable vegetation types.

20 x 20m quadrats were established at these sites in appropriate locations, taking into account representation of surrounding vegetation and vegetation boundaries.

Each quadrat site was marked in all corners with a 97cm galvanized fence dropper and was defined by tape measures. The location of the North-East (NE) corner was captured on a TwoNav Aventura GPS at ±4m accuracy, using Universal Transverse Mercator location on GDA94 datum. Digital photographs were taken of each quadrat site from the NE corner.

Data collected at each of the six quadrats included, but not limited to:

- Site Code
- Location (via GPS)
- Size of Quadrat
- Quadrat marking method
- Photograph/s from north-west corner
- Landform and soil description
- Comprehensive Species List (including dominant growth form, height, cover and species present for the upper, mid and lower stratums)
- % Bare Ground and Litter
- Description of disturbances (including fire history)
- Vegetation Condition

A complete list of all species encountered was also recorded, detailing the average height and estimated coverage of the dominant species from the three stratum levels (Upper, Mid and Lower).

Specimens of taxa not recognised by the Botanist were collected and pressed along with specimens of taxa recognised as, or thought to be, conservation-significant species.

The vegetation structure was assessed using the method developed by Muir (1977). Definitions of the vegetation structure are presented in Appendix B.

The condition of each quadrat was assessed using the method developed by Keighery (1994). Definitions of the condition scale are presented in Appendix B.

Vegetation groups were mapped (section 3.3.4 below).

Relevé sites were used between quadrat sampling points, and outside of the survey area via wandering traverses for opportunistic sampling of plant taxa, to collect flora specimens and to aid vegetation group mapping in the survey area. Opportunistic sampled plant taxa are listed in the table "Species List per Vegetation Group" in Appendix E.

Maps of all sample sites are included in Appendix C, Map 2, with detailed quadrat information listed in Appendix F.

3.3.3 Post-Field Methods

Unknown specimens collected in the field were identified post field work by Eren Reid and Frank Obbens with reference to published keys and samples held in the Reference Section of the Western Australian Herbarium (WAHERB, 2023).



Species information was transferred into Microsoft Excel® worksheets in preparation for PATN analysis (Belbin, 1994), via Bray and Curtis Flexible unweighted pair group method with arithmetic mean (UPGMA).

PATN Analysis was completed on both the dominant species and all species recorded within each quadrat. PATN is a software package that aims to try and display patterns in complex data. Complex in PATN's terms, requires a minimum of 6 objects (i.e., different species) and a suite of more than 4 variables (i.e., different quadrats) that describe the objects. The vegetation groups listed in Section 4.2.1.2 show the grouping of quadrats based on similarities in the flora species that are present or absent in each quadrat. This data is entered into the PATN Analysis software which produces a quantitative estimate of the relationship between species composition of each quadrat.

A Species Accumulation Curve was also generated via input into the computer program "Species Diversity and Richness IV" (Seaby & Henderson, 2006).

3.3.4 Mapping

Vegetation mapping was produced via GPS recorded information in the field, cross-referenced with vegetation descriptions made in the field, overlaid on aerial imagery of the survey area. The GPS utilized (TwoNav Aventura GPS) displayed aerial imagery, hence real-time mapping of vegetation groups was available during field work.

GPS tracks and waypoints recorded during field work are presented in Appendix C. Vegetation Health Condition was assessed in the field with reference to Keighery (1994).

3.3.5 IBSA Data Package

The Environmental Protection Authority (EPA), Department of Water and Environmental Regulation (DWER) and DMIRS require Index of Biodiversity Surveys for Assessments (IBSA) Data Packages to be submitted to support assessment and compliance under the *Environmental Protection Act 1986.*

An IBSA data package is a single file in .zip format, containing:

- one Metadata and Licensing Statement in .pdf format
- one survey report in .pdf format
- one plain-text survey report in .txt format; and
- a set of electronic data files, comprising:
 - one survey details spatial dataset in shapefile (.shp, etc.) or Mapinfo (.tab, etc.) format; and
 - one or more survey data spatial datasets, as required, in shapefile (.shp, etc.) or Mapinfo (.tab, etc.) format.

The IBSA Data package for this survey has been submitted via the DWER IBSA Submission Portal.



3.4 NOMENCLATURE AND TAXONOMY

Nomenclature follows that used by the WAHERB.

The WAHERB has updated its sequence and arrangement of collections to conform to the systematic sequence of the Angiosperm Phylogeny Group (APGIII), with the result that many Families and Genera have been moved or renamed. This report attempts to follow those changes in relation to species recorded during this survey. Definitions of Threatened Flora are also included in Section 8 below.



3.5 LIMITATIONS

Table 1 lists potential limitations that may have affected the survey.

Table 2: List of potential survey limitations

Possible Limitation	Constraint	Comment
		Experienced and competent personnel conducted the
Competency/experience of		survey. Eren Reid has over 18 years' experience in
the consultant carrying out		botanical surveys throughout the Goldfields and over a
the survey	No	variety of environments across Western Australia.
,		The Scope of work was adequately defined. Vascular flora
		species were the focus of the survey and were thoroughly
Scope	No	sampled.
•		All taxa not identified in the field were collected and
	NI-	pressed, and later identified by Eren Reid or Frank
Proportion of flora identified,	No	Obbens. See also Species Accumulation Curve in
recorded and/or collected		section 4.2.2.2.
		Information on flora and vegetation of the region and local
		area was available from publicly available databases,
Sources of information	No	books and reports.
Proportion of the tasks	-	
achieved	No	All tasks completed.
	_	This survey was undertaken in September 2022. Local
		rainfall in 2022 was below average for most months prior
		to the survey excluding April, July and September. Rainfall
		received in September was more than 5 times the monthly
		average in 2022. The survey coincided with flowering of
		many flora species that were invigorated by the
Timing/season	No	September rainfall.
- manage control		Disturbances within the survey area included the
		Goldfields Highway, existing open pits and waste
		landforms, as well as exploration areas. The disturbances
		did not significantly compromise the results of the survey
Disturbance in survey area	Yes	as these areas were avoided whilst collecting data.
	. 55	The survey intensity is considered to have been sufficient
		for a detailed survey according to EPA (2016) guidelines.
		Areas most likely to contain threatened and priority
		species were targeted. Vegetation mapping sites were
		selected to provide adequate coverage of the survey area.
		The Species accumulation curve suggests sampling
Intensity of survey effort	No	efficacy was sufficient.
mission, c. carvey energ		Resources, in terms of time, equipment, support and
		personnel were adequate to undertake and complete the
Resources	No	detailed survey.
Remoteness and/or access		All the areas in need of survey were easily accessible from
problems	No	existing tracks, or by foot.
	1.0	Contextual information regarding vegetation and flora
		around the Eastern Murchison subregion is readily
Availability of contextual		available. Adequate information was able to be accessed
information for the region	No	from available databases.
initiality of the region	110	nom available databacco.



4 RESULTS

4.1 PRELIMINARY DESKTOP ASSESSMENT

4.1.1 EPBC Protected Matters Search Tool

The EPBC Protected Matters report indicated no TECs or Commonwealth Reserves within the requested search area.

The results of the EPBC Protected Matters search are included in Appendix A.

4.1.2 Threatened Flora and Communities

The DBCA database searches revealed a potential for no Threatened and 3 Priority Flora species to occur within a 20 km radius of the survey area (DBCA, 2023a). No known locations of Threatened or Priority Flora occur within the survey area.

Results of the threatened flora database search are included in Table 2 below.

Likelihood of occurring in survey area-CONS_CODE TAXON Comment post field work Unlikely- possible suitable habitat, extensively Angianthus prostratus Р3 searched Unlikely- possible suitable habitat, extensively Р3 Calytrix praecipua searched Unlikely- possible suitable habitat, extensively Р1 Nicotiana salina searched

Table 3: Threatened flora database search results

The PEC/TEC search revealed no TECs within 50km of the survey area (DBCA, 2023).

The search identified two Priority Ecological Communities (PEC) within 50 km of the Survey Area; both listed as Priority 1. One of PECs intersects the Survey Area at both Gwalia and Tower Hill: The Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station (Appendix A). It is known for its unique assemblages of invertebrates in the groundwater calcretes and is threatened by hydrological changes associated with mining. The remaining PEC is located 25 km to the west of the Survey Area. It was assigned a 'Low likelihood' to occur within the survey area based on the restriction to a palaeodrainage system on Sturt Meadows Station.

4.1.3 Environmentally Sensitive Areas and Conservation Reserves

No ESAs are located within the survey area (DWER, 2023).

4.1.4 Land Systems

As part of the Rangeland resource surveys, the Department of Agriculture mapped the Land Systems of Western Australia (DPIRD, 2017). The Land Systems occurring within the survey area are listed in Table 4 below, and displayed in Appendix C.



Table 4: Land Systems occurring within the survey area (DPIRD, 2017)

Land System	Description	Extent of Survey Area (ha)	% Of Survey Area (%)	Total Eastern Murchison Extent (ha)	% of Eastern Murchison extent within survey area
Rainbow System	Hardpan plains supporting mulga tall shrublands.	320.13	9.00	235,345.67	0.14
Violet System	Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands.	221.49	6.23	418,724.97	0.05
Leonora System	Low greenstone hills and stony plains supporting mixed chenopod shrublands.	152.74	4.29	125,955.45	0.12
Tiger System	Gravelly hardpan plains and sandy banks with mulga shrublands and wanderrie grasses.	102.70	2.89	110,095.64	0.09
Gundockerta System	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands.	2,241.51	63.00	330,076.45	0.68
Brooking System	Prominent ridges of banded iron formation supporting mulga shrublands and occasional minor halophytic communities.	182.69	5.13	96,123.30	0.19
Carnegie System	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and <i>Acacia</i> tall shrublands.	336.75	9.46	1,664,130.07	0.02

4.1.5 Vegetation Type, Extent and Status

One vegetation unit defined by Beard (1990) was identified as part of the desktop assessment. Vegetation units identify the Pre-European extent of vegetation, as mapped by Beard (1990). The national objectives and targets for biodiversity conservation recognise that the retention of 30% or more of the pre-clearing extent of Beard's vegetation associations is necessary if Australia's biological diversity is to be protected.

Information relating to the known Beard (1990) vegetation units within the survey area has been summarised in Tables 5, 6, 7, 8 and 9 below. This information has been compiled through both desktop assessments and the site visit. The extent of Beard vegetation units within the survey area is less than 1.5% of the total area at each scale (Table 5), and each are above the 30% threshold at a State, bioregional and subregional level (Tables 6, 7, 8 & 9).

Table 5: Extent of Beard Association within the survey area

Beard Vegetation	Extent within	% of survey area	% of extent at each
Association	survey area (ha)	(%)	scale^
18	382.74	10.76	<1%
28	1,994.72	56.06	0<1.5%
39	272.98	7.67	<1%
676	907.61	25.51	<1%

[^] By Association (WA) (Shepherd et al., 2002), By Association (WA), By IBRA Region (Murchison), By IBRA Subregion (Eastern Murchison) and By LGA (Shire of Leonora) (DBCA, 2019).



Table 6: Summary of information regarding Pre-European and current vegetation extent of vegetation association 18 within the survey area

Factor	Value							
Beard Vegetation Association*	18	18						
Vegetation Association Description*	Low woodland; mulga (<i>Acacia aneura</i>)							
			Scale					
Pre-European Extent (ha)	By Association (WA)	By Association (WA)	By IBRA Region (Murchison)	By IBRA Sub- region (Eastern Murchison)	By LGA (Shire of Leonora			
	22,029,557*	19,892,306**	12,363,252**	10,269,896**	2,010,057**			
% Pre-European Extent Remaining	100.00%*	99.75%**	99.68%**	99.66%**	99.62%**			
Surrounding Land Use***	Mining, Explo	ration, Prospectin	g, Pastoral Lease)				
Weed prevalence***	Low							

^{*} Source: Shepherd et al. (2002) Appendix 2

Table 7: Summary of information regarding Pre-European and current vegetation extent of vegetation association 28 within the survey area

Factor	Value							
Beard Vegetation Association*	28							
Vegetation Association Description*	Open low woodla	Open low woodland; mulga						
			Scale					
Pre-European Extent (ha)	By Association (WA)	By Association (WA)	By IBRA Region (Murchison)	By IBRA Sub- region (Eastern Murchison)	By LGA (Shire of Leonora)			
	317,397*	395,895**	220,583**	141,411**	126,344**			
% Pre-European Extent Remaining	100.00%*	99.06%**	98.35%**	97.38%**	98.25%**			
Surrounding Land Use***	Mining, Exploration, Prospecting, Pastoral Lease							
Weed prevalence***	II OW							

^{**}Source: DBCA, (2019)
*** Source: Field Assessment

^{*} Source: Shepherd *et al.* (2002) Appendix 2
**Source: DBCA, (2019)
*** Source: Field Assessment



Table 8: Summary of information regarding Pre-European and current vegetation extent of vegetation association 39 within the survey area

Factor	Value							
Beard Vegetation Association*	39	39						
Vegetation Association Description*	Shrublands; mulga scrub							
			Scale					
Pre-European Extent (ha)	By Association (WA)	By Association (WA)	By IBRA Region (Murchison)	By IBRA Sub- region (Eastern Murchison)	By LGA (Shire of Leonora)			
	4,856,768*	6,613,567**	1,138,064**	711,328.84**	252,141**			
% Pre-European Extent Remaining	100.00%*	99.83%**	99.10%**	98.68%**	97.56%**			
Surrounding Land Use***	Mining, Explo	ration, Prospectin	g, Pastoral Lease)				
Weed prevalence***	Low							

^{*} Source: Shepherd et al. (2002) Appendix 2

Table 9: Summary of information regarding Pre-European and current vegetation extent of vegetation association 676 within the survey area

Factor		Value					
Beard Vegetation Association*	n 676						
Vegetation Association Description*	Succulent steppe	; samphire					
			Scale				
Pre-European Extent (ha)	By Association (WA)	By Association (WA)	By IBRA Region (Murchison)	By IBRA Sub- region (Eastern Murchison)	By LGA (Shire of Leonora		
	1,907,938*	2,063,413**	382,704**	369,324**	207,892**		
% Pre-European Extent Remaining	99.01%*	95.18%**	99.97%**	99.97%**	99.95%**		
Surrounding Land Use*** Mining, Exploration, Pro		ration, Prospectin	g, Pastoral Leas	e			
Weed prevalence***	Low						

^{*} Source: Shepherd et al. (2002) Appendix 2

4.1.6 Wetlands

No water bodies were identified within the survey area via the CPS Map Viewer. The closest waterbody lies 400 m south of the survey area (DWER, 2023).

4.1.7 Dieback

The survey area receives average annual rainfall of approximately 236.4 mm (BOM, 2023). Under normal circumstances Dieback is only considered a potential issue for any project if the project

^{**}Source: DBCA, (2019)
*** Source: Field Assessment

^{**}Source: DBCA, (2019)
*** Source: Field Assessment



area lies within the Southwest Land Division and the mean annual rainfall of the area is greater than 400 mm. There is no record of *Phytophthora cinnamomi* (Dieback) establishing in natural ecosystems in regions receiving <400mm rainfall per annum (CALM, 2003). However, as indicated within the more recent Dieback guidelines (DBCA, 2020), other species of *Phytophthora* may persist east of the 400mm isohyet in unusually wet conditions. Therefore, if any clearing is to be completed within the survey area, it is recommended to conduct a risk assessment as per these guidelines.

Additionally, if clearing is proposed within the survey area, all measures should be taken to prevent any possible soil contamination (seeds of non-native species *etc.*) which poses a risk in the survey area during seasonally favourable conditions.



4.2 FIELD ASSESSMENT

4.2.1 Vegetation of the Survey Area

Beard's vegetation associations are very broad and are used over large areas in which there is also a large amount of variation at a more local level. The vegetation groups described below for the survey area fit into the broader Beard description above in section 4.1.5.

The vegetation groups described below were determined visually based on dominant species and topographical features, to form the descriptions taken at the time of the field survey.

Descriptions of all 59 sites/quadrats are presented in Appendix F. For each of these sites, the physical features, vegetation description and unit, along with the species lists for the 20 x 20m plots with typical canopy cover and height, are provided.

4.2.1.1 Vegetation Groups

Sixteen vegetation groups were identified during this survey, largely following topographical features and dominant species. Table 10 summarises the vegetation group extent and relative Quadrat and flora information. Mapping of the 16 vegetation groups, as well as the quadrat locations can be seen in Appendix C. Photographs of each quadrat and the relevant vegetation group can be seen in Appendix F.

Table 10: Vegetation Group Extent within Survey Area

Vegetation Group	Vegetation Group Code	Quadrats	Family	Genera	Species	Area (ha)	Percentage of Survey Area (%)
Open Mulga Woodland over Chenopod Shrubland	А	Q1, Q4, Q7, Q15, Q25 and Q59	26	44	80	261.07	7.34
Creekline Vegetation	В	Q2, Q5, Q6, Q45, Q48 and Q50	25	48	70	170.32	4.79
Mulga Woodland	С	Q3, Q11, Q12, Q13, Q16, Q20 and Q46	20	32	55	890.80	25.03
Mulga over Senna shrubland	D	Q8, Q28 and Q57	11	17	25	115.33	3.24
Mulga over Chenopod Shrubland	E	Q9, Q23, Q24 and Q49	21	32	56	411.62	11.57
Mulga over Ironstone and Quartz outcrops	F	Q10, Q56 and Q58	14	20	28	2.96	0.08
Open Low Chenopod Shrubland	G	Q14, Q18 and Q19	13	22	32	393.74	11.06
Eremophila youngii subsp. youngii over Chenopod and Tecticornia shrubland	Н	Q17, Q26, Q54 and Q55	11	19	25	35.88	1.01
Acacia quadrimarginea shrubland over rocky plain	I	Q21	13	16	21	17.67	0.50
Mulga over Eremophila forrestii and Eremophila compacta	J	Q22, Q27, Q29 and Q31	17	22	31	121.57	3.42
Mulga over Banded Ironstone Formation (BIF)	К	Q30, Q32 and Q33	18	26	49	60.43	1.70
Acacia duriuscula over Maireana sedifolia and Scaevola spinescens	L	Q34, Q35 and Q36	12	17	29	9.05	0.25
Tecticornia shrubland	М	Q37, Q39, Q40 and Q44	6	10	15	85.43	2.40
Mulga over <i>Melaleuca interioris</i> and <i>Eremophila miniata</i> sand dune	N	Q38, Q41 and Q47	15	24	32	38.43	1.08
Melaleuca sheathiana over Cratystylis subspinescens and Tecticornia shrubland	0	Q42 and Q43	13	20	23	9.54	0.27
Acacia burkittii creekline vegetation	Р	Q51, Q52 and Q53	18	28	39	6.62	0.19
Bare Salt Lake	Q	None	N/A	N/A	N/A	15.93	0.45
Existing Disturbance	R	None	N/A	N/A	N/A	912.23	25.63
		Total	42*	95*	201*	3558.62#	100%#

^{*}Denotes total recorded in the survey area (not sum of column)

[#] Denotes sum of column



4.2.1.2 PATN Analysis of Quadrat Data

PATN analysis was used to determine the similarities or differences between and within the delineated vegetation groups. The results are supplied below in Figure 6 and Figure 7 as dendrograms. Dendrograms demonstrate the hierarchical relationship between objects.

Quadrats representing similar vegetation groups (as depicted in field work by NVS) are based on species composition, density, topographical features and/or lithology. The PATN analysis does not take these factors into account, and only demonstrates similarities based on presence/absence data within each quadrat. Therefore, PATN analysis groupings are not necessarily distinct, when defining vegetation groups. Hence quadrats depicted as outliers are expected when variations in species composition occurs between quadrats of the same predetermined vegetation grouping.

The PATN analysis dendrogram of the dominant species in Figure 6, displays each quadrat with like symbols representing the NVS mapped vegetation groups, and coloured lines depicting PATN defined vegetation groups. The dendrogram shows a good association between vegetation groups described in section 4.2.1.1, as there were 13 outliers. Outliers are quadrats that do not show a good association with other quadrats in the same NVS mapped vegetation group.

Outliers are expected to occur for most vegetation groups. In most cases one or two dominant species will be present within a 20x20 quadrat, but it will not contain all the varieties of dominant species that will occur across that vegetation type, and as such some quadrats of the same vegetation group will be separated when assessed by the PATN Analysis.



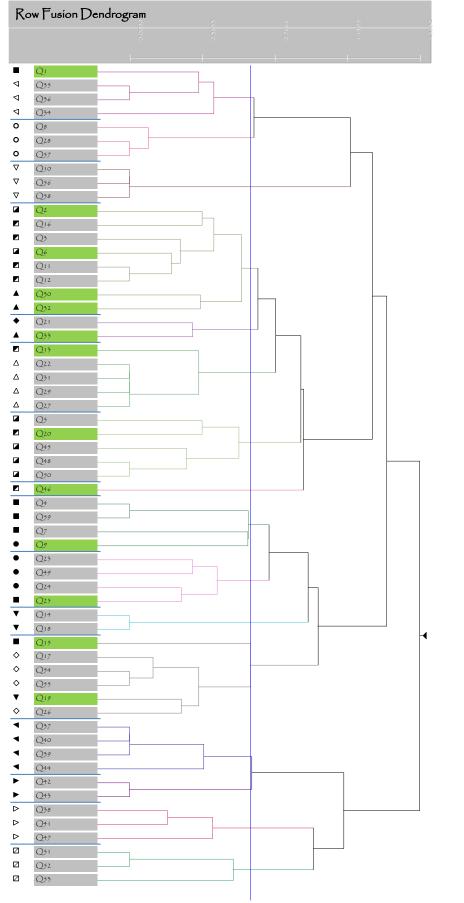


Figure 6: PATN Analysis of Dominant Species into 16 groups



The dendrogram below (Figure 7) of the analysis of all species shows a correlation to pre-grouped quadrats described in section 4.2.1.1. The dendrogram displays each quadrat with like symbols representing NVS mapped vegetation groups, and coloured lines depicting PATN defined vegetation groups. The All species PATN analysis shows a good association between vegetation groups as there were only eight outliers (Figure 7). Outliers are quadrats in the PATN Analysis that do not show a good association with other quadrats in the same vegetation group mapped by NVS. This is expected due to the unweighted nature of PATN analysis, which does not take into account topographical/lithological features or the density of key species defining the vegetation group.

All 16 vegetation groups were well represented via all species PATN Analysis, with all NVS grouped quadrats forming in the analysis. Of the 176 species detected within Quadrats, only eight were shared across 10 or more different vegetation groups.



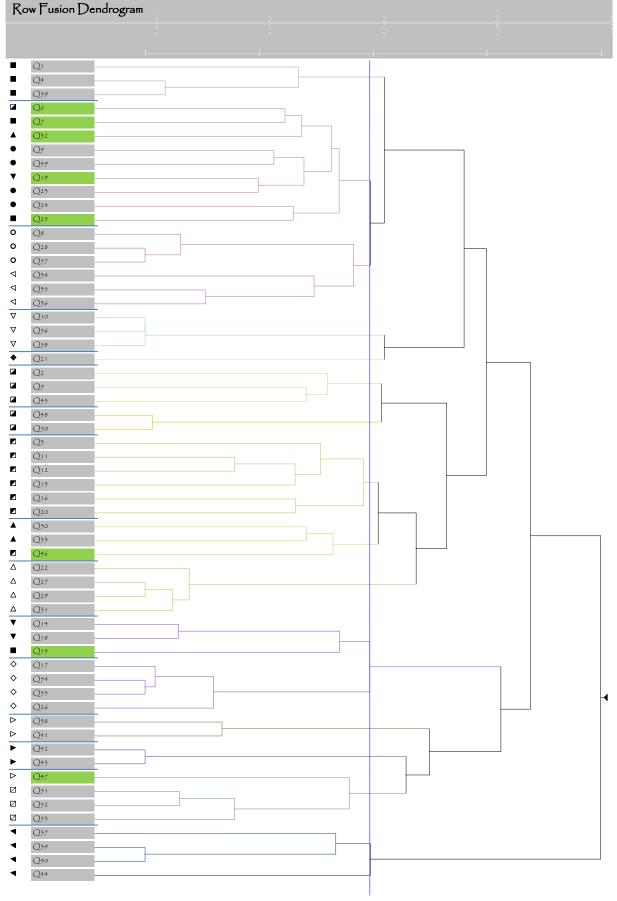


Figure 7: PATN Analysis of All Species into 16 groups



4.2.1.3 Vegetation Condition

Vegetation in the survey area has been subjected to historical exploration and mining activities and grazing.

In accordance with the Keighery (1994) scale, most of the sites/quadrats inspected were in Good to Very Good condition (Appendix F). Disturbed areas were present within the survey area, mostly attributed existing roads, historical open pits and historical waste land forms. The vegetation more than 0.5m off these tracks was mostly in Good to condition (Keighery 1994).

As discussed below in Section 4.2.2.4 below, there were eighteen non-native species recorded in the survey area.

4.2.2 Flora of the Survey Area

4.2.2.1 **General**

Two-hundred and one species were recorded within the survey area with 176 species recorded within quadrats. Fourty-two families and 95 genera were recorded overall. These are listed in Appendix E, per Quadrat as well as per vegetation group. Of the native species, Asteraceae had the highest representation, with 31 species from 21 genera. The next best represented families were Chenopodiaceae and Fabaceae with 30 and 25 species respectively.

The most common and widespread species was *Ptilotus obovatus* which was recorded in 41 quadrats. The next most common were *Erodium cygnorum* and *Maireana pyramidata*, both occurring in 35 quadrats.

Quadrats Q53 and Q59 had the richest species list with 34 taxa recorded in both.

Eighteen introduced weed species were detected within the survey area. Three of these are considered Declared Pests (DPIRD, 2023), *Cylindropuntia imbricata*- s22(2) C3 Restricted, *Opuntia stricta*- s22(2) C3 Restricted and *Rumex vesicarius*- Prohibited s12 C1 Prohibited.

4.2.2.2 Species Accumulation Curve

A Species Accumulation Curve was generated using the computer programme Species Diversity and Richness- Version 4.1.2 (Seaby & Henderson, 2006). The model assumed 59 random selections of sample order. This curve was then fitted to a logarithmic curve in Excel® (Figure 8). The logarithmic trend line and R² values were generated in Excel®. According to the Species Accumulation Curve below, the R² value (0.993) shows an acceptable fit for a logarithmic curve of the total accumulated species per number of quadrats established (Figure 8).

Sufficient sampling was inferred via the effort of intensity (number of quadrats established) versus the return of species collected (total accumulated species). From this fitted logarithmic curve formula, sufficient sampling was determined where the gain of new species was less than 1% for every new quadrat established. Based on this reasoning, sufficient sampling would be reached at 30 quadrats, at which the extrapolated total accumulated number of species would be 147. Therefore the 176 species collected within the 59 quadrats represents 119% of the predicted total abundance.



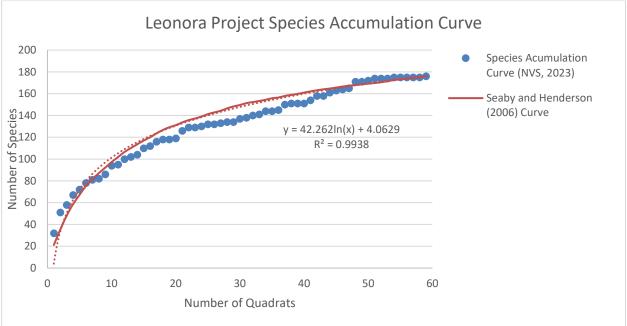


Figure 8: Species Accumulation Curve for the 59 sampled quadrats

4.2.2.3 Conservation significant species

No Threatened flora were recorded in the survey area.

No Priority flora were recorded in the survey area.

One species recorded in the survey area, *Sondottia connata* is considered a significant range extension to already known population locations. The Leonora location is more than 200km east of known locations west of Lake Barlee and Mount Magnet.

4.2.2.4 Introduced species

Eighteen introduced weed species were detected within the survey area. Three of these are considered Declared Pests (DPIRD, 2023), *Cylindropuntia imbricata*- s22(2) C3 Restricted, *Opuntia stricta*- s22(2) C3 Restricted and *Rumex vesicarius*- Prohibited s12 C1 Prohibited.

The other 15 introduced species recorded were:

- Aloe vera*
- Asphodelus fistulosus*
- Carrichtera annua*
- Cenchrus ciliaris*
- Citrullus amarus*
- Cuscuta planiflora*
- Lysimachia arvensis*
- Medicago laciniata*
- Medicago minima*
- Salvia verbenaca*



- Schinus molle var. areira*
- Sisymbrium erysimoides*
- Sisymbrium irio*
- Solanum nigrum*
- Sonchus oleraceus*



5 DISCUSSION

The survey area is located within the Eastern Murchison subregion (CALM, 2002). Results of this survey indicate that the majority of the flora within the survey area is not unique and is in fact common throughout the Eastern Murchison subregion and adjoining regions.

Two-hundred and one species were recorded within the survey area with 176 of those species recorded within quadrats. Forty-two families and 95 genera were recorded overall. These are listed in Appendix E, per Quadrat as well as per vegetation group. Of the native species, Asteraceae had the highest representation, with 31 species from 21 genera. The next best represented families were Chenopodiaceae and Fabaceae with 30 and 25 species respectively.

The most common and widespread species was *Ptilotus obovatus* which was recorded in 41 quadrats. The next most common were *Erodium cygnorum* and *Maireana pyramidata*, both occurring in 35 quadrats.

Quadrats Q53 and Q59 had the richest species list with 34 taxa recorded in both.

The database searches revealed a potential for no Threatened and 3 Priority Flora species to occur within a 20 km radius of the survey area (DBCA, 2023a). No known locations of Threatened or Priority Flora occur within the survey area, with the closest Priority Flora located approximately 8.6 km south of the survey area.

No Threatened Flora were recorded in the survey area.

No Priority Flora were recorded in the survey area.

One species recorded in the survey area, *Sondottia connata* is considered a significant range extension to already known population locations. The Leonora location is more than 200km east of known locations west of Lake Barlee and Mount Magnet.

The PEC/TEC search revealed no TECs occur within 50km of the survey area (DBCA, 2023).

The search did identify two PECs within 50 km of the Survey Area; both listed as Priority 1. One of PECs intersects the Survey Area at both Gwalia and Tower Hill: The Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station. It is known for its unique assemblages of invertebrates in the groundwater calcretes and is threatened by hydrological changes associated with mining. The remaining PEC is located 25 km to the west of the Survey Area. It was assigned a 'Low likelihood' to occur within the survey area based on the restriction to a palaeodrainage system on Sturt Meadows Station.

Vegetation condition was generally 'Good' to 'Very Good' (Keighery 1994). Disturbance was present within the survey area and mostly attributed to access tracks and exploration related activities, as well as waste landforms and open pits.

Eighteen introduced weed species were detected within the survey area. Three of these are considered Declared Pests (DPIRD, 2023), *Cylindropuntia imbricata*- s22(2) C3 Restricted, *Opuntia stricta*- s22(2) C3 Restricted and *Rumex vesicarius*- Prohibited s12 C1 Prohibited.

Given the above, any potential future clearing within the survey will not result in significant impacts such as vegetation fragmentation or the loss of vegetation associations or species that may be unique. This is partially due to the relevant size of the survey area in comparison to similar abundant vegetation and habitat represented and retained outside of the survey area.



IMPACT ASSESSMENT

5.1 THREATENING PROCESSES

Proposed clearing may affect the Flora within the survey area via the following ways:

- Vehicle use damaging vegetation if existing tracks are not adhered to;
- The introduction and increased abundance of non-native species;
- Dust generated during clearing of native vegetation and associated activities may settle
 on adjacent native vegetation, causing possible stress and perhaps death, especially
 during drier months; and
- Accidental fire, arising from clearing and associated activities, may affect vegetation in surrounding areas.



6 CONCLUSIONS

This report summarises the results of a detailed flora and vegetation survey.

The survey established that the condition of most of the vegetation in the survey area is overall 'Good' to 'Very Good' condition. No Threatened or Priority Flora were recorded in the area. No TECs were recorded in the survey area.

The search did identify two PECs within 50 km of the Survey Area; both listed as Priority 1. One of PECs intersects the Survey Area at both Gwalia and Tower Hill: The Melita calcrete groundwater assemblage type on Raeside palaeodrainage on Melita (Sons of Gwalia) Station. It is known for its unique assemblages of invertebrates in the groundwater calcretes and is threatened by hydrological changes associated with mining. The remaining PEC is located 25 km to the west of the Survey Area. It was assigned a 'Low likelihood' to occur within the survey area based on the restriction to a palaeodrainage system on Sturt Meadows Station.

The EPA objective for flora and vegetation is to maintain the abundance, species diversity and geographical distribution of flora and vegetation as well as protect Threatened flora consistent with the provisions of the *Biodiversity Conservation Act 2016*. Most of the species and communities recorded during this survey are widespread throughout the Eastern Murchison subregion and adjoining regions.



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8 GLOSSARY

Acronyms:

BAM Act Biosecurity and Agriculture Management Act 2007, Western Australia
BC Act Biodiversity Conservation Act 2016 (partly enacted), Western Australia

BOM Bureau of Meteorology, Australian Government

BSc Bachelor of Science

CALM Department of Conservation and Land Management (now DBCA)

CPS Clearing Permit System (DWER)

DBCA Department of Biodiversity, Conservation and Attractions, Western Australia

DCCEEW Department of Climate Change, Energy, the Environment and Water, Australian Government

DMIRS
Department of Mines, Industry Regulation and Safety, Western Australia
DPAW
Department of Parks and Wildlife, Western Australia (now DBCA)

DPIRD Department of Primary Industries and Regional Development, Western Australia

DRF Declared Rare Flora

DWER Department of Water and Environmental Regulation, Western Australia

EPA Environmental Protection Authority, Western Australia
EP Act Environmental Protection Act 1986, Western Australia

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth Act)

ESA Environmentally Sensitive Area
GIS Geographical Information System
ha Hectare (10,000 square metres)

IBRA Interim Biogeographic Regionalisation for Australia, DCCEEW

IUCN International Union for the Conservation of Nature and Natural Resources – commonly known as

the World Conservation Union

km Kilometres
m Metres

MUR Murchison Bioregion, IBRA

MUR01 Eastern Murchison Subregion, IBRA

NVS Native Vegetation Solutions

PEC Priority Ecological Community, Western Australia

Ramsar A wetland site designated of international importance under the Ramsar Convention (UNESCO)

TEC Threatened Ecological Community

UNESCO United Nations Educational, Scientific and Cultural Organization

WA Western Australia

WAHERB Western Australian Herbarium, DBCA WAOL Western Australian Organism List

WC Act Wildlife Conservation Act 1950, Western Australia

Definitions:

{DBCA (2019a) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia, January 2019}: -

T Threatened species:

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.



CR Critically endangered species

Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

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

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

VU Vulnerable species

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

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

Extinct species:

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

EX Extinct species

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

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

EW Extinct in the wild species

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

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018.



CD Species of special conservation interest (conservation dependent fauna)

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

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

OS Other specially protected species

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

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

P Priority Species

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

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

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

Priority 1: Poorly known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g., agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

Priority 2: Poorly known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g., national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

Priority 3: Poorly known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

Priority 4: Rare, Near Threatened and other species in need of monitoring

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.
- (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.



Appendix A - EPBC and Other	Government Data	abase Search	Results
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Australian Government

Department of Climate Change, Energy, the Environment and Water

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: 02-Jan-2023

Summary

Details

Matters of NES

Other Matters Protected by the EPBC Act

Extra Information

Caveat

Acknowledgements





Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	4
Listed Migratory Species:	7

Other Matters Protected by the EPBC Act

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

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

A <u>permit</u> 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:	10
Commonwealth Heritage Places:	None
Listed Marine Species:	10
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

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



Details

Matters of National Environmental Significance

Listed Threatened Species		[Res	source Information]
Status of Conservation Dependent and E Number is the current name ID.	xtinct are not MNES unde	r the EPBC Act.	
Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD	Timeateries estegory	T TOSOTIOG TOXE	Duner Otatas
Falco hypoleucos			
Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Leipoa ocellata			
Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pezoporus occidentalis			
Night Parrot [59350]	Endangered	Species or species habitat may occur within area	In feature area
Polytelis alexandrae			
Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat known to occur within area	In feature area
Listed Migratory Species		[Res	source 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 Terrestrial Species			
Motacilla cinerea			
Grey Wagtail [642]		Species or species	In feature area
		habitat may occur within area	
Motacilla flava Yellow Wagtail [644]			In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

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

Commonwealth Land Name	State	Buffer Status
Unknown		
Commonwealth Land - [51752]	WA	In feature area
Commonwealth Land - [51754]	WA	In feature area
Commonwealth Land - [51755]	WA	In feature area
Commonwealth Land - [52213]	WA	In feature area
Commonwealth Land - [51756]	WA	In feature area
Commonwealth Land - [52232]	WA	In feature area
Commonwealth Land - [51753]	WA	In feature area
Commonwealth Land - [51751]	WA	In feature area
Commonwealth Land - [51058]	WA	In feature area
Commonwealth Land - [52197]	WA	In feature area

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status



Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird	Timedicined editegory	110001100 10/1	Duner Ciatas
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat known 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
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within 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 oscu	ulans		
Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
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
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Thinomis cucullatus as Thinomis rubricoll	lis		
Hooded Plover, Hooded Dotterel [87735]	_	Species or species habitat known to occur within area overfly marine area	In feature area



Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

EPBC Act Referrals			[Resour	rce Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area



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

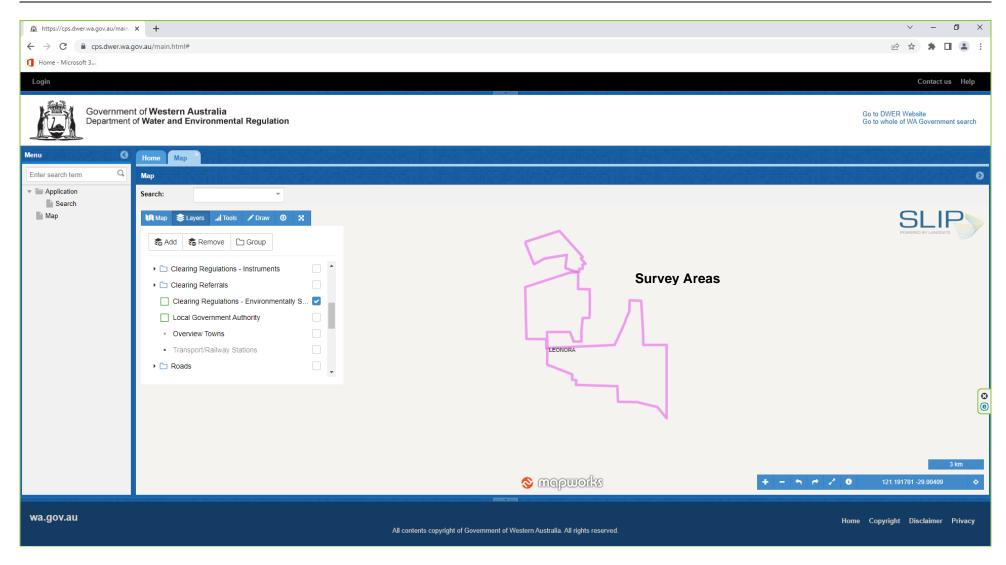
The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

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

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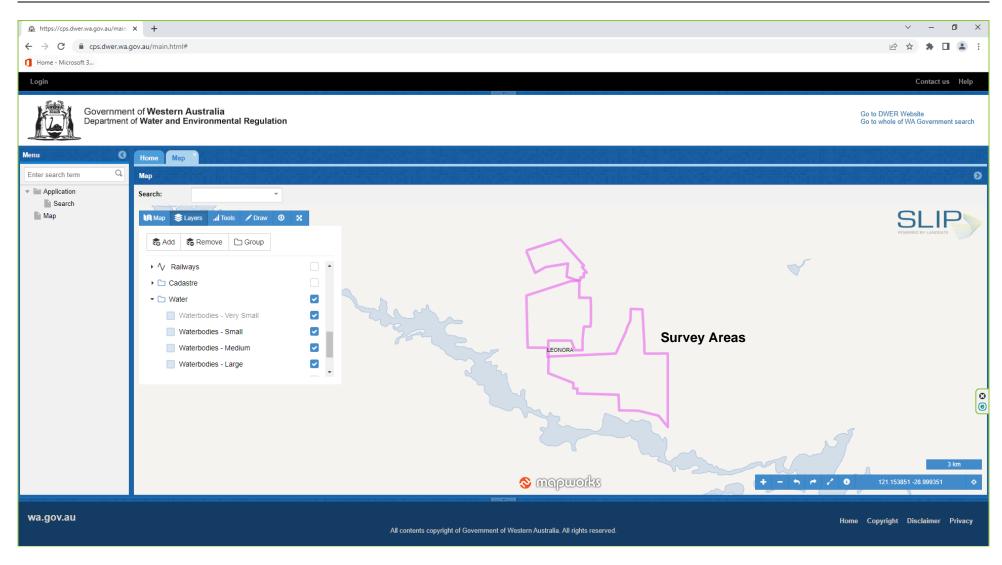
Department of Climate Change, Energy, the Environment and Water GPO Box 3090 Canberra ACT 2601 Australia +61 2 6274 1111





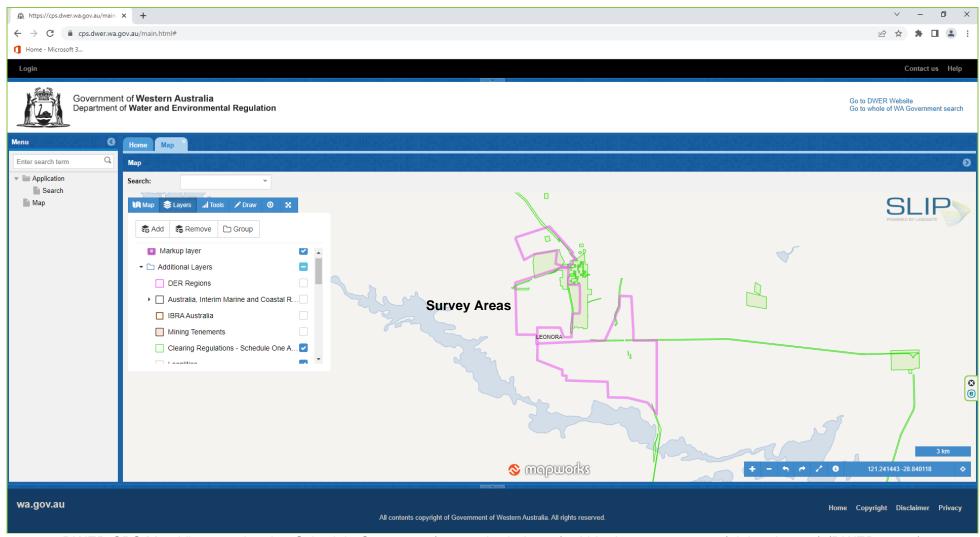
DWER CPS Map Viewer - showing no ESA's (dark green shaded areas) within the survey areas (pink polygons) (DWER, 2023)





DWER CPS Map Viewer - showing no water bodies within the survey areas (pink polygons) (DWER, 2023)





DWER CPS Map Viewer - showing Schedule One areas (green shaded area) within the survey areas (pink polygons) (DWER, 2023)



Appendix B - Vegetation Definitions



Vegetation Condition Definitions (Keighery, 1994)

Pristine (1). Pristine or nearly so, no obvious signs of disturbance.

Excellent (2). Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.

Very Good (3). Vegetation structure altered, obvious signs of disturbance.

For example, disturbance to vegetation structure caused by repeating fires, the presence of some more aggressive weeds, dieback, logging and grazing.

Good (4). Vegetation structure significantly altered by very obvious signs of multiple disturbance.

Retains basic vegetation structure or ability to regenerate it.

For example, disturbance to vegetation structure caused by frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.

Degraded (5). Basic vegetation structure severely impacted by disturbance.

Scope for regeneration but not to a state approaching good condition without intensive management.

For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.

Completely Degraded (6). 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 compromising weed or crop species with isolated trees or shrubs.



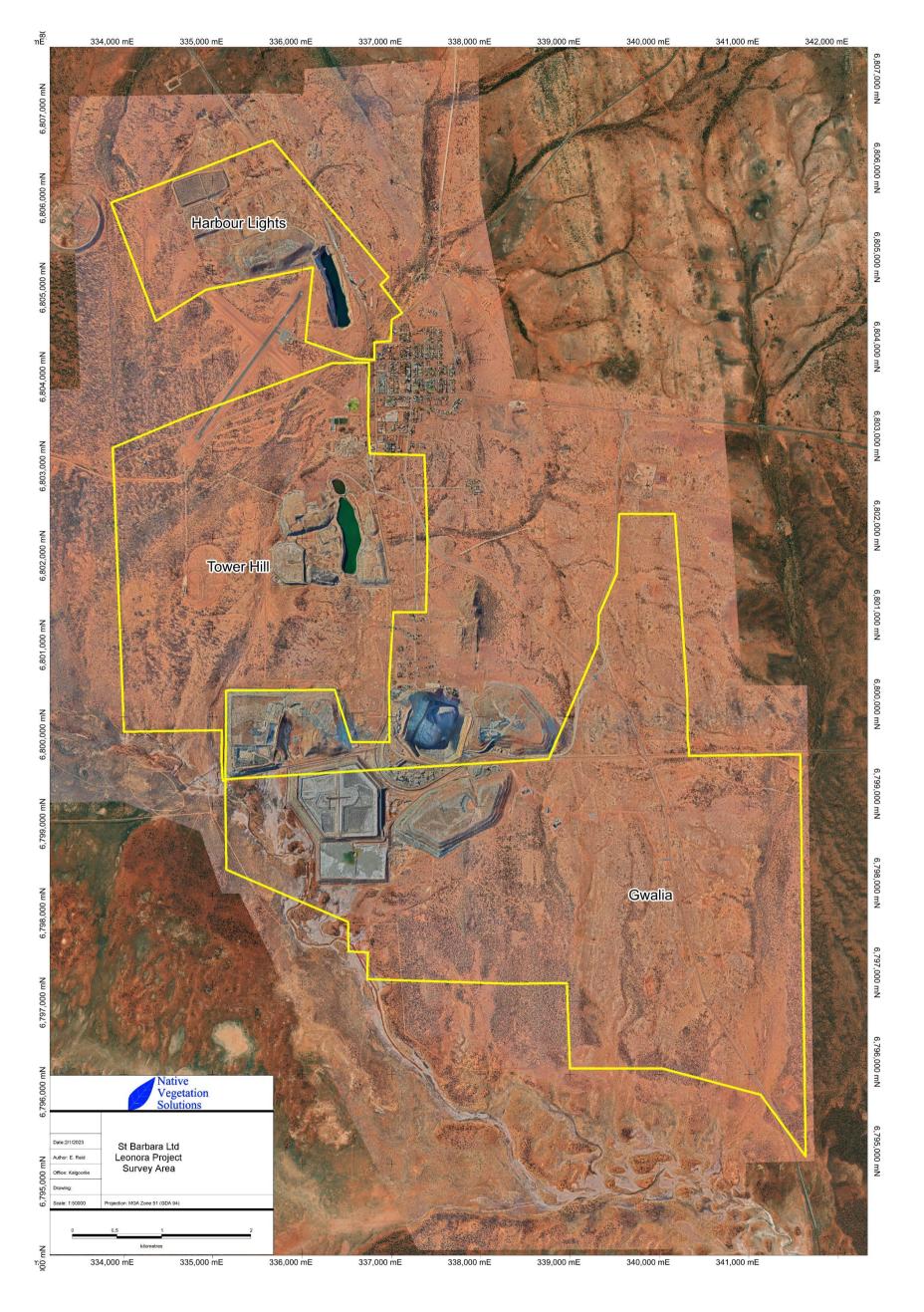
Vegetation Structure Definitions (Muir, 1977)

		Canopy Cover						
		Dense	Dense Mid-Dense Sparse Very Sparse					
		70-100%	30-70%	10-30%	2-10%			
١	6 5 /0 1 1 0			10-3070				
LI	fe Form/Height Class	d	С	I	r			
Т	Trees>30m	Dense Tall Forest	Tall Forest	Tall Woodland	Open Tall Woodland			
M	Trees 15-30m	Dense Forest	Forest	Woodland	Open Woodlnd			
LA	Trees 5-15m	Dense Low Forest A	Low Forest A	Low Woodland A	Open Low Woodland A			
LB	Trees<5m	Dense Low Forest B	Low Forest B	Low Woodland B	Open Low Woodland B			
KT	Mallee tree form	Dense Tree Mallee	Tree Mallee	Open Tree Mallee	Very Open Tree Mallee			
KS	Mallee shrub form	Dense Shrub Mallee	Shrub Mallee	Open Shrub Mallee	Very Open Shrub Mallee			
S	Shrubs>2m	Dense Thicket	Thicket	Scrub	Open Scrub			
SA	Shrubs 1.5-2.0m	Dense Heath A	Heath A	Low Scrub A	Open Low Scrub A			
SB	Shrubs 1.0-1.5m	Dense Heath B	Heath B	Low Scrub B	Open Low Scrub B			
SC	Shrubs 0.5-1.0m	Dense Low Heath C	Low Heath C	Dwarf Scrub C	Open Dwarf Scrub C			
SD	Shrubs 0.0-0.5m	Dense Low Heath D	Low Heath D	Dwarf Scrub D	Open Dwarf Scrub D			
Р	Mat plants	Dense Mat Plants	Mat Plants	Open Mat Plants	Very Open Mat Plants			
Н	Hummock Grass	Dense Hummock Grass	Mid-Dense Hummock Grass	Hummock Grass	Open Hummock Grass			
GT	Bunch grass >0.5m	Dense Tall Grass	Tall Grass	Open Tall Grass	Very Open Tall Grass			
GL	Bunch grass < 0.5m	Dense Low Grass	Low Grass	Open Low Grass	Very Open Low Grass			
J	Herbaceous spp.	Dense Herbs	Herbs	Open Herbs	Very Open Herbs			
VT	Sedges >0.5m	Dense Tall Sedges	Tall Sedges	Open Tall Sedges	Very Open Tall Sedges			
VL	Sedges < 0.5m	Dense Low Sedges	Low Sedges	Open Low Sedges	Very Open Low Sedges			
Χ	Ferns	Dense Ferns	Ferns	Open Ferns	Very Open Ferns			
	Mosses, liverwort	Dense Mosses	Mosses	Open Mosses	Very Open Mosses			



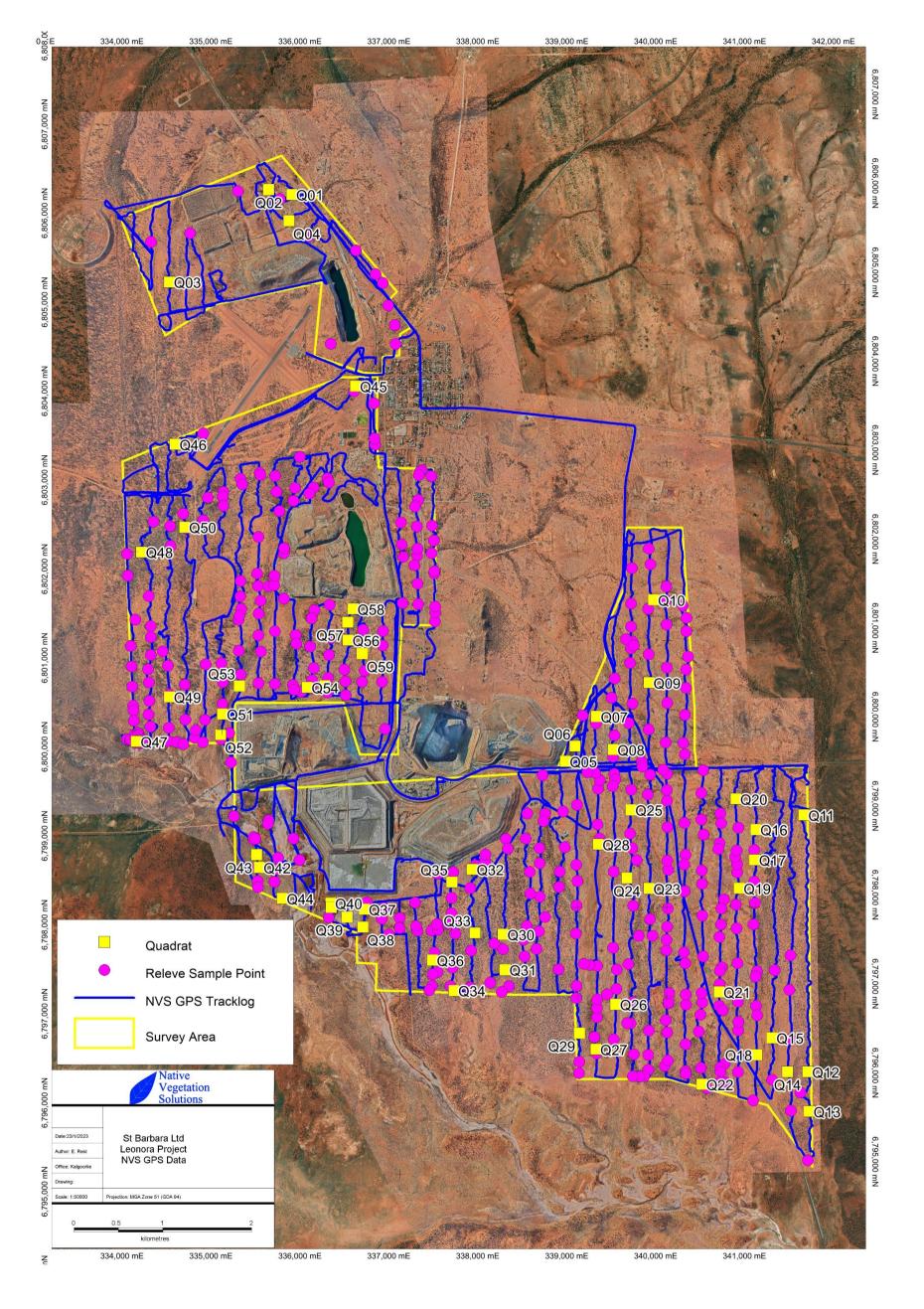
Appendix C - Mapping





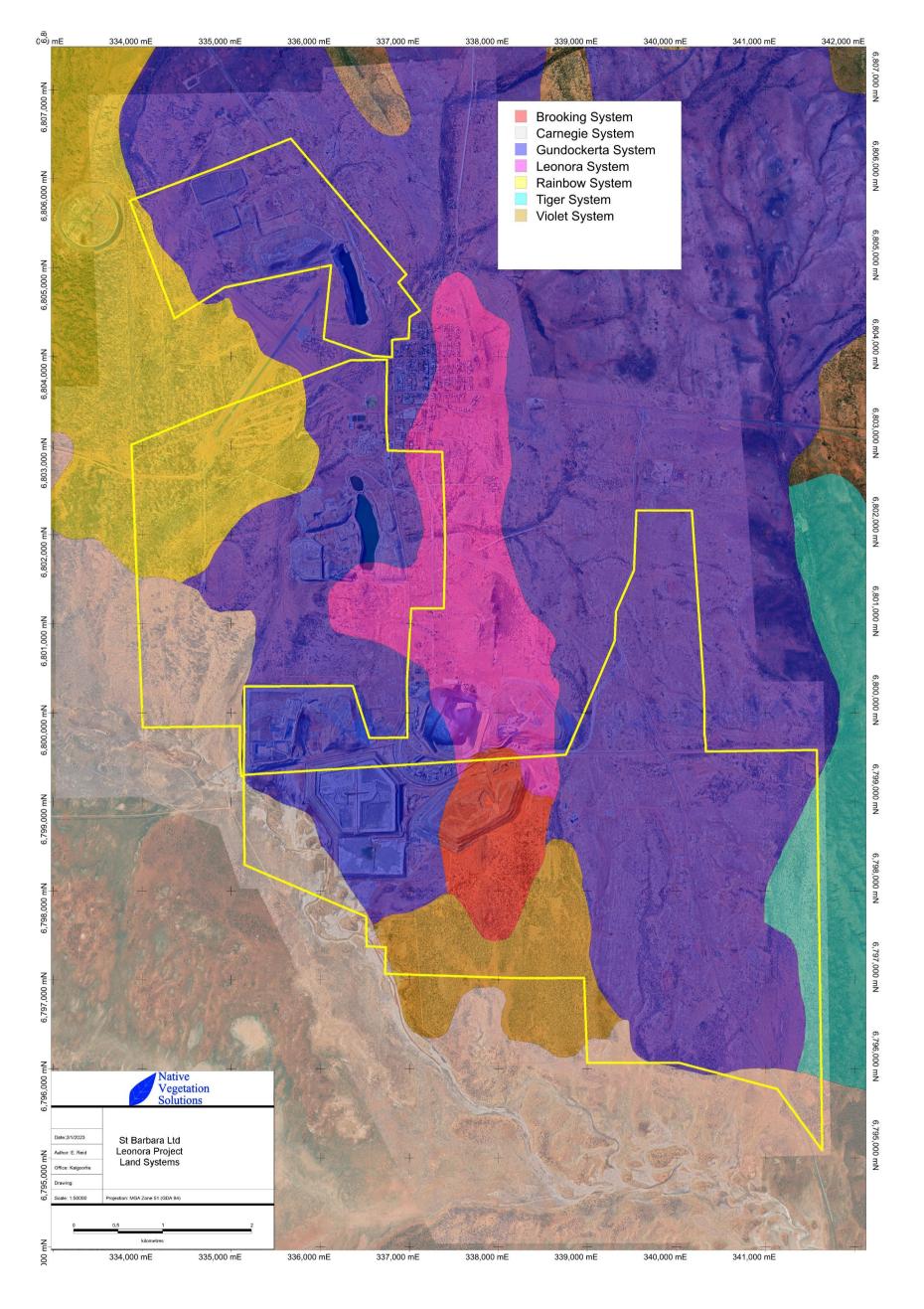
Map 1: Leonora Project Survey Area





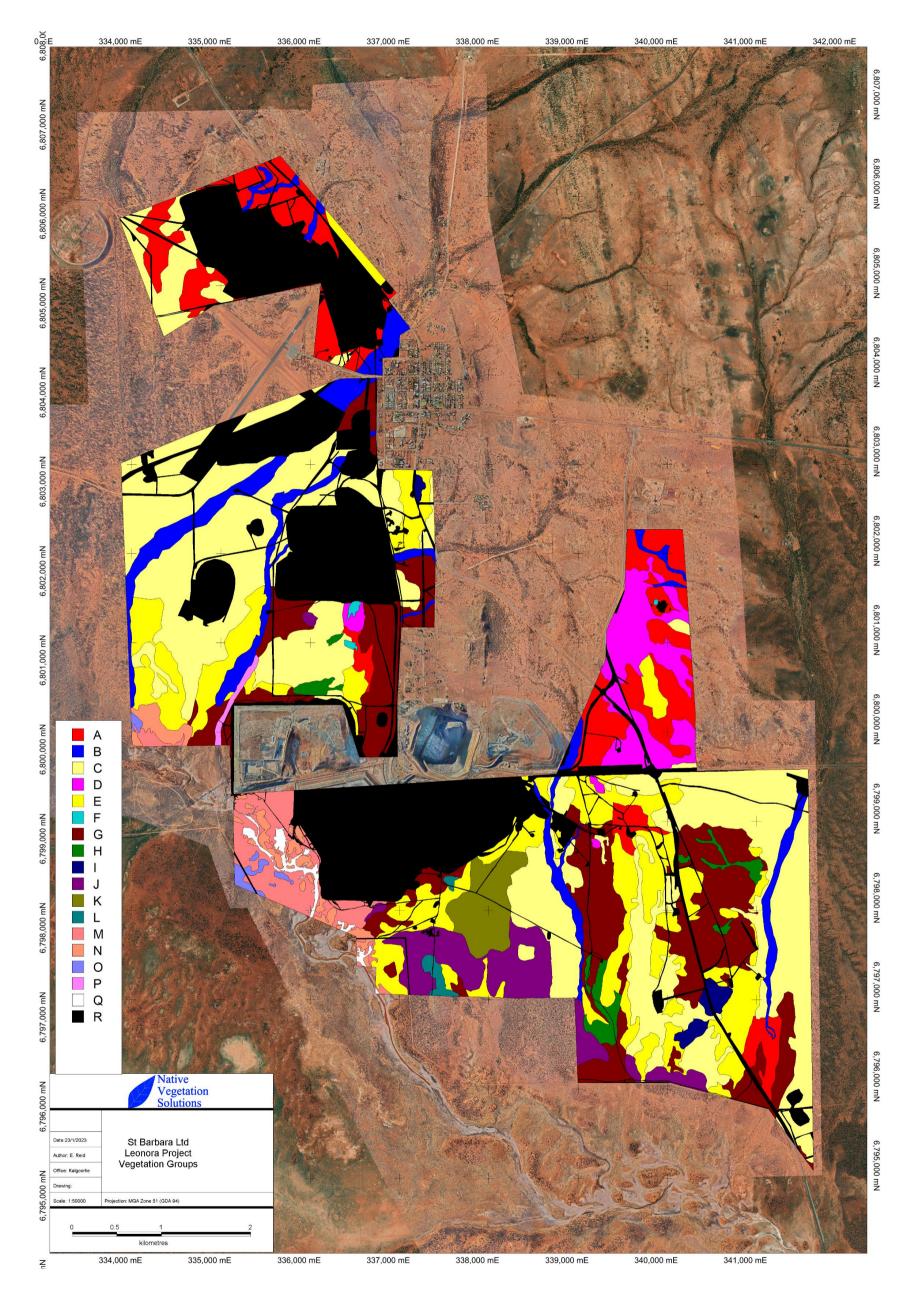
Map 2: NVS GPS Data for the Leonora Project





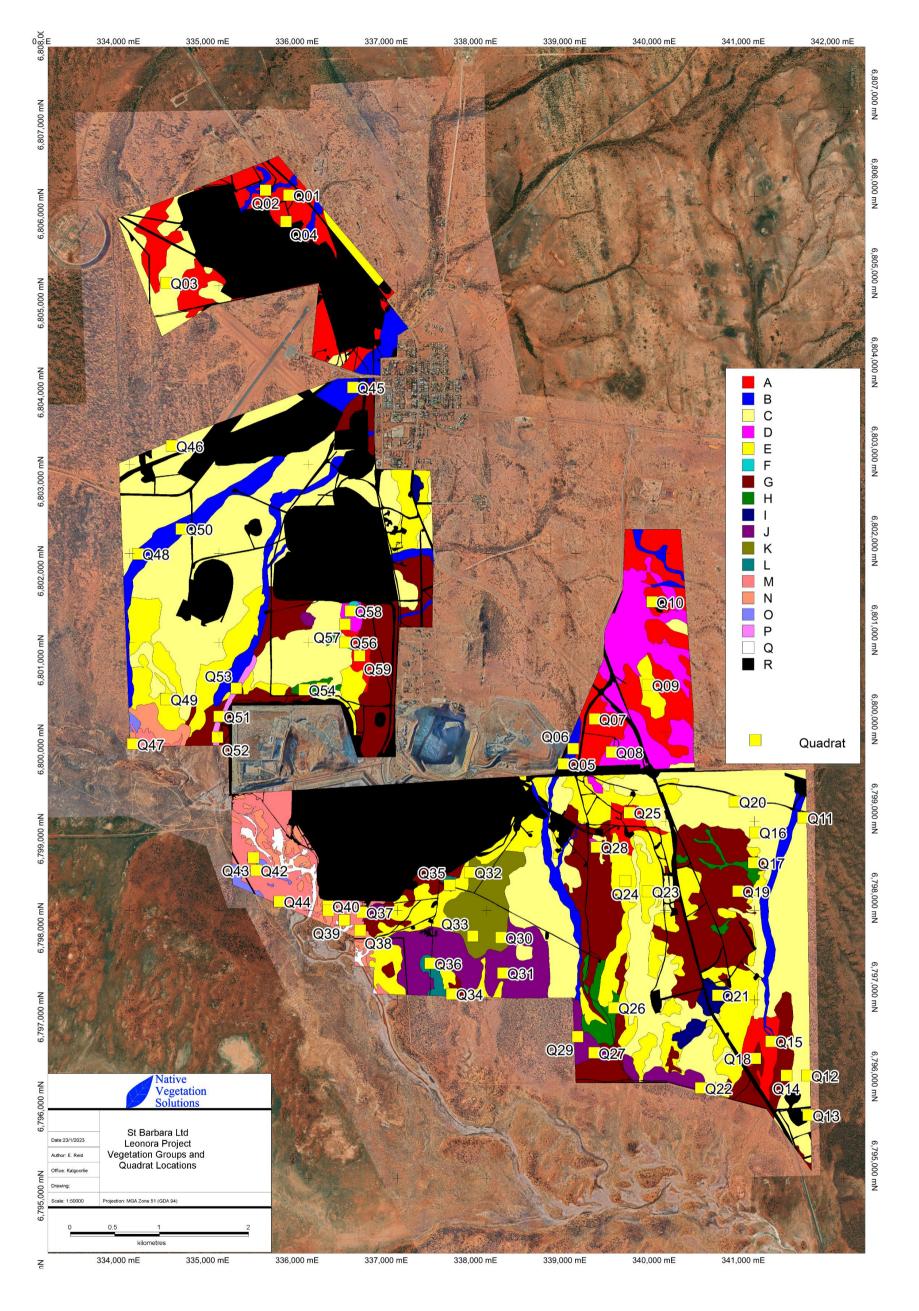
Map 3: Land Systems for the Leonora Project





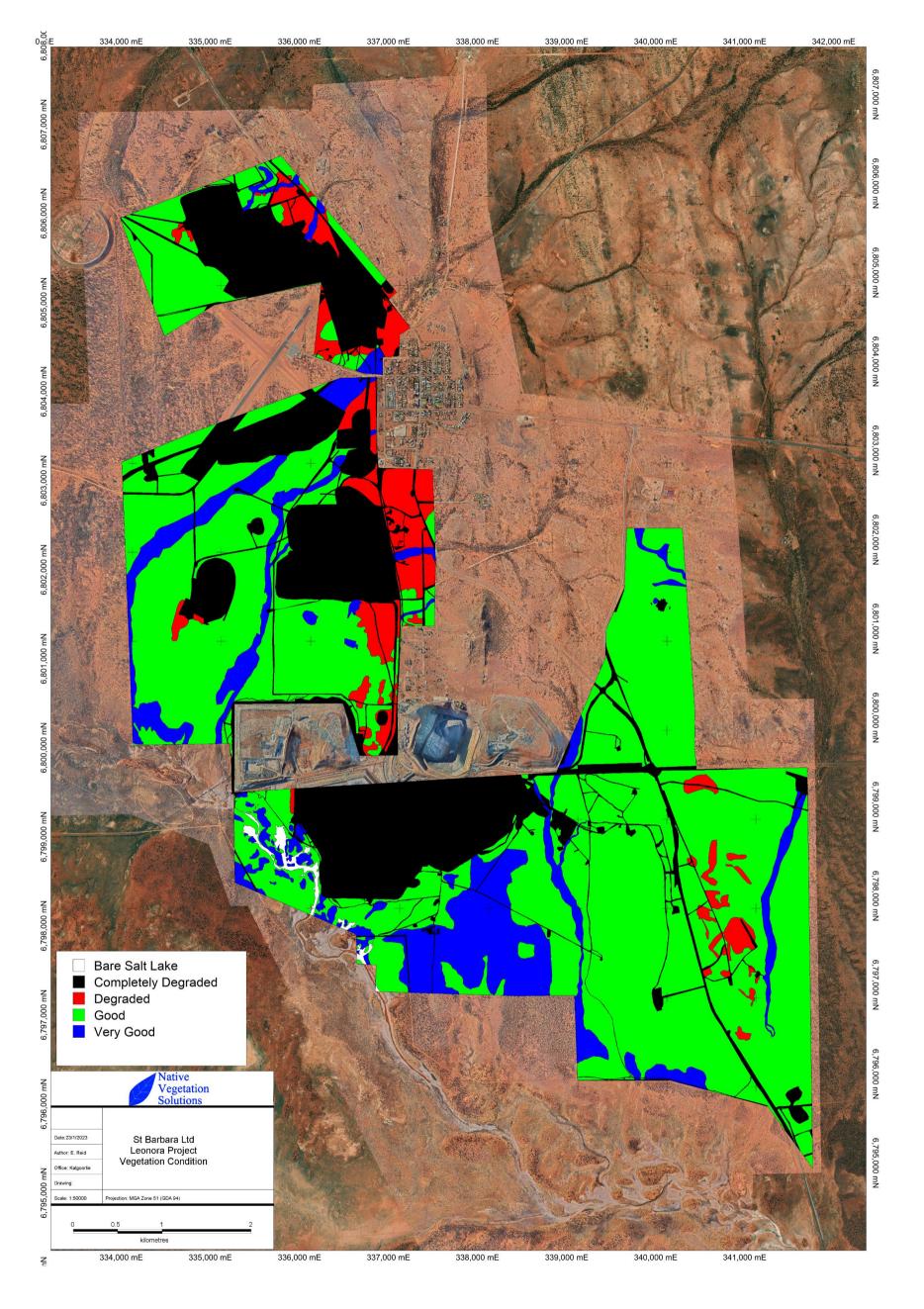
Map 4: Vegetation Groups for the Leonora Project





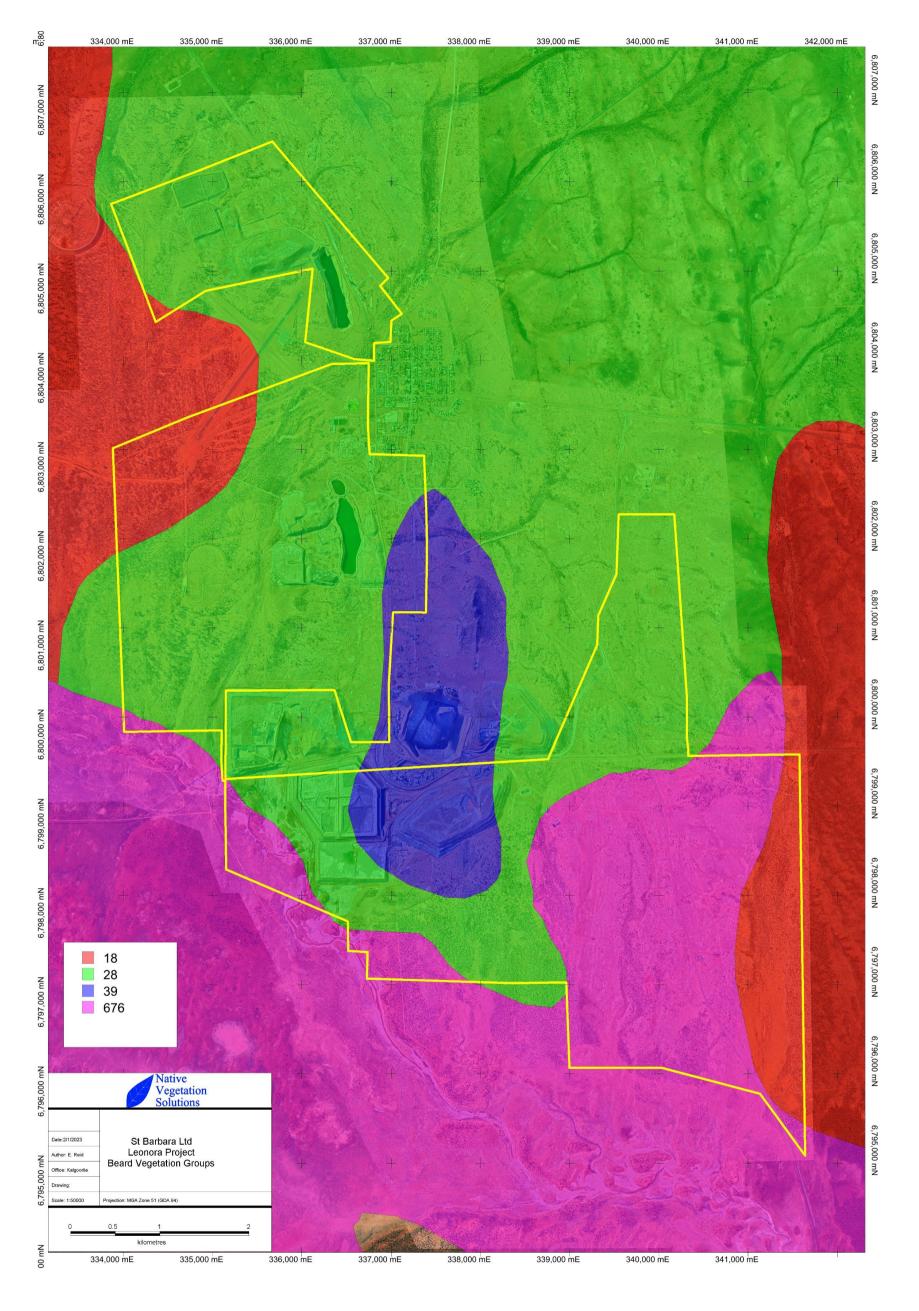
Map 5: Vegetation Groups and Quadrat Locations for the Leonora Project





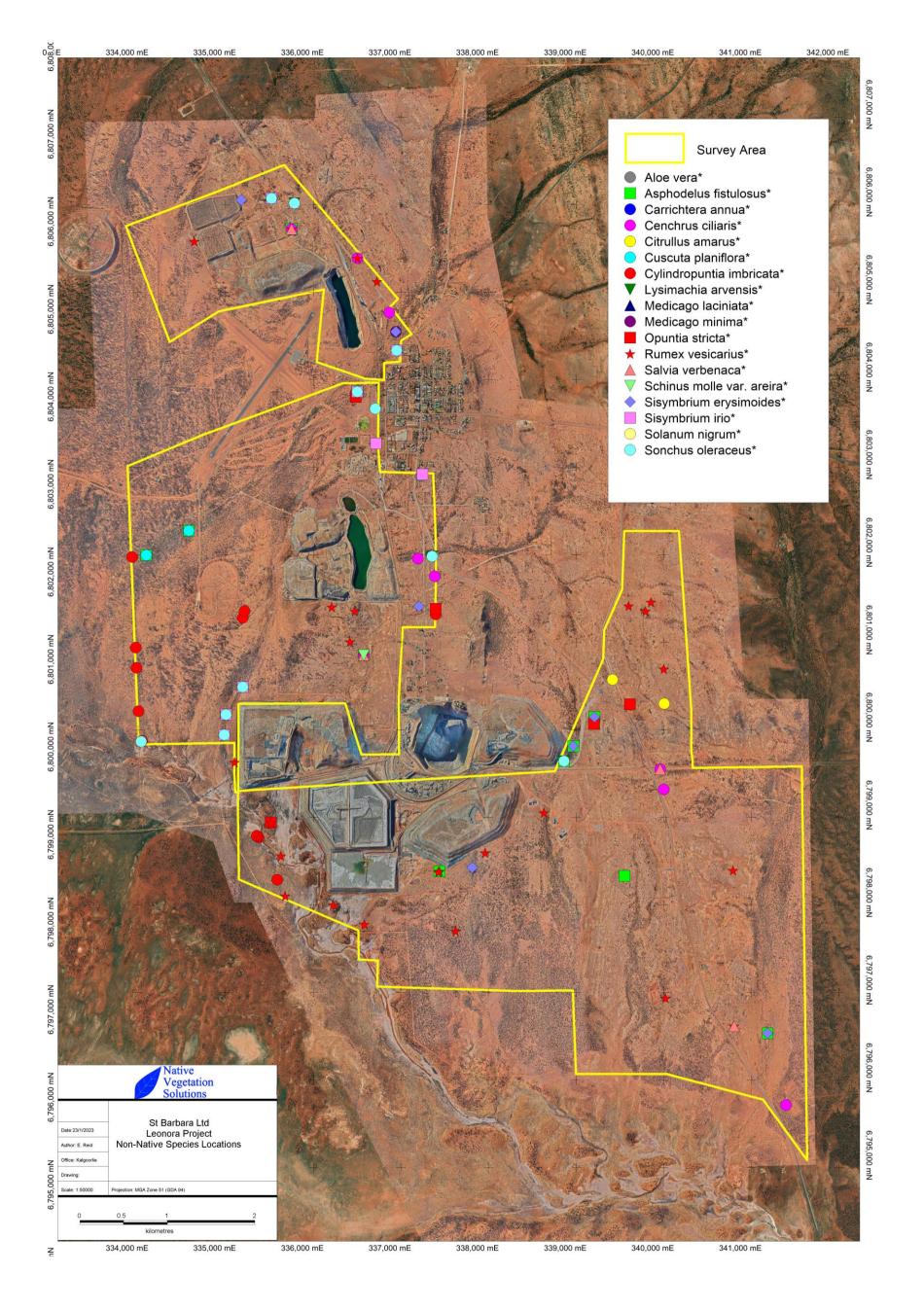
Map 6: Vegetation Condition for the Leonora Project





Map 7: Beard Vegetation mapping for the Leonora Project





Map 8: Non-Native Species recorded in the Leonora Project



Appendix D – Priority Flora Recorded During the Survey



No Threatened or Priority Flora were recorded in the Survey Area.



Appendix E - Species Recorded During the September 2022 Survey



Species List per Quadrat

Family	Genus	Taxon	170	75	63	94	S)	90	0,7	98	60	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q.25	Q.26	Q27	Q28	Q.29	030
Aizoaceae	Disphyma	Disphyma crassifolium																		*								*				
Aizoaceae	Gunniopsis	Gunniopsis quadrifida																													<u> </u>	ـــــ
Amaranthaceae	Ptilotus	Ptilotus divaricatus															*													<u> </u>	<u> </u>	Ь.
Amaranthaceae	Ptilotus	Ptilotus exaltatus						<u> </u>																							├	₩
Amaranthaceae Amaranthaceae	Ptilotus Ptilotus	Ptilotus gaudichaudii Ptilotus helipteroides		*								*											*				*			<u> </u>	├──	+-
Amaranthaceae	Ptilotus		*	*	*	*	*	*	*	*	*		*	*	*			*	*		*	*	*	*	*	*	*	*	*	*	*	*
Amaranthaceae	Ptilotus	Ptilotus obovatus Ptilotus roei		1		-						*		-					-		-	-	*		-		-	-	-		–	+-
Amaranthaceae	Ptilotus	Ptilotus roei Ptilotus schwartzii										*											*									+-
Anacardiaceae	Schinus	Schinus molle var. areira		1																										-		+-
Apocynaceae	Leichhardtia	Leichhardtia australis	*	1	*				*		*	*											*	*					*	-	*	+-
Asparagaceae	Thysanotus	Thysanotus manglesianus						1																*					*		*	†
Asphodelaceae	Asphodelus	Asphodelus fistulosus*		*		*	*	*	*								*									*						1
Asteraceae	Brachyscome	Brachyscome ciliaris				*	*														*				*	*						
Asteraceae	Brachyscome	Brachyscome iberidifolia											*	*																<u> </u>		
Asteraceae	Calocephalus	Calocephalus knappii		*																												
Asteraceae	Calotis	Calotis hispidula														*			*	*	*							*				
Asteraceae	Calotis	Calotis multicaulis						*																		*						
Asteraceae	Cephalipterum	Cephalipterum drummondii						*			*										*				*	*	*			*		
Asteraceae	Chrysocephalum	Chrysocephalum puteale																					*									
Asteraceae	Cratystylis	Cratystylis subspinescens															*		*		*				*			*				
Asteraceae	Erymophyllum	Erymophyllum ramosum subsp. ramosum														*				*												
Asteraceae	Gnephosis	Gnephosis brevifolia															*															
Asteraceae	Helipterum	Helipterum craspedioides																					*									Ш.
Asteraceae	Isoetopsis	Isoetopsis graminifolia																														*
Asteraceae	Podolepis	Podolepis canescens																												L'	<u> </u>	Ь
Asteraceae	Podolepis	Podolepis capillaris															*											*		L'	<u> </u>	Ь
Asteraceae	Podolepis	Podolepis lessonii																*													<u> </u>	₩
Asteraceae	Rhodanthe	Rhodanthe floribunda			*																										<u> </u>	┿
Asteraceae	Rhodanthe	Rhodanthe maryonii						*				*											*								├	₩
Asteraceae	Rhodanthe	Rhodanthe propinqua		_	_						*	*	*	*	_											_					—	+
Asteraceae	Rhodanthe	Rhodanthe charsleyae	-	*	*								*	-	*											*					⊢—	+
Asteraceae	Schoenia	Schoenia cassiniana			-	-		 											-								-	*	-		├──	+
Asteraceae Asteraceae	Senecio Sonchus	Senecio glossanthus Sonchus oleraceus*	*	*			*												-									-			₩	+-
Asteraceae	Sondottia	Sondottia connata		1																												+-
Asteraceae	Vittadinia	Vittadinia sulcata		_	-	-		 																			-		-		├──	+-
Asteraceae	Walshia	Walshia kendallii																													 	+-
Brassicaceae	Carrichtera	Carrichtera annua*	*	1			*																							-		+-
Brassicaceae	Lepidium	Lepidium oxytrichum		*		*		1											*							*		*			†	+
Brassicaceae	Lepidium	Lepidium platypetalum																												*		1
Brassicaceae	Sisymbrium	Sisymbrium erysimoides*						*	*								*													_		1
Brassicaceae	Sisymbrium	Sisymbrium irio*		*																												
Brassicaceae	Stenopetalum	Stenopetalum salicola																														
Campanulaceae	Wahlenbergia	Wahlenbergia gracilenta					*																									
Campanulaceae	Wahlenbergia	Wahlenbergia tumidifructa																														
Chenopodiaceae	Atriplex	Atriplex bunburyana	*			*			*		*	*					*				*				*			*				
Chenopodiaceae	Atriplex	Atriplex codonocarpa					*									*	*		*	*								*				
Chenopodiaceae	Atriplex	Atriplex vesicaria				*																						*				\bot
Chenopodiaceae	Didymanthus	Didymanthus roei																														\bot
Chenopodiaceae	Dysphania	Dysphania kalpari		*																												\bot
Chenopodiaceae	Enchylaena	Enchylaena tomentosa var. tomentosa				*		*	*	*	*					*			*	*						*		*	*	*	*	┺
Chenopodiaceae	Maireana	Maireana amoena				<u> </u>		<u> </u>																			<u> </u>			<u> </u>	<u></u>	ـــــ
Chenopodiaceae	Maireana	Maireana carnosa		1				!																						<u> </u>	Ь—	₩
Chenopodiaceae	Maireana	Maireana georgei	*	1		*		!	*					*	*												*			<u> </u>	Ь—	₩
Chenopodiaceae	Maireana	Maireana glomerifolia	ļ					L .			*																			<u> </u>	<u> </u>	₩
Chenopodiaceae	Maireana	Maireana pyramidata		*	<u> </u>	*		*	*	*	*					*	*		*	*	*			*	*	*	*	*	*	*	<u> </u>	₩
Chenopodiaceae	Maireana	Maireana sedifolia	*	1	<u> </u>	_		<u> </u>		*		*															*		<u> </u>	+	<u> </u>	-
Chenopodiaceae	Maireana	Maireana thesioides	*	1	-	*		1	*		*	-	-	*	*	*			*	_				*			-	*	*			┿
Chenopodiaceae	Maireana	Maireana tomentosa	-	1	-	*		1	*		*	-	-			*	*		*	*	*						-	*	-	*	₩	+-
Chenopodiaceae	Maireana	Maireana trichoptera		1				<u> </u>			*										-							<u> </u>	<u> </u>	*	₩	+-
Chenopodiaceae	Maireana	Maireana triptera															*		*													



Family G																																
Family G																																1 '
	Genus	Taxon	Q1	Q2	Q3	Q4	0,5	90	۵7	98	60	010	011	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	020	Q21	Q22	023	Q24	025	920	027	028	029	Q30
•			Ŭ	Ŭ	•	•	•		Ŭ	·	•	٥	٥	٥	0	٥	O	٥	0	٥	٥	O	٥	O	O	0	O	O	٥	٥	O	
																																<u> </u>
		Rhagodia eremaea		*			*																									<u> </u>
		Salsola australis		1														-										*				
		Sclerolaena cuneata Sclerolaena densiflora	*			*						-				*			-	*	-							-				
		Sclerolaena diacantha	*		*	*	*	*	*	*	*	*				*	*	-	-	*	*		*		*		*			*		-
		Sclerolaena drummondii																														
	Sclerolaena	Sclerolaena eriacantha				*											*								*							-
		Sclerolaena patenticuspis			*											*	*		*	*								*				-
	Tecticornia	Tecticornia disarticulata																	*									*				
Chenopodiaceae To	Tecticornia	Tecticornia indica subsp. bidens																														i
Chenopodiaceae To	Tecticornia	Tecticornia pruinosa																														i
	Tecticornia	Tecticornia undulata																														i
Convolvulaceae C	Cuscuta	Cuscuta planiflora*		*																												i
		Crassula colorata var. acuminata		*																												*
Fabaceae A	Acacia	Acacia aneura	*	*	*	*	*	*		*	*	*	*	*				*				*	*	*	*	*	*		*	*	*	*
		Acacia burkittii																														1
	Acacia	Acacia caesaneura					*	*			*			*	*			<u> </u>	<u> </u>			*		*					*		*	*
	Acacia	Acacia craspedocarpa					*	*	*				*	*	*			*						*					*		*	*
		Acacia duriuscula		L_				.				.	.																	igsquare		ь—
		Acacia incurvaneura	*	*			*	_														*										_
		Acacia mulganeura			*	*		-		*		-	*	*	*		*	-	-							*				*		_
		Acacia pteraneura Acacia quadrimarginea		1		*		 		*		 	 					-	!	 			*							*		
								-				*	-					-	1				-	*					*		*	
		Acacia ramulosa var. ramulosa Acacia sibirica										-									-					*			-		_	
		Acacia sibirica Acacia tetragonophylla	*	*	*	*	*	*	*		*	*	*	*	*		*	*			-	*	*	*	*	-			*		*	*
		Medicago minima*																														
		Senna artemisioides subsp. ×sturtii							*	*	*	*																		*		
		Senna artemisioides subsp. artemisioides							*												*				*							
		Senna artemisioides subsp. filifolia	*							*	*				*		*							*					*	*	*	*
		Senna cardiosperma																									*					
		Senna charlesiana																														
Fabaceae Se	Senna	Senna glutinosa subsp. chatelainiana							*	*																				*		<u> </u>
Fabaceae Se	Senna	Senna sp. Meekatharra	*																													i
	-rankenia	Frankenia cinerea								*	*					*	*			*								*		*		1
Frankeniaceae Fr	Frankenia	Frankenia interioris															*															i .
	Frankenia	Frankenia laxiflora																														i .
Frankeniaceae Fr	Frankenia	Frankenia pauciflora var. pauciflora																														<u> </u>
		Erodium crinitum																						*					*		*	
	Frodium	Erodium cygnorum	*	*	*	*	*	*			*	*	*	*	*			*			*		*	*	*	*	*		*		*	
		Goodenia havilandii		*																												
	Goodenia	Goodenia rosea		*							*				*		*						*	*	*	*	*		*	*	*	
	Goodenia	Goodenia sp. Midwest		*				*	*	*	*	*	<u> </u>		*	*	*	-	*	*	*				*	*	*	*	*	*	*	
	Scaevola	Scaevola spinescens	*	*				-	*	*	*	-	-		*			-	-	-					*	*	*		*	*	*	
		Haloragis gossei		1														 	 										•	\vdash	•	
		Haloragis trigonocarpa		1				1				1	1	*	*			1	-			*		*					*	\vdash	*	*
		Dianella revoluta var. divaricata Salvia verbenaca*	*			*												-	1			•									-	
		Teucrium teucriiflorum		*	*		*	 				 	*	*	*			*	1			*								\vdash		*
		Amyema fitzgeraldii						l -				l -	l -					t	†											1		
		Abutilon cryptopetalum			*			1				1	1					t	1													
		Abutilon otocarpum		*				1				1	1					t	1													
		Abutilon oxycarpum		*																												
		Brachychiton gregorii																					*									
		Sida calyxhymenia	*																			*	*		*							*
Malvaceae Si		Sida ectogama						*	*									*			İ	*			*							*
		Sida intricata				*																										
		Sida sp. Excedentifolia	*			*																										
		Sida sp. Golden calyces glabrous					*	*	*			*						*			1	*										*
	Calandrinia	Calandrinia creethae																														
Montiaceae Co	Calandrinia	Calandrinia eremaea		*		*											*												*		*	
		Calandrinia eremaea sans lat										*																				
	Calandrinia	Calandrinia polyandra				*			*							*	*			*		,				*	*	*				
	Eucalyptus	Eucalyptus camaldulensis subsp. obtusa																														
		Melaleuca interioris																														



Family	Genus	Тахоп	Q1	0 2	Q3	Q4	QS	90	۵,	Q8	9	010	Q11	Q12	Q13	Q14	Q15	916	Q17	Q18	Q19	020	Q21	022	023	Q24	925	970	027	028	Q29	030
Myrtaceae	Melaleuca	Melaleuca sheathiana																													\vdash	
Pittosporaceae	Pittosporum	Pittosporum angustifolium			*																											
Plantaginaceae	Plantago	Plantago turrifera																														
Poaceae	Aristida	Aristida contorta																						*		*			*		*	
Poaceae	Austrostipa	Austrostipa elegantissima																	*									*				
Poaceae	Austrostipa	Austrostipa nitida				*						*						*												*	$rac{1}{2}$	
Poaceae	Cenchrus	Cenchrus ciliaris*	*			*	*																								-	
Poaceae	Enneapogon	Enneapogon caerulescens			1							*																		 	\vdash	-
Poaceae	Eragrostis	Eragrostis eriopoda	1	1								*			*		*					*		*					*	$\vdash \vdash$	*	
Poaceae	Eriachne	Eriaghostis chopoda Eriachne flaccida	1	1								*																		$\vdash \vdash$	$\overline{}$	
Poaceae	Eriachne	Eriachne mucronata	1	1																			*							$\vdash \vdash$	-	$\overline{}$
Poaceae	Eriachne	Eriachne pulchella subsp. pulchella	1	1							*																			$\vdash \vdash$	-	
			1	1	1	1	1	1	1						1		\vdash		*		1							*	-	$\vdash \vdash \vdash$	-	$\overline{}$
Poaceae	Monachather Rumex	Monachather paradoxus Rumex vesicarius*	*	*	 	*	<u> </u>	<u> </u>							<u> </u>		-				<u> </u>					.		_	-	┉		
Polygonaceae			*	*		-	*					-																		lacksquare	-	
Primulaceae	Lysimachia	Lysimachia arvensis*	<u> </u>		1		-															*								₩		-
Proteaceae	Grevillea	Grevillea berryana	*			*				*											*	*					*			ليہ		
Proteaceae	Hakea	Hakea preissii	*			*			*	*											*					*	*	*		*		\vdash
Proteaceae	Hakea	Hakea recurva subsp. recurva	ļ											*																ш′		\vdash
Pteridaceae	Cheilanthes	Cheilanthes sieberi subsp. sieberi		*								*											*							لــــــا		*
Rubiaceae	Psydrax	Psydrax rigidula												*																		
Rubiaceae	Psydrax	Psydrax suaveolens																														
Rutaceae	Phebalium	Phebalium lepidotum																									*					
Santalaceae	Exocarpos	Exocarpos aphyllus													*																	
Santalaceae	Santalum	Santalum lanceolatum																*												<u> </u>		
Santalaceae	Santalum	Santalum spicatum												*	*																1	
Sapindaceae	Dodonaea	Dodonaea rigida																												(,	7	$\overline{}$
Scrophulariaceae	Eremophila	Eremophila clarkei																												(,	7	*
Scrophulariaceae	Eremophila	Eremophila compacta				*								*	*	*		*		*		*		*					*		*	
Scrophulariaceae	Eremophila	Eremophila forrestii subsp. forrestii									*	*										*		*					*		*	
Scrophulariaceae	Eremophila	Eremophila glandulifera			*																		*									
Scrophulariaceae	Eremophila	Eremophila latrobei subsp. latrobei																														*
Scrophulariaceae	Eremophila	Eremophila maculata subsp. brevifolia																		*												
Scrophulariaceae	Eremophila	Eremophila metallicorum			*			*	*	*	*		*	*											*					*		
Scrophulariaceae	Eremophila	Eremophila miniata																											*		*	
Scrophulariaceae	Eremophila	Eremophila oldfieldii subsp. angustifolia	*							*																				*	$rac{1}{2}$	
Scrophulariaceae	Eremophila	Eremophila oppositifolia subsp. angustifolia	*																												-	
Scrophulariaceae	Eremophila	Eremophila pantonii	1																												-	
Scrophulariaceae	Eremophila	Eremophila platycalyx subsp. Leonora	*	*	*	*		*				*	*	*				*							*					$\vdash \vdash$	$\overline{}$	-
Scrophulariaceae	Eremophila	Eremophila scoparia	1	1																										$\vdash \vdash$	-	-
			1	1													*		*		*									$\vdash \vdash$	-	_
Scrophulariaceae Scrophulariaceae	Eremophila Myoporum	Eremophila youngii subsp. youngii	+	1	 		<u> </u>	<u> </u>							<u> </u>		<u> </u>				<u> </u>					.		_	-	┉		
		Myoporum montanum	+	1	 		<u> </u>	<u> </u>							<u> </u>		-		<u> </u>		<u> </u>					.			-	┉		
Solanaceae	Lycium	Lycium australe	1		 	-	-	-	!				*	*	-				-		-								-	┉	$-\!-\!\!-$	
Solanaceae	Nicotiana	Nicotiana rosulata	-	1	 	_	_	-	!		*		-		-			-	-		_		_		_				-	┉	$-\!-\!\!-$	-
Solanaceae	Solanum	Solanum lasiophyllum	*		<u> </u>	*					*			*				*			*		*		*					——'	'	-
Solanaceae	Solanum	Solanum nigrum*		*	ļ																									╙	ш	\vdash
Solanaceae	Solanum	Solanum nummularium			ļ																									╙	ш	\vdash
Stylidiaceae	Stylidium	Stylidium ?sp 111-5	1		<u> </u>																		*							'ـــــــــــــــــــــــــــــــــــــ	<u></u> '	
Zygophyllaceae	Roepera	Roepera eremaea	*		I		I	I			_	*									I					*				1 7	, 7	, 7



		T																											—		—
Family	Genus	Тахоп	Q31	Q32	033	Q34	935	036	037	038	039	Q40	Q41	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	050	Q51	Q52	053	Q54	Q55	Q56	Q57	058	Q59
Aizoaceae	Disphyma	Disphyma crassifolium							*					*	*												\Box				
Aizoaceae	Gunniopsis	Gunniopsis quadrifida											*	*	*								*	*	*						
Amaranthaceae	Ptilotus	Ptilotus divaricatus																													
Amaranthaceae	Ptilotus	Ptilotus exaltatus		*													*														
Amaranthaceae	Ptilotus	Ptilotus gaudichaudii																										ш			
Amaranthaceae	Ptilotus	Ptilotus helipteroides			*																						'	*		*	
Amaranthaceae	Ptilotus	Ptilotus obovatus	*	*	*	*	*	*										*			*		*	*	*	*	*	لــــــــــــــــــــــــــــــــــــــ	*		*
Amaranthaceae	Ptilotus	Ptilotus roei																									'	*		*	
Amaranthaceae	Ptilotus	Ptilotus schwartzii			*													*										*		*	
Anacardiaceae	Schinus	Schinus molle var. areira																													*
Apocynaceae	Leichhardtia	Leichhardtia australis	*			*													*		*		*	*	*			*		*	
Asparagaceae	Thysanotus	Thysanotus manglesianus	*																									ш			
Asphodelaceae	Asphodelus	Asphodelus fistulosus*															*			*		*						لــــــــــــــــــــــــــــــــــــــ			*
Asteraceae	Brachyscome	Brachyscome ciliaris															*											ш	ldot		*
Asteraceae	Brachyscome	Brachyscome iberidifolia																										لــــــــــــــــــــــــــــــــــــــ			
Asteraceae	Calocephalus	Calocephalus knappii																													
Asteraceae	Calotis	Calotis hispidula																								*	*	╙	لــــــــــــــــــــــــــــــــــــــ		ш
Asteraceae	Calotis	Calotis multicaulis																									'	ldot	ш		ш
Asteraceae	Cephalipterum	Cephalipterum drummondii	1																		*							╙	*		ш
Asteraceae	Chrysocephalum	Chrysocephalum puteale																									'	ldot	ш		ldot
Asteraceae	Cratystylis	Cratystylis subspinescens				*								*	*	*					*		Ţ			*	*	لـــــا	ш		
Asteraceae	Erymophyllum	Erymophyllum ramosum subsp. ramosum																													
Asteraceae	Gnephosis	Gnephosis brevifolia																	*									لـــــا	ш		
Asteraceae	Helipterum	Helipterum craspedioides																									'				
Asteraceae	Isoetopsis	Isoetopsis graminifolia																													
Asteraceae	Podolepis	Podolepis canescens																		*		*									
Asteraceae	Podolepis	Podolepis capillaris																													
Asteraceae	Podolepis	Podolepis lessonii																													
Asteraceae	Rhodanthe	Rhodanthe floribunda																													
Asteraceae	Rhodanthe	Rhodanthe maryonii																										*		*	
Asteraceae	Rhodanthe	Rhodanthe propinqua																		*	*	*					'	*		*	
Asteraceae	Rhodanthe	Rhodanthe charsleyae															*			*		*			*						*
Asteraceae	Schoenia	Schoenia cassiniana																				*									
Asteraceae	Senecio	Senecio glossanthus												*	*		*		*							*	*				
Asteraceae	Sonchus	Sonchus oleraceus*															*		*				*	*	*		'				
Asteraceae	Sondottia	Sondottia connata														*															
Asteraceae	Vittadinia	Vittadinia sulcata																		*		*					'				
Asteraceae	Walshia	Walshia kendallii																		*		*						لــــــــــــــــــــــــــــــــــــــ			
Brassicaceae	Carrichtera	Carrichtera annua*																									'				
Brassicaceae	Lepidium	Lepidium oxytrichum			*																					*	*				*
Brassicaceae	Lepidium	Lepidium platypetalum																											*		
Brassicaceae	Sisymbrium	Sisymbrium erysimoides*		*																							'				
Brassicaceae	Sisymbrium	Sisymbrium irio*															*						*	*	*			لــــــــــــــــــــــــــــــــــــــ			
Brassicaceae	Stenopetalum	Stenopetalum salicola														*											'				
Campanulaceae	Wahlenbergia	Wahlenbergia gracilenta																		*		*						لــــا	لــــــــــــــــــــــــــــــــــــــ		[
Campanulaceae	Wahlenbergia	Wahlenbergia tumidifructa																		*		*			*			╙	لــــــــــــــــــــــــــــــــــــــ		ш
Chenopodiaceae	Atriplex	Atriplex bunburyana		*		*		*													*		*	*	*		'	*	ш	*	*
Chenopodiaceae	Atriplex	Atriplex codonocarpa	1	1					1																	*	* 7	ш	لـــــا		igsquare
Chenopodiaceae	Atriplex	Atriplex vesicaria	<u> </u>	*			<u> </u>		<u> </u>					*	*								*	*	*		——'	╙	ldot		*
Chenopodiaceae	Didymanthus	Didymanthus roei	<u> </u>	<u> </u>			<u> </u>		<u> </u>							*											——'	╙	ldot		ldot
Chenopodiaceae	Dysphania	Dysphania kalpari	1	<u> </u>			<u> </u>		<u> </u>																		——'	╙	ldot		
Chenopodiaceae	Enchylaena	Enchylaena tomentosa var. tomentosa	*	*		*	<u> </u>		<u> </u>										*		*		*	*	*	*	*	╙	*		*
Chenopodiaceae	Maireana	Maireana amoena	<u> </u>	<u> </u>			<u> </u>		<u> </u>					*	*												——'	╙	ldot		ldot
Chenopodiaceae	Maireana	Maireana carnosa	1	<u> </u>			<u> </u>		*																		——'	╙	ldot		
Chenopodiaceae	Maireana	Maireana georgei	<u> </u>	*			<u> </u>	*	<u> </u>										*					*	*		——'	╙	ldot		*
Chenopodiaceae	Maireana	Maireana glomerifolia	<u> </u>	<u> </u>			<u> </u>		<u> </u>																		——'	╙	ldot		ldot
Chenopodiaceae	Maireana	Maireana pyramidata	*	*		*	*	*	1	*			*						*		*		*	*	*	*	*	ldot	*		*
Chenopodiaceae	Maireana	Maireana sedifolia	1	1		*	*	*	1																		'	*	*	*	ш
Chenopodiaceae	Maireana	Maireana thesioides	*																									╙	ш		ш
	Maireana	Maireana tomentosa		*			*	*													*		*	*	*	*	*	لـــــا	*		*
Chenopodiaceae	iviuireuriu		1	1	I	1	1	*			1							_							1		, 7	1 7	1 T		[
Chenopodiaceae Chenopodiaceae	Maireana	Maireana trichoptera																													
Chenopodiaceae		Maireana trichoptera Maireana triptera		*		*	*	*	*												*					*	*	*	*	*	*
Chenopodiaceae Chenopodiaceae	Maireana		*	*	*	*	*	*	*									*			*					*	*	*	*	*	*
Chenopodiaceae Chenopodiaceae Chenopodiaceae Chenopodiaceae Chenopodiaceae	Maireana Maireana Rhagodia Rhagodia	Maireana triptera Rhagodia drummondii Rhagodia eremaea	*	*	*	*	*	*	*									*	*		*					*	*	*	*	*	*
Chenopodiaceae Chenopodiaceae Chenopodiaceae Chenopodiaceae	Maireana Maireana Rhagodia	Maireana triptera Rhagodia drummondii	*	* *	*	*	*	*	*				*					*	*		*					*	*	*	*	*	*



Family	Genus	Taxon	031	032	033	034	Q35	036	037	038	039	040	041	Q42	043	Q44	Q45	Q46	Q47	Q48	Q49	050	Q51	Q52	053	054	955	950	Q57	058	059
Chenopodiaceae	Sclerolaena	Sclerolaena densiflora																													*
Chenopodiaceae	Sclerolaena	Sclerolaena diacantha		*			*	*	*					*	*				*		*		*	*	*			*	*	*	*
Chenopodiaceae	Sclerolaena	Sclerolaena drummondii							*					*	*																
Chenopodiaceae	Sclerolaena	Sclerolaena eriacantha																													*
Chenopodiaceae	Sclerolaena	Sclerolaena patenticuspis							*					*	*								*	*	*	*	*				
Chenopodiaceae	Tecticornia	Tecticornia disarticulata																								*	*				*
Chenopodiaceae	Tecticornia	Tecticornia indica subsp. bidens							*		*	*		*	*	*			*												
Chenopodiaceae	Tecticornia	Tecticornia pruinosa							*		*	*											*	*							
Chenopodiaceae	Tecticornia	Tecticornia undulata							*		*	*		*	*	*			*				*	*							
Convolvulaceae	Cuscuta	Cuscuta planiflora*									<u> </u>									*		*									
Crassulaceae	Crassula	Crassula colorata var. acuminata	*	_																*	_	*						_		_	
Fabaceae	Acacia	Acacia aneura	-	-	-					-	<u> </u>					-	-			-	-	•		-					-	-	
Fabaceae	Acacia	Acacia burkittii	*										-										*	•	-						
Fabaceae Fabaceae	Acacia Acacia	Acacia caesaneura Acacia craspedocarpa	*	-		*							-				*	*	-		*				*						
Fabaceae	Acacia	Acacia craspeaocarpa Acacia duriuscula	-			*	*	*									_	-			-				-						
Fabaceae	Acacia	Acacia incurvaneura		-	-				-		 					-		-		*				-	-						
Fabaceae	Acacia			*	*				 		 					-	*	*	*	*	*	*			-						
Fabaceae	Acacia	Acacia mulganeura Acacia pteraneura	1			-		-	 	-	 					1	*								1	-	-	-	*		*
Fabaceae	Acacia	Acacia quadrimarginea	!	*	*				t		!					-		t							-				\vdash		
Fabaceae	Acacia	Acacia quadrimarginea Acacia ramulosa var. ramulosa	*						t		!					-		t							-			*	\vdash	*	
Fabaceae	Acacia	Acacia sibirica	1	 	 				 		 					 		 	1				-	 	 				\vdash		
Fabaceae	Acacia	Acacia tetragonophylla	*	*	*	1			1	1	1					1	*	1		*	*	*		1	*		1	*		*	*
Fabaceae	Medicago	Medicago minima*															*														
Fabaceae	Senna	Senna artemisioides subsp. ×sturtii																										*	*	*	
Fabaceae	Senna	Senna artemisioides subsp. artemisioides			*																										
Fabaceae	Senna	Senna artemisioides subsp. filifolia	*			*		*																					*		*
Fabaceae	Senna	Senna cardiosperma																							*						
Fabaceae	Senna	Senna charlesiana		*			*	*			1							*			*										
Fabaceae	Senna	Senna glutinosa subsp. chatelainiana							1		1							1											*		-
Fabaceae	Senna	Senna sp. Meekatharra			*																										
Frankeniaceae	Frankenia	Frankenia cinerea																											*		
Frankeniaceae	Frankenia	Frankenia interioris																													
Frankeniaceae	Frankenia	Frankenia laxiflora																	*												
Frankeniaceae	Frankenia	Frankenia pauciflora var. pauciflora							*					*	*	*															
Geraniaceae	Erodium	Erodium crinitum	*																												
Geraniaceae	Erodium	Erodium cygnorum	*	*	*		*	*									*	*	*	*	*	*			*			*		*	*
Goodeniaceae	Goodenia	Goodenia havilandii			*															*		*									
Goodeniaceae	Goodenia	Goodenia rosea	*																												
Goodeniaceae	Goodenia	Goodenia sp. Midwest															*				*				*	*	*	*	*	*	
Goodeniaceae	Scaevola	Scaevola spinescens	*	*		*	*	*		*			*	*	*				*				*	*	*				*		
Haloragaceae	Haloragis	Haloragis gossei	*																												
Haloragaceae	Haloragis	Haloragis trigonocarpa						*																							
Hemerocallidaceae	Dianella	Dianella revoluta var. divaricata	*															*													
Lamiaceae	Salvia	Salvia verbenaca*																													*
Lamiaceae	Teucrium	Teucrium teucriiflorum		*																	*										
Loranthaceae	Amyema	Amyema fitzgeraldii						<u> </u>	<u> </u>		<u> </u>					<u> </u>		*							<u> </u>	<u> </u>					
Malvaceae	Abutilon	Abutilon cryptopetalum									<u> </u>																				
Malvaceae	Abutilon	Abutilon otocarpum	ļ						1		1							1													
Malvaceae	Abutilon	Abutilon oxycarpum									<u> </u>																				
Malvaceae	Brachychiton	Brachychiton gregorii	1			<u> </u>		<u> </u>	<u> </u>	<u> </u>	<u> </u>							<u> </u>								<u> </u>	<u> </u>	<u> </u>	igspace		
Malvaceae	Sida	Sida calyxhymenia							 		!							 													
Malvaceae	Sida	Sida ectogama	*	*	*				 		!							 			*										
Malvaceae	Sida	Sida intricata	<u> </u>						1		1					-		1							-				$\vdash \vdash$		-
Malvaceae	Sida	Sida sp. Excedentifolia	1	<u> </u>	<u> </u>				<u> </u>		<u> </u>							<u> </u>	1					<u> </u>					\vdash		*
Malvaceae	Sida	Sida sp. Golden calyces glabrous		-	-	-			1	-	1					-		1						-	_		-	*		*	
Montiaceae	Calandrinia	Calandrinia creethae	*	-	-	_			1	_	1					-	_	1	_	*	_	*		_	*		-	-			
Montiaceae	Calandrinia	Calandrinia eremaea	*	-	-	*			1	-	1		*	*	*	-	*	1	*	*	*	*		*	*		-			-	*
Montiaceae	Calandrinia	Calandrinia eremaea sans lat		-	-	-			1	-	1					-		1	*		_			*	*		-	*		*	
Montiaceae	Calandrinia	Calandrinia polyandra	<u> </u>						1		1					-		1	*		*		,	*	*				$\vdash \vdash$		*
Myrtaceae	Eucalyptus	Eucalyptus camaldulensis subsp. obtusa	<u> </u>						1	_	1		-			-	*	1	*				*	*					$\vdash \vdash$		
Myrtaceae	Melaleuca	Melaleuca interioris		-	-	-			1	-	1		*			-		1	*					*	*		-	-			
Myrtaceae	Melaleuca	Melaleuca sheathiana		-	-	-			1	-	1		*	*	*	-		1	*					*	*		-	-			
Pittosporaceae	Pittosporum	Pittosporum angustifolium	1			 		 	1	 	1					-		1	-	*		*			-	 	 	 	\vdash		
Plantaginaceae	Plantago	Plantago turrifera	*						-	_	-					-		-		•		•			-						
Poaceae	Aristida	Aristida contorta							1				*			1		1													



Family	Genus	Taxon	031	Q32	033	Q34	035	036	037	038	650	040	Q41	0,42	Q43	Q44	045	Q46	Q47	Q48	Q49	050	051	052	Q53	Q54	Q55	Q 56	Q57	058	Q59
Poaceae	Austrostipa	Austrostipa elegantissima																								*	*		$\neg \neg$	$\overline{}$	-
Poaceae	Austrostipa	Austrostipa nitida												*	*													*	*	*	*
Poaceae	Cenchrus	Cenchrus ciliaris*															*		*				*	*	*						*
Poaceae	Enneapogon	Enneapogon caerulescens		*				*																				*		*	1
Poaceae	Eragrostis	Eragrostis eriopoda	*											*	*													*		*	
Poaceae	Eriachne	Eriachne flaccida																										*		*	1
Poaceae	Eriachne	Eriachne mucronata																											-		
Poaceae	Eriachne	Eriachne pulchella subsp. pulchella												*	*																
Poaceae	Monachather	Monachather paradoxus																								*	*		-		
Polygonaceae	Rumex	Rumex vesicarius*		*						*			*			*							*	*	*			*	-	*	*
Primulaceae	Lysimachia	Lysimachia arvensis*															*						*	*	*				$\neg \neg$		
Proteaceae	Grevillea	Grevillea berryana		1		†			†								†	*											-		
Proteaceae	Hakea	Hakea preissii		*		†			†	*			*				†												*		*
Proteaceae	Hakea	Hakea recurva subsp. recurva			*	-			-								1												-		-
Pteridaceae	Cheilanthes	Cheilanthes sieberi subsp. sieberi		*	*													*		*		*						*		*	
Rubiaceae	Psydrax	Psydrax rigidula		1	*											1													-	$\overline{}$	$\overline{}$
Rubiaceae	Psydrax	Psydrax suaveolens	*	1	1											1													\rightarrow	$\overline{}$	-
Rutaceae	Phebalium	Phebalium lepidotum		1												1													-	$\overline{}$	$\overline{}$
Santalaceae	Exocarpos	Exocarpos aphyllus		1										*	*	1							*	*	*				\rightarrow		$\overline{}$
Santalaceae	Santalum	Santalum lanceolatum		1												1				*		*							\rightarrow		$\overline{}$
Santalaceae	Santalum	Santalum spicatum		-	-	 			 	-	-	-		-		_	 												\rightarrow	-	-
Sapindaceae	Dodonaea	Dodonaea rigida	_	-	*	1			1							1													\longrightarrow	-	-
	Eremophila	Eremophila clarkei		1	*	<u> </u>			<u> </u>							1		*		*		*							-	$\overline{}$	-
Scrophulariaceae			*	1	<u> </u>											1		*		- 1	*								\longrightarrow	\vdash	-
Scrophulariaceae	Eremophila	Eremophila compacta	*			-			-	-	-	-		-			 	-			*							*	\longrightarrow	*	Ť
Scrophulariaceae	Eremophila	Eremophila forrestii subsp. forrestii				-			-		-			-			 				-							-	\longrightarrow		
Scrophulariaceae	Eremophila	Eremophila glandulifera		*	*	1	*	*	1							1	1												\longrightarrow		-
Scrophulariaceae	Eremophila	Eremophila latrobei subsp. latrobei	_			-	_	_	-							1													-		\vdash
Scrophulariaceae	Eremophila	Eremophila maculata subsp. brevifolia	*	-		-			-							1													*		
Scrophulariaceae	Eremophila	Eremophila metallicorum	*	<u> </u>		ļ			ļ				*		*	<u> </u>			*												ь—
Scrophulariaceae	Eremophila	Eremophila miniata								*			*	*	*				*												-
Scrophulariaceae	Eremophila	Eremophila oldfieldii subsp. angustifolia		*		*	*	*	ļ							<u> </u>	<u> </u>												*		ь—
Scrophulariaceae	Eremophila	Eremophila oppositifolia subsp. angustifolia	_													ļ													,—	<u></u>	
Scrophulariaceae	Eremophila	Eremophila pantonii		1		*																							-	<u> </u>	—
Scrophulariaceae	Eremophila	Eremophila platycalyx subsp. Leonora	_				*	*								ļ												*	,—	*	*
Scrophulariaceae	Eremophila	Eremophila scoparia																								*	*			L	
Scrophulariaceae	Eremophila	Eremophila youngii subsp. youngii															ļ						*	*		*	*		, — Д	<u> </u>	
Scrophulariaceae	Myoporum	Myoporum montanum																					*	*							
Solanaceae	Lycium	Lycium australe			1									*	*									*	*					<u> </u>	
Solanaceae	Nicotiana	Nicotiana rosulata		1	1	<u> </u>			<u> </u>								<u> </u>												ш	<u> </u>	
Solanaceae	Solanum	Solanum lasiophyllum					*	*															*	*	*				تـــــــا		*
Solanaceae	Solanum	Solanum nigrum*																													1
Solanaceae	Solanum	Solanum nummularium				*																							تــــــــــــــــــــــــــــــــــــــ		
Stylidiaceae	Stylidium	Stylidium ?sp 111-5																													
Zygophyllaceae	Roepera	Roepera eremaea												*	*													*		*	



Species List per Vegetation Group (Opportunistically sampled species not captured in guadrats identified in Bold type)

Family	Genus	Taxon	Α	В	С	D	E	F	G	Н	ı	J	K	L	M	N	0	P
Aizoaceae	Disphyma	Disphyma crassifolium	*						*	*					*		*	<u></u>
Aizoaceae	Gunniopsis	Gunniopsis quadrifida														*	*	*
Amaranthaceae	Ptilotus	Ptilotus divaricatus	*															<u> </u>
Amaranthaceae	Ptilotus	Ptilotus exaltatus		*									*					
Amaranthaceae	Ptilotus	Ptilotus gaudichaudii									*							
Amaranthaceae	Ptilotus	Ptilotus helipteroides	*	*				*					*					
Amaranthaceae	Ptilotus	Ptilotus obovatus	*	*	*	*	*		*	*	*	*	*	*				*
Amaranthaceae	Ptilotus	Ptilotus roei						*			*							
Amaranthaceae	Ptilotus	Ptilotus schwartzii			*			*			*		*					
Anacardiaceae	Schinus	Schinus molle var. areira	*															
Apiaceae	Daucus	Daucus glochidiatus		*														
Apocynaceae	Leichhardtia	Leichhardtia australis	*		*		*	*			*	*		*		*		*
Asparagaceae	Thysanotus	Thysanotus manglesianus										*						
Asphodelaceae	Aloe	Aloe vera*					*											
Asphodelaceae	Asphodelus	Asphodelus fistulosus*	*	*			*											
Asteraceae	Brachyscome	Brachyscome ciliaris	*	*			*		*									
Asteraceae	Brachyscome	Brachyscome iberidifolia		1	*				1			1	1					
Asteraceae	Calocephalus	Calocephalus knappii		*	1	1	1	†	l –					†				
Asteraceae	Calotis	Calotis hispidula							*	*								
Asteraceae	Calotis	Calotis multicaulis		*			*											
Asteraceae	Cephalipterum	Cephalipterum drummondii	*	*	*	*	*	1	*		1			1	1			
Asteraceae	Chrysocephalum	Chrysocephalum puteale			1						*							\vdash
Asteraceae	Cratystylis	Cratystylis subspinescens	*			+	*		*	*			1	*	*		*	\vdash
Asteraceae	Erymophyllum	Erymophyllum ramosum subsp. ramosum					-		*									
				+	1	+	-	1			1	1	-	1	1	*		\vdash
Asteraceae Asteraceae	Gnephosis Gnephosis	Gnephosis angianthoides Gnephosis brevifolia	*	+	1	+	-	1			1	1	-	1	1	*		\vdash
	Helipterum	Helipterum craspedioides		+	1	+	-	1			*	1	-	1	1			\vdash
Asteraceae	· ·				 	-	-					-						\vdash
Asteraceae	Isoetopsis	Isoetopsis graminifolia		*	 	-	-						+ -					
Asteraceae	Myriocephalus	Myriocephalus oldfieldii		-	1	*												
Asteraceae	Panaetia	Panaetia lessonii				-	-											—
Asteraceae	Podolepis	Podolepis canescens	*	*						*								₩
Asteraceae	Podolepis	Podolepis capillaris	*		<u> </u>					•								—
Asteraceae	Podolepis	Podolepis lessonii			*		*											
Asteraceae	Rhodanthe	Rhodanthe chlorocephala subsp. splendida			1		•								1			—
Asteraceae	Rhodanthe	Rhodanthe floribunda	*		*							ļ						—
Asteraceae	Rhodanthe	Rhodanthe maryonii		*				*			*							——
Asteraceae	Rhodanthe	Rhodanthe oppositifolia subsp. oppositifolia		*														Ь—
Asteraceae	Rhodanthe	Rhodanthe propinqua		*	*		*	*										Ь
Asteraceae	Rhodanthe	Rhodanthe charsleyae	*	*	*		*											*
Asteraceae	Schoenia	Schoenia cassiniana		*														Ь
Asteraceae	Senecio	Senecio glossanthus		*						*						*	*	
Asteraceae	Senecio	Senecio magnificus	*															
Asteraceae	Sonchus	Sonchus oleraceus*	*	*												*		*
Asteraceae	Sondottia	Sondottia connata													*			<u> </u>
Asteraceae	Vittadinia	Vittadinia sulcata		*														<u> </u>
Asteraceae	Walshia	Walshia kendallii		*														
Brassicaceae	Carrichtera	Carrichtera annua*	*	*														
Brassicaceae	Lepidium	Lepidium oxytrichum	*	*			*			*			*					
Brassicaceae	Lepidium	Lepidium platypetalum				*												
Brassicaceae	Sisymbrium	Sisymbrium erysimoides*	*	*				Ì					*	Ì				
Brassicaceae	Sisymbrium	Sisymbrium irio*		*		1	1											*
Brassicaceae	Stenopetalum	Stenopetalum salicola		1	1			1	1			1	1	1	*	1		
Cactaceae	Cylindropuntia	Cylindropuntia imbricata*		*	*		*		*			1				*	*	
Cactaceae	Opuntia	Opuntia stricta*	*	*	1	1	1	†	*					†		*		
Campanulaceae	Wahlenbergia	Wahlenbergia gracilenta		*	1	1	1	<u> </u>			1		1	<u> </u>	1	1	1	
Campanulaceae	Wahlenbergia	Wahlenbergia tumidifructa	-	*	1	+	1	 	1		1	-	1	 	1	1	-	*
	Wallichberglu			1												1		



Family	Genus	Taxon	Α	В	С	D	E	F	G	Н			К	L	М	N	0	Р
			А	В	L	U	E	F	G	н		J *	K	L	IVI	IN	U	Р
Casuarinaceae Chenopodiaceae	Casuarina Atriplex	Casuarina pauper Atriplex bunburyana	*	1	1		*	*	*	*			*	*		 	$\vdash \vdash$	*
Chenopodiaceae	Atriplex	Atriplex builburyunu Atriplex codonocarpa	*	*					*	*						 	$\vdash \vdash$	
Chenopodiaceae	Atriplex	Atriplex coamocarpa Atriplex vesicaria	*	<u> </u>						*			*			 	*	*
Chenopodiaceae	Didymanthus	Didymanthus roei													*	 	$\vdash \vdash$	
Chenopodiaceae	Dysphania	Dysphania kalpari		*												 	$\vdash \vdash$	
Chenopodiaceae	Enchylaena	Enchylaena tomentosa var. tomentosa	*	*		*	*		*	*		*	*	*		*	$\vdash \vdash$	*
Chenopodiaceae	Maireana	Maireana amoena														 	*	
Chenopodiaceae	Maireana	Maireana carnosa													*	 	$\vdash \vdash$	
Chenopodiaceae	Maireana	Maireana georgei	*		*								*	*		*	$\vdash \vdash$	*
Chenopodiaceae	Maireana	Maireana glomerifolia					*							1		 	$\vdash \vdash$	
Chenopodiaceae	Maireana	Maireana pyramidata	*	*	*	*	*		*	*		*	*	*		*	$\vdash \vdash$	*
Chenopodiaceae	Maireana	Maireana sedifolia	*			*		*					*	*		 	$\vdash \vdash$	
Chenopodiaceae	Maireana	Maireana thesioides			*							*	*	1		 	$\vdash \vdash$	
Chenopodiaceae	Maireana	Maireana tomentosa	*			*	*		*	*			*	*		 	$\vdash \vdash$	*
Chenopodiaceae	Maireana	Maireana trichoptera	*				*		*					*		 	$\vdash \vdash$	
Chenopodiaceae	Maireana	Maireana triptera	*		*	*	*	*	*	*			*	*	*	 	$\vdash \vdash$	
Chenopodiaceae	Rhagodia	Rhagodia drummondii	*	*	*	*						*	*	*			\vdash	
Chenopodiaceae	Rhagodia	Rhagodia eremaea	*	*									*	1		*	$\vdash \vdash$	
Chenopodiaceae	Salsola	Salsola australis												1		*	$\vdash \vdash$	
Chenopodiaceae	Sclerolaena	Sclerolaena cuneata					*	*		*				*		 	$\vdash \vdash$	*
Chenopodiaceae	Sclerolaena	Sclerolaena densiflora	*						*					1		 	$\vdash \vdash$	
Chenopodiaceae	Sclerolaena	Sclerolaena diacantha	*	*	*	*	*	*	*		*		*	*	*	*	*	*
Chenopodiaceae	Sclerolaena	Sclerolaena drummondii													*	 	*	
Chenopodiaceae	Sclerolaena	Sclerolaena ariacantha	*				*									 	$\vdash \vdash$	
Chenopodiaceae	Scierolaena	Sclerolaena eurotioides							*							 	$\vdash \vdash$	
Chenopodiaceae	Sclerolaena	Sclerolaena patenticuspis	*		*				*	*					*	 	*	*
Chenopodiaceae	Tecticornia	Tecticornia disarticulata	*							*						 	$\vdash \vdash$	
Chenopodiaceae	Tecticornia	Tecticornia indica subsp. bidens												1	*	*	*	
Chenopodiaceae	Tecticornia	Tecticornia pruinosa													*	*	$\vdash \vdash$	*
Chenopodiaceae	Tecticornia	Tecticornia undulata													*	*	*	*
Convolvulaceae	Cuscuta	Cuscuta planiflora*		*												 	$\vdash \vdash$	
Crassulaceae	Crassula	Crassula colorata var. acuminata		*									*			 	$\vdash \vdash$	
Cucurbitaceae	Citrullus	Citrullus amarus*	*			*										 	$\vdash \vdash$	
Cucurbitaceae	Cucumis	Cucumis myriocarpus*					*							1		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia aneura	*	*	*	*	*	*			*	*	*	1		*	$\vdash \vdash$	
Fabaceae	Acacia	Acacia burkittii												1		 	$\vdash \vdash$	*
Fabaceae	Acacia	Acacia caesaneura		*	*		*					*	*	1		*	$\vdash \vdash$	
Fabaceae	Acacia	Acacia craspedocarpa	*	*	*		*					*	*	*		 	$\vdash \vdash$	*
Fabaceae	Acacia	Acacia duriuscula												*		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia incurvaneura	*	*	*												\vdash	
Fabaceae	Acacia	Acacia kempeana	*														\vdash	
Fabaceae	Acacia	Acacia masliniana					*							1		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia mulganeura	*	*	*		*						*			*	\vdash	
Fabaceae	Acacia	Acacia oswaldii					*							1		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia pteraneura	*	*		*								1		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia quadrimarginea					*				*		*	1		 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia ramulosa var. ramulosa			*			*				*				 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia sibirica					*									 	$\vdash \vdash$	
Fabaceae	Acacia	Acacia tetragonophylla	*	*	*		*	*			*	*	*			 	$\vdash \vdash$	*
Fabaceae	Acacia	Acacia victoriae		†	 		 		*			 	 	 		 	\vdash	
Fabaceae	Medicago	Medicago laciniata*		*	 		 	-		 		1	 	 		 	\vdash	
Fabaceae	Medicago Medicago	Medicago minima*		*	1		 	1	1	-	1	1	1	1	1	 	$\vdash \vdash$	
	Senna Senna		*	-	}	*	*	*		 	-	}	1	1	-	 	$\vdash \vdash$	
Fabaceae		Senna artemisioides subsp. ×sturtii	*	1	 		*	<u> </u>	*			}	*	1		 	${f m m m m m m m m m m m m m $	
Fabaceae	Senna	Senna artemisioides subsp. artemisioides	*	 	*	*	*					*	*	*		 	⊢─┤	
Fabaceae	Senna	Senna artemisioides subsp. filifolia	*	 	 	<u> </u>	-					-	-	<u> </u>		 	┢═┩	*
Fabaceae	Senna	Senna cardiosperma	Ŧ													<u> </u>	ш	-



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Family	Genus	Taxon	Α	В	С	D	E	F	G	Н	ı	J	K	L	М	N	0	P
Fabaceae	Senna	Senna charlesiana	*		*	*	*						*	*				<u> </u>
Fabaceae	Senna	Senna glutinosa subsp. chatelainiana				*												
Fabaceae	Senna	Senna sp. Meekatharra	*										*					Ļ
Frankeniaceae	Frankenia	Frankenia cinerea				*	*		*	*								Ļ
Frankeniaceae	Frankenia	Frankenia interioris	*															Ļ
Frankeniaceae	Frankenia	Frankenia laxiflora														*		<u> </u>
Frankeniaceae	Frankenia	Frankenia pauciflora var. pauciflora													*		*	<u> </u>
Geraniaceae	Erodium	Erodium crinitum										*						<u> </u>
Geraniaceae	Erodium	Erodium cygnorum	*	*	*		*	*	*		*	*	*	*		*		*
Goodeniaceae	Goodenia	Goodenia havilandii		*									*					
Goodeniaceae	Goodenia	Goodenia rosea			*						*	*						
Goodeniaceae	Goodenia	Goodenia sp. Midwest	*	*		*	*	*	*	*								*
Goodeniaceae	Scaevola	Scaevola spinescens	*	*	*	*	*					*	*	*		*	*	*
Haloragaceae	Haloragis	Haloragis gossei										*						<u> </u>
Haloragaceae	Haloragis	Haloragis trigonocarpa												*				
Hemerocallidaceae	Dianella	Dianella revoluta var. divaricata			*							*	*					
Lamiaceae	Salvia	Salvia verbenaca*	*															<u> </u>
Lamiaceae	Teucrium	Teucrium teucriiflorum		*	*		*						*					
Loranthaceae	Amyema	Amyema fitzgeraldii			*													
Loranthaceae	Amyema	Amyema fitzgeraldii			*													
Malvaceae	Abutilon	Abutilon cryptopetalum			*													
Malvaceae	Abutilon	Abutilon otocarpum		*														
Malvaceae	Abutilon	Abutilon oxycarpum		*														
Malvaceae	Brachychiton	Brachychiton gregorii									*							
Malvaceae	Sida	Sida calyxhymenia	*		*		*				*		*					
Malvaceae	Sida	Sida ectogama	*	*	*		*					*	*					
Malvaceae	Sida	Sida intricata	*															
Malvaceae	Sida	Sida sp. Excedentifolia	*															
Malvaceae	Sida	Sida sp. Golden calyces glabrous	*	*	*			*					*					
Montiaceae	Calandrinia	Calandrinia creethae		*														*
Montiaceae	Calandrinia	Calandrinia eremaea	*	*			*					*		*		*	*	*
Montiaceae	Calandrinia	Calandrinia eremaea sans lat						*										
Montiaceae	Calandrinia	Calandrinia polyandra	*				*		*	*						*		*
Myrtaceae	Eucalyptus	Eucalyptus camaldulensis subsp. obtusa		*														*
Myrtaceae	Eucalyptus	Eucalyptus lesouefii		*														
Myrtaceae	Eucalyptus	Eucalyptus oleosa subsp. oleosa										*						
Myrtaceae	Eucalyptus	Eucalyptus torquata	*															
Myrtaceae	Melaleuca	Melaleuca interioris														*		*
Myrtaceae	Melaleuca	Melaleuca sheathiana														*	*	*
Pittosporaceae	Pittosporum	Pittosporum angustifolium			*		*											
Plantaginaceae	Plantago	Plantago turrifera		*														
Poaceae	Aristida	Aristida contorta					*					*				*		
Poaceae	Austrostipa	Austrostipa elegantissima								*								
Poaceae	Austrostipa	Austrostipa nitida	*		*	*		*									*	
Poaceae	Cenchrus	Cenchrus ciliaris*	*	*												*		*
Poaceae	Enneapogon	Enneapogon caerulescens						*					*	*				
Poaceae	Eragrostis	Eragrostis eriopoda	*		*			*				*					*	
Poaceae	Eriachne	Eriachne flaccida						*										
Poaceae	Eriachne	Eriachne mucronata									*					1		
Poaceae	Eriachne	Eriachne pulchella subsp. pulchella					*										*	
Poaceae	Monachather	Monachather paradoxus								*						1		
Polygonaceae	Rumex	Rumex vesicarius*	*	*				*					*		*	*		*
Primulaceae	Lysimachia	Lysimachia arvensis*	*	*														*
Proteaceae	Grevillea	Grevillea berryana			*								*					
Proteaceae	Hakea	Hakea preissii	*			*	*		*	*			*			*		
Proteaceae	Hakea	Hakea recurva subsp. recurva			*								*					
	Cheilanthes	Cheilanthes sieberi subsp. sieberi														1	1	1



Family	Genus	Taxon	Ι .	- n	_	D	F	-	G				V	1 .	М	N	0	В
			A	В		U	-	r		П		,	*		IVI	IN		<u> </u>
Rubiaceae	Psydrax	Psydrax rigidula		-			-					*	-				┼──	├ ──
Rubiaceae	Psydrax	Psydrax suaveolens	*						1	1		-			1		├	├──
Rutaceae	Phebalium -	Phebalium lepidotum	•						-								*	
Santalaceae	Exocarpos	Exocarpos aphyllus			1				<u> </u>	<u> </u>				<u> </u>	<u> </u>		<u> </u>	<u> </u>
Santalaceae	Santalum	Santalum lanceolatum		*	*													<u> </u>
Santalaceae	Santalum	Santalum spicatum			*													<u> </u>
Sapindaceae	Alectryon	Alectryon oleifolius subsp. canescens										*					<u> </u>	<u> </u>
Sapindaceae	Dodonaea	Dodonaea rigida											*					
Scrophulariaceae	Eremophila	Eremophila clarkei		*	*								*					<u> </u>
Scrophulariaceae	Eremophila	Eremophila compacta	*		*		*		*			*						<u> </u>
Scrophulariaceae	Eremophila	Eremophila forrestii subsp. forrestii			*		*	*				*						<u> </u>
Scrophulariaceae	Eremophila	Eremophila glandulifera			*						*							
Scrophulariaceae	Eremophila	Eremophila latrobei subsp. latrobei											*	*				
Scrophulariaceae	Eremophila	Eremophila longifolia							*									
Scrophulariaceae	Eremophila	Eremophila maculata subsp. brevifolia							*									
Scrophulariaceae	Eremophila	Eremophila metallicorum	*	*	*	*	*					*						
Scrophulariaceae	Eremophila	Eremophila miniata										*				*	*	
Scrophulariaceae	Eremophila	Eremophila oldfieldii subsp. angustifolia	*			*							*	*				
Scrophulariaceae	Eremophila	Eremophila oppositifolia subsp. angustifolia	*															
Scrophulariaceae	Eremophila	Eremophila pantonii												*				
Scrophulariaceae	Eremophila	Eremophila platycalyx subsp. Leonora	*	*	*		*	*						*				
Scrophulariaceae	Eremophila	Eremophila scoparia								*								
Scrophulariaceae	Eremophila	Eremophila youngii subsp. youngii	*			*			*	*								*
Scrophulariaceae	Myoporum	Myoporum montanum																*
Solanaceae	Lycium	Lycium australe															*	*
Solanaceae	Nicotiana	Nicotiana rosulata		*	*													
Solanaceae	Solanum	Solanum lasiophyllum	*		*		*		*		*			*				*
Solanaceae	Solanum	Solanum nigrum*		*														
Solanaceae	Solanum	Solanum nummularium												*				
Stylidiaceae	Stylidium	Stylidium ?sp 111-5									*							
Zygophyllaceae	Roepera	Roepera eremaea	*				*	*									*	



Appendix F - Site Descriptions



Solutions					
		Project Name: St Barbara Ltd			
Date:	12/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3163	62 -28.863108	Quadrat:	Q1	
Quadrat size:	20x20	·			
Vegetation group:		Chenopod shrubland	-		· <u> </u>
WP:	wpt001				
Photo number:			1 and 2		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective disturb	ance except grazing by hoofed animals	
Fire History:			Greater than 10 year		
Coarse fragments on the surface (abur	ndance/size/shape):		No qualifier; comm	on/Medium gravelly; medium pebbles/Sub	rounded
Rock outcrop (abundance/runoff):			No bedrock expose		
Soil (profile/field texture/soil surface)			Uniform/Sandy clay	loam/Firm	
% Cover leaf litter:			10		
% Cover bare ground:			70		
Tallest stratum		Mid-stratum		Lower stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	V <10	Crown cover %:	S 10-30	Crown cover %:	
	Λ <10		3 10-30		S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Eremophila oldfieldii subsp. angustifoli	1	Senna artemisioides subsp. filifolia		Ptilotus obovatus	
		Eremophila platycalyx subsp. Leono		Maireana sedifolia	
		Eremophila oppositifolia subsp. ang		Scaevola spinescens	
		ALL SPECIES			
		Eremophila oldfieldii subs	p. angustifolia		
		Scaevola spinest Solanum lasiophy Sida calyxhyme Maireana tomen Sclerolaena dens Sclerolaena diaca Carrichtera ann Sonchus olerace Lysimachia arver Cenchrus ciliar Acacia aneur. Roepera erema	/llum nia tosa ifflora intha ua* us* isis* isi* ia		
		Sida sp. Excedent			
		Atriplex bunbury			
		Maireana geor			
	-	Maireana trichor			-
	-	Hakea preissi			-
		Erodium cygnor			
	-	Rumex vesicari			
		Senna sp. Meekat			
		Leichhardtia aust			
		Maireana tripto	era		
		Acacia tetragono	ohylla		
		Acacia incurvane			-
		Salvia verbenad			
		Rhodanthe chars			
		modulicie tilaisi	-,		
		0.4-14-			
		Outside			
		Eucalyptus torqu			
		Acacia kempea			
		Eremophila comp	oacta		
		BL 1 11 (1 11			





	Project	Name: St Barbara Ltd Leonora Pro	piect		
ate:	12/09/2022	20. 20. 20. 20. 20. 20. 20. 20. 20. 20.	Botanist:	Eren Reid	
ocation:	GDA94 121.313678 -28.862588		Quadrat:	Q2	
Quadrat size:	20x20		Quaurat.	1 44	
/egetation group:	Creekline Vegetation				
wegetation group:	wpt002				
wr: Photo number:	wptooz		3		
Landform:			Closed		
				sturbanca aveant graning by	haafad animala
Land surface/disturbance: Fire History:			Greater than 1	sturbance except grazing by I	noored animais
	ace (abundance/size/shape):			<u> </u>	
			No coarse fragi		
Rock outcrop (abundance/ru			No bedrock exp		
Soil (profile/field texture/soi	і ѕиттасе):			clay loam/Firm	
% Cover leaf litter:			60		
% Cover bare ground:			45		
	Tallest stratum	Mid-stra	tum	James 4	stratum
Growth form:		Growth form:		Growth form:	S Shrub
Growth form:	Y Shrub Mallee (< 8m) 6-12m	Growth form: Height:	S Shrub 1-3m	Height:	0.5-1m
Height:					
Crown cover %:	M 30-70	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:	en Loonero	Dominant taxa:	
Acacia incurvaneura		Eremophila platycalyx sub	ър. геопога	Maireana pyramidata	
Acacia aneura		Acacia tetragonophylla		Rhagodia eremaea	
		ALL SPECIES		Ptilotus obovatus	
		Acacia incurvaneura			
		Acacia aneura			
	E	are a letter at letter at least a leas			
	Ere	mophila platycalyx subsp. Leonora			
		Acacia tetragonophylla			
		Maireana pyramidata			
		Rhagodia eremaea			
		Ptilotus obovatus			
		Asphodelus fistulosus*			
		Lysimachia arvensis*			
		Sonchus oleraceus*			
		Sisymbrium irio*			
		Calandrinia eremaea			
		Cuscuta planiflora*			
		Erodium cygnorum			
		Rhodanthe charsleyae			
		Nicotiana rosulata			
		Nicotiana rosulata Abutilon otocarpum			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius*			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii			
	C	Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi			
	C	Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum			
	C	Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum*			
	C	Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum			
	C	Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens Goodenia havilandii			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens Goodenia havilandii crassula colorata var. acuminata			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens Goodenia havilandii rassula colorata var. acuminata Ptilotus helipteroides			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens Goodenia havilandii Crassula colorata var. acuminata Ptilotus helipteroides Dysphania kalpari			
		Nicotiana rosulata Abutilon otocarpum Abutilon oxycarpum Rumex vesicarius* Calocephalus knappii heilanthes sieberi subsp. sieberi Lepidium oxytrichum Solanum nigrum* Teucrium teucriiflorum Scaevola spinescens Goodenia havilandii rassula colorata var. acuminata Ptilotus helipteroides			





		Project Name: St Barbara	Ltd Leonora Project		
Date:	12/09/2022	•	Botanist:	Eren Reid	
Location:	GDA94 121.3021	07 -28.871817	Quadrat:	Q3	
Quadrat size:	20x20			•	
Vegetation group:	Mulga woodland				
WP:	wpt005				
Photo number:	•		4		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective dist	urbance	
Fire History:			Greater than 10	years ago	
Coarse fragments on the surfa	ce (abundance/size/shape):		No coarse fragm	ents	
Rock outcrop (abundance/run	off):		No bedrock expo	osed	
Soil (profile/field texture/soil	surface):		Uniform/Sandy of	clay loam/Firm	
% Cover leaf litter:	-		10		
% Cover bare ground:			70		
			•		
Tallest	stratum	Mid	-stratum	Lower	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:	•	Dominant taxa:		Dominant taxa:	•
Acacia aneura		Eremophila platycalyx sub	sp. Leonora	Teucrium teucriiflorum	
Acacia mulganeura		Acacia tetragonophylla		Ptilotus obovatus	
		ALL SPE	CIES		
		Acacia ar	neura		
		Acacia mul	ganeura		
		Eremophila platycaly	x subsp. Leonora		
		Acacia tetrag	onophylla		
		Teucrium teu	criiflorum		
		Ptilotus ob	ovatus		
		Erodium cy			
		Sclerolaena d			
		Rhodanthe c			
		Eremophila me			
		Eremophila gl			
		Leichhardtia			
		Rhodanthe fl			
		Abutilon crypt			
		Pittosporum an	-		
		Sclerolaena pa	tenticuspis		
		Outsi			
		Acacia crasp	•		
		Nicotiana r			
		Santalum s			
		Cido en Coldon es	lucos alabrous		





		Project Name: St Barbara	Ltd Leonora Project		
Date:	12/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.315	957 -28.865763	Quadrat:	Q4	
Quadrat size:	20x20		1 -3	•	
Vegetation group:		er chenopod shrubland			
WP:	wpt008	• • • • • • • • • • • • • • • • • • • •			
Photo number:			7		
Landform:			Flat/Plain		
Land surface/disturbance:			Limited clearing		
Fire History:			Greater than 10 y	ears ago	
Coarse fragments on the surface	(ahundance/size/shane)			Coarse gravelly; large pebbles/Sub	ounded
Rock outcrop (abundance/runoff			No bedrock expo		ounided
Soil (profile/field texture/soil sur			Uniform/Sandy c		
% Cover leaf litter:	iucej.		5	ay ioaniy i iiii	
% Cover bare ground:			75		
70 COVEL DATE STOUTIU.			/3		
Tallest stra	atum	Mid-st	ratum	Lowers	tratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	V <10	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia pteraneura		Hakea preissii		Maireana pyramidata	
Acacia aneura		+		Atriplex bunburyana	
			niec .	Ptilotus obovatus	
		ALL SPEC			
		Acacia ptera			
		Acacia an	eura		
			-1!!		
		Hakea pro	eissii		
		Maireana pyr			
		Atriplex bunl			
		Ptilotus ob			
		Maireana t	•		
		Cenchrus c			
		Sclerolaena d			
		Maireana tor			
		Enchylaena tomentos			
		Atriplex ve			
		Eremophila c			
		Austrostipa			
		Sclerolaena d			
				·	
		Maireana g			
		Maireana g Brachyscome			
			e ciliaris		
		Brachyscome	e ciliaris gnorum		
		Brachyscome Erodium cyg	e ciliaris gnorum cata		
		Brachyscom Erodium cyg Sida intri	e ciliaris gnorum cata Jentifolia		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec	e ciliaris gnorum cata dentifolia x subsp. Leonora		
		Brachyscom Erodium cyg Sida intri Sida sp. Exceo Eremophila platycaly:	e ciliaris gnorum cata dentifolia x subsp. Leonora carius*		
		Brachyscom Erodium cyg Sida inti Sida sp. Excec Eremophila platycaly: Rumex vesi	e ciliaris gnorum cata dentifolia x subsp. Leonora carius*		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi Solanum lasic Calandrinia e	e ciliaris gnorum cata Jentifolia x subsp. Leonora carius* pphyllum eremaea		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi. Solanum lasic Calandrinia e	e ciliaris gnorum cata Jentifolia x subsp. Leonora carius* ophyllum premaea olyandra		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi Solanum lasic Calandrinia e Calandrinia p	e ciliaris gnorum cata dentifolia x subsp. Leonora carius* sphyllum eremaea olyandra stulosus*		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi Solanum lasic Calandrinia e Calandrinia p Asphodelus fi:	e ciliaris gnorum cata dentifolia x subsp. Leonora carius* ophyllum reremaea olyandra stulosus* riacantha		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi Solanum lasic Calandrinia e Calandrinia e Calandrinis e Sclerolaena ei	e ciliaris gnorum cata dentifolia x subsp. Leonora carius* ophyllum eremaea olyandra stulosus* riacantha rtrichum		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi. Solanum lasic Calandrinia e Calandrinia p Asphodelus fi: Sclerolaena Lepidium oxy Salvia verbe	e ciliaris gnorum cata Jentifolia x subsp. Leonora carius* ophyllum premaea olyandra stulosus* riacantha rtrichum enaca*		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi Solanum lasic Calandrinia e Calandrinia e Calandrinis e Sclerolaena ei	e ciliaris gnorum cata Jentifolia x subsp. Leonora carius* ophyllum premaea olyandra stulosus* riacantha rtrichum enaca*		
		Brachyscom Erodium cyg Sida intri Sida sp. Excec Eremophila platycaly: Rumex vesi. Solanum lasic Calandrinia e Calandrinia p Asphodelus fi: Sclerolaena Lepidium oxy Salvia verbe	e ciliaris gnorum cata dentifolia x subsp. Leonora carius* pphyllum eremaea olyandra stulosus* riacantha trrichum enaca* pnophylla		





	Pro	ject Name: St Barbara Ltd Leonora I	Project		
Date:	13/09/2022	jeet Hame. St Barbara Lta Leonora I	Botanist:	Eren Reid	
ocation:	GDA94 121.346965 -28.920992		Quadrat:	Q5	
Quadrat size:	20x20		- Quadrati	43	
/egetation group:	Creekline vegetation				
VP:	wpt017				
Photo number:			10		
andform:				on (vale)/Drainage depression	on
and surface/disturbance:				sturbance except grazing by	
ire History:			Greater than 1		
Coarse fragments on the su	urface (abundance/size/shape):		No coarse frag	ments	
Rock outcrop (abundance/			No bedrock ex		
Soil (profile/field texture/s				y clay loam/Firm	
6 Cover leaf litter:	•		20	, ,	
6 Cover bare ground:			40		
	Tallest stratum	Mid-str	atum	Lower	stratum
Frowth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	F Forb
Height:	6-12m	Height:	1-3m	Height:	0.25-0.5m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	M 30-70
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia incurvaneura		Acacia tetragonophylla		Lysimachia arvensis*	
Acacia aneura				Sisymbrium erysimoides	s*
Acacia caesaneura				Erodium cygnorum	
		ALL SPECIES			
		Acacia incurvaneura			
		Acacia aneura			
		Acacia caesaneura			
		Acacia tetragonophylla			
		Lysimachia arvensis*			
		Erodium cygnorum			
		Asphodelus fistulosus*			
		Atriplex codonocarpa			
		Carrichtera annua*			
		Rhagodia eremaea			
		Cenchrus ciliaris*			
		Sonchus oleraceus*			
		Nicotiana rosulata			
		Wahlenbergia gracilenta Brachyscome ciliaris			
		Ptilotus obovatus			
		Sclerolaena diacantha			
		Acacia craspedocarpa			
		Teucrium teucriiflorum			
		Sida sp. Golden calyces glabrous			
-		Sida sp. doluen caryces glabrous			
		Outside			
		Rhagodia drummondii			



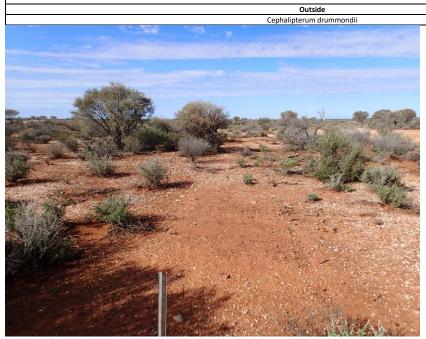


	Proje	ect Name: St Barbara Ltd Leonora Pi	roject			
Date:	13/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.348083 -28.919477		Quadrat:	Q6		
Quadrat size:	20x20					
Vegetation group:	Mulga creekline					
WP:	wpt018					
Photo number:			11			
Landform:			Open depressi	on (vale)/Drainage depression	1	
Land surface/disturbance:			No effective di	sturbance except grazing by h	oofed animals	
Fire History:			Greater than 1	0 years ago		
Coarse fragments on the si	urface (abundance/size/shape):		Very; abundan	t/Coarse gravelly; large pebble	es/Subrounded	
Rock outcrop (abundance/	runoff):		No bedrock ex	posed/Rapid		
Soil (profile/field texture/s	oil surface):		Uniform/Sand	clay loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			45			
	Tallest stratum	Mid-str	atum	Lower st	tratum	
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	6-12m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	M 30-70	Crown cover %:	S 10-30	Crown cover %:	V <10	
Dominant taxa:		Dominant taxa:	1	Dominant taxa:		
Acacia aneura		Acacia tetragonophylla	Maireana pyramidata			
Acacia mulganeura		Eremophila platycalyx su				
Acacia caesaneura				Ptilotus obovatus		
		ALL SPECIES				
		Acacia aneura				
		Acacia mulganeura				
	-	Acacia caesaneura				
	-	Acacia tetragonophylla				
	-	Eremophila platycalyx subsp. Leonor	a			
		z.copia piacyca.yx sazsp. zcono.				
	-	Maireana pyramidata				
	-	Eremophila metallicorum				
		Ptilotus obovatus				
	-	Acacia craspedocarpa				
		Enchylaena tomentosa var. tomentos	ia .			
		Goodenia sp. Midwest				
		Calotis multicaulis				
		Sclerolaena diacantha				
	-	Erodium cygnorum				
		Sida sp. Golden calyces glabrous				
		Asphodelus fistulosus*				
		Sisymbrium erysimoides*				
		Rhagodia drummondii Sida ectogama				
		Sida ectogama				
		-				



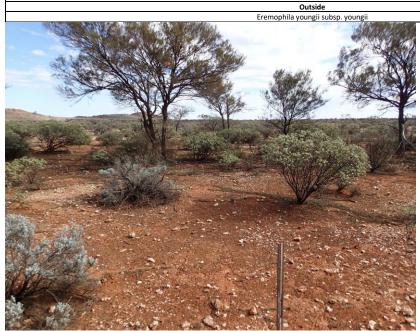


		Project Name: St Barbara	Itd Leonora Project			
Date:	13/09/2022	1 Toject Nume. St Burbura	Botanist:	Eren Reid		
Location:	GDA94 121.3506	12 29 016407	Quadrat:	Q7		
Quadrat size:	20x20	012 -28.910497	Quaurat.	ų,		
Vegetation group:		r chenopod shrubland				
WP:	wpt020	r cheriopou sili ubianu				
Photo number:	wpt020		12-13			
Pnoto number: Landform:						
			Flat/Plain			
Land surface/disturbance:				urbance except grazing by hoofed	animais	
Fire History:			Greater than 10		/a	
	face (abundance/size/shape):			ny/Coarse gravelly; large pebbles,	/Subrounded	
Rock outcrop (abundance/ru			No bedrock expo			
Soil (profile/field texture/soil	l surface):		Uniform/Sandy of	clay loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			65			
	t stratum		tratum		r stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	3-6m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Acacia craspedocarpa		Scaevola spinescens		Maireana pyramidata		
Hakea preissii		Senna glutinosa subsp. chat	elainiana	Ptilotus obovatus		
		Acacia tetragonophylla		Eremophila metallicorum		
		ALL SPEC	CIES			
		Acacia craspe				
		Hakea pre				
		·				
		Scaevola spir	nescens			
		Senna glutinosa subs				
		Acacia tetrago				
		Maireana pyr				
			ramidata			
		Ptilotus obo	ovatus			
		Ptilotus obo Eremophila me	ovatus Itallicorum			
		Ptilotus obo Eremophila me Maireana tor	ovatus stallicorum mentosa			
		Ptilotus obr Eremophila me Maireana tor Sida ectog	ovatus itallicorum mentosa gama			
		Ptilotus obd Eremophila me Maireana tor Sida ectog Sida sp. Golden cal	ovatus vtallicorum mentosa gama lyces glabrous			
		Ptilotus obt Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tı	ovatus rtallicorum mentosa gama lyces glabrous riptera			
		Ptilotus obt Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tr Maireana g	ovatus tallicorum mentosa gama lyces glabrous triptera leorgei			
		Ptilotus obr Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tr Maireana g Goodenia sp.	ovatus ttallicorum mentosa gama lyces glabrous riptera eorgei Midwest			
		Ptilotus obr Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tr Goodenia sp. Sclerolaena d	ovatus tallicorum mentosa gama lyces glabrous riptera teorgei Midwest iacantha			
		Ptilotus obt Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tı Maireana g Goodenia sp. Sclerolaena d	ovatus tallicorum mentosa gama lyces glabrous riptera eorgei Midwest iacantha a var. tomentosa			
		Ptilotus obt Eremophila me Maireana tor Sida sp. Golden cal Maireana ti Maireana ti Goodenia sp. Sclerolaena d Enchylaena tomentos.	ovatus tallicorum mentosa gama lyces glabrous riptera eeorgei Midwest iaicantha a var. tomentosa australis			
		Ptilotus obt Eremophila me Maireana tor Sida sp. Golden cal Maireana tr Maireana tr Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia	ovatus tallicorum mentosa gama lyces glabrous riptera eeorgei Midwest iacantha a var. tomentosa australis buryana			
		Ptilotus obr Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana tr Maireana tr Sida ectog Sida sp. Golden cal Maireana g Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia Atriplex bunt	ovatus tallicorum mentosa gama lyces glabrous riptera eeorgei Midwest iacantha a var. tomentosa australis buryana mmondii			
		Ptilotus obt Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana t Maireana g Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia . Atriplex bunl Rhagodia drun Senna artemisioides su	ovatus tallicorum mentosa gama dyces glabrous riptera eorgei Midwest iacantha a var. tomentosa australis buryana mmondii bsp. artemisioides			
		Ptilotus obt Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana t Maireana t Maireana g Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia Atriplex bunl Rhagodia dru Senna artemisioides su Asphodelus fis	ovatus tallicorum mentosa gama lyces glabrous riptera eeorgei Midwest iacantha a var. tomentosa australis buryana mmondii bsp. artemisioides stulosus*			
		Ptilotus obt Eremophila me Maireana tor Sida sp. Golden cal Maireana ti Maireana ti Maireana g Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia Atriplex bunt Rhagodia dru Senna artemisioides su Asphodelus fis	ovatus tallicorum mentosa gama lyces glabrous riptera eeorgei Midwest iaicantha a var. tomentosa australis buryana mmondii bsp. artemisioides stulosus*			
		Ptilotus obr Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana ti Maireana ti Sodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia: Atriplex bunt Rhagodia drut Senna artemisioides su Asphodelus fis Rhagodia er Calandrinia pi	ovatus tallicorum mentosa gama lyces glabrous riptera eorgei Midwest iacantha a var. tomentosa australis buryana mmondii bsp. artemisioides stulosus* emaea olyandra			
		Ptilotus obd Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana t Maireana t Goodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia . Atriplex buni Rhagodia dru Senna artemisioides su Asphodelus fis Rhagodia er Calandrinia p Sisymbrium ery	ovatus tallicorum mentosa gama lyces glabrous riptera eorgei Midwest liacantha a var. tomentosa australis buryana mmondii bsp. artemisioides stulosus* ermaea olyandra rsimoides*			
		Ptilotus obr Eremophila me Maireana tor Sida ectog Sida sp. Golden cal Maireana ti Maireana ti Sodenia sp. Sclerolaena d Enchylaena tomentos Leichhardtia: Atriplex bunt Rhagodia drut Senna artemisioides su Asphodelus fis Rhagodia er Calandrinia pi	ovatus tallicorum mentosa gama lyces glabrous riptera eorgei Midwest liacantha a var. tomentosa australis buryana mmondii bsp. artemisioides stulosus* ermaea olyandra rsimoides*			





		Project Name: St Barbara	Ltd Leonora Project		
Date:	13/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3525	503 -28.91987	Quadrat:	Q8	
Quadrat size:	20x20				
Vegetation group:	Mulga over Senr	na shrubland			
WP:	wpt023				
Photo number:			17		
Landform:			Flat/Plain		
and surface/disturbance:			No effective dist	urbance	
Fire History:			Greater than 10	years ago	
Coarse fragments on the surface (a	bundance/size/shape):		No qualifier; cor	nmon/Coarse gravelly; large pebb	es/Subrounded
Rock outcrop (abundance/runoff):			No bedrock expo	osed/No runoff	
Soil (profile/field texture/soil surfa	ce):		Uniform/Sandy	clay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			60		
Tallest strat	tum	Mid	-stratum	Lower	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura			artemisioides subsp. ×sturtii Maireana sedifolia		
		Eremophila oldfieldii subs	o. angustifolia	Maireana triptera	
		ALL SPE			
		Acacia ar	ieura		
		Senna artemisioide	a auban vaturtii		
		Eremophila oldfieldii s	•		
		Eremoprina dianeian s	ausp. angustirona		
		Maireana s	odifolia		
		Maireana t			
		ividiredila	прсега		
		Ptilotus ob	ovatus		
		Maireana py			
		Rhagodia dru			
		Enchylaena tomentos			
		Scaevola spi			
		Sclerolaena d			
		Frankenia			
		Eremophila me			
	-	Goodenia sp.			
		Acacia pter	aneura		
		Acacia pter	s subsp. filifolia		
		Acacia pter Senna artemisioide	s subsp. filifolia sp. chatelainiana		
		Acacia pter Senna artemisioide Senna glutinosa subs	s subsp. filifolia sp. chatelainiana		





			Project Name: St Barbara	Itd Leonora Project		
D-4	1	42/00/2022	Project Name: St Barbara		From Baild	
Date:		13/09/2022	7 20 242422	Botanist:	Eren Reid	
Location:		GDA94 121.35674	/ -28.913132	Quadrat:	Q9	
Quadrat size:		20x20				
Vegetation group:		Mulga over cheno	pod			
WP:		wpt040				
Photo number:				18-19		
Landform:				Flat/Plain		
Land surface/disturbance:					bance except grazing by hoofed	l animals
Fire History:				Greater than 10 ye		
Coarse fragments on the s	urface (abundar	nce/size/shape):			non/Coarse gravelly; large pebb	les/Subrounded
Rock outcrop (abundance/				No bedrock expos		
Soil (profile/field texture/s	oil surface):			Uniform/Sandy cla	y loam/Firm	
% Cover leaf litter:				5		
% Cover bare ground:				80		
-				•		
Talle	est stratum		Mid-stra	atum	Lowe	r stratum
Growth form:		S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:		6-12m	Height:	1-3m	Height:	0.25-0.5m
Crown cover %:		V <10	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:			Dominant taxa:		Dominant taxa:	1
Acacia aneura			Acacia tetragonophylla		Frankenia cinerea	
Acacia caesaneura			Scaevola spinescens		Maireana pyramidata	
cacia cacsancula			Senna artemisioides subsp. fil	ifolia	Atriplex bunburyana	
			ALL SPEC		Acripies builbui yana	
			Acacia and			
			Acacia caesa	ineura		
			A en eig toturo	nanhulla		
			Acacia tetrago			
			Scaevola spir			
			Senna artemisioides	•		
			Frankenia ci			
			Maireana pyr			
			Atriplex bunk			
			Ptilotus obc			
			Maireana tr			
			Maireana tric	•		
			Rhodanthe pr	opinqua		
			Cephalipterum d	rummondii		
			Erodium cyg	norum		
			Solanum lasio	phyllum		<u> </u>
			Goodenia sp. I	Midwest		
			Maireana glor			
			Sclerolaena di			
			Eremophila me			
			Eriachne pulchella si			
			Senna artemisioides			
			Maireana ton			
			Eremophila forrestii			
			Enchylaena tomentosa			
			Leichhardtia			
			Leicinardtia a	iustialis		
-				_		
			Outsid			
			Outsid Pittosporum ang Hakea pre	ustifolium		





		Project Name: St Barbar	a Ltd Leonora Project		
Date:	13/09/2022	,	Botanist:	Eren Reid	
Location:	GDA94 121.3574	102 -28,904742	Quadrat:	Q10	
Quadrat size:	20x20		4,000.00	, 420	
Vegetation group:		stone quartz outcrop			
WP:	wpt043	Active degree outcoop			
Photo number:	wpto+3		20		
Landform:			Hillock/Mound		
				turbanes avent graning by boofs	d animals
Land surface/disturbance:				turbance except grazing by hoofe	u animais
Fire History:			Greater than 10	years ago	
	face (abundance/size/shape):		20-30cm		
Rock outcrop (abundance/ru			50%		
Soil (profile/field texture/so	il surface):			clay loam/Hard setting	
% Cover leaf litter:			5		
% Cover bare ground:			70		
	st stratum		l-stratum		r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Acacia ramulosa var. ramu	ulosa	Senna artemisioides subs	
				Eremophila forrestii subs	
				Eremophila platycalyx sub	osp. Leonora
		ALL SPE	CIES		
		Senna artemisioide	a cuban vaturtii		
		Eremophila forrest	ii subsp. forrestii		
		Eremophila forresti Eremophila platycal	ii subsp. forrestii yx subsp. Leonora		
		Eremophila forresti Eremophila platycal Erodium cy	ii subsp. forrestii yx subsp. Leonora rgnorum		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp	ii subsp. forrestii yx subsp. Leonora gnorum . Midwest		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena	ii subsp. forrestii yx subsp. Leonora gnorum . Midwest cuneata		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena	ii subsp. forrestii yx subsp. Leonora gnorum . Midwest cuneata diacantha		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest cuneata diacantha oropinqua		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia	ii subsp. forrestii yx subsp. Leonora ggorum . Midwest cuneata diacantha propinqua a australis		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur	ii subsp. forrestii yx subsp. Leonora rgnorum Midwest Cuneata diacantha oranginqua na ustralis nburyana		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest cuneata diacantha oropinqua a ustralis hburyana pteroides		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtii Atriplex bur Ptilotus heli	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest cuneata diacantha oropinqua a ustralis aburyana pteroides icarius*		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtii Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebe	ii subsp. forrestii yx subsp. Leonora gnorum . Midwest cuneata diacantha oropinqua a ustralis abburyana pteroides icarius* ri subsp. sieberi		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e	ii subsp. forrestii yx subsp. Leonora ggnorum Midwest cuneata diacantha oropinqua naustralis nburyana pteroides iicarius* ri subsp. sieberi remaea		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebel Roepera e Austrostip	ii subsp. forrestii yx subsp. Leonora gnorum Midwest cuneata diacantha oropinqua a ustralis aburyana pteroides icarius* ri subsp. sieberi remaea a nitida		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebel Roepera e Austrostip	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest cuneata diacantha oropinqua a australis nburyana pteroides iicarius* ri subsp. sieberi remaea a nitida aerulescens		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe g Leichhardti Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Reopera e Austrostip Enneapogon c Rhodanthe	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest . cuneata diacantha oropinqua . australis aburyana pteroides . icarius* ri subsp. sieberi remaea a antida aerulescens maryonii		
		Eremophila forrest Eremophila platycal Eredium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe	ii subsp. forrestii yx subsp. Leonora ggnorum Midwest Cuneata diacantha oropinqua naustralis nburyana pteroides iciarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ca	ii subsp. forrestii yx subsp. Leonora gnorum Midwest cuneata diacantha oropinqua a ustralis aburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous onophylla		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebei Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ci Acacia tetrag Ptilotus sc	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest cuneata diacantha oropinqua a ustralis iburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous onophylla hwartzii		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebet Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden c Acacia tetrag Ptilotus sc	ii subsp. forrestii yx subsp. Leonora ignorum . Midwest . cuneata diacantha oropinqua a australis nburyana pteroides . iicarius* ri subsp. sieberi remaea a nitida aerulescens maryonii slyces glabrous onoophylla hwartzii		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ca Acacia tetrag Ptilotus Sclerolaena	ii subsp. forrestii yx subsp. Leonora ggnorum Midwest Cuneata diacantha oropinqua naustralis nburyana pteroides cicarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous conophylla hwartzii erroei		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ci Acacia tetrag Ptilotus Eragrostis se Eriachne f	ii subsp. forrestii yx subsp. Leonora ggnorum Midwest cuneata diacantha oropinqua na ustralis nburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous tonophylla hwartzii rerie eriopoda laccida		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden cs Acacia tetrag Ptilotus sc Ptilotus Eragrostis c	ii subsp. forrestii yx subsp. Leonora gnorum Midwest cuneata diacantha oropinqua a ustralis aburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous onophylla hwartzii r roei eriopoda laccida sedifolia		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebei Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ca Acacia tetrag Ptilotus sc Ptilotus Eragrostis Eriachis e Maireana Maireana	ii subsp. forrestii yx subsp. Leonora ggnorum . Midwest cuneata diacantha oropinqua a ustralis nburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous onophylla hwartzii i roei eriopoda llaccida sedifolia triptera		
		Eremophila forrest Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes sieber Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden cs Acacia tetrag Ptilotus sc Ptilotus Eragrostis c	ii subsp. forrestii yx subsp. Leonora ggnorum . Midwest cuneata diacantha oropinqua a ustralis nburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous onophylla hwartzii i roei eriopoda llaccida sedifolia triptera		
		Eremophila forresti Eremophila platycal Erodium cy Goodenia sp Sclerolaena Sclerolaena Rhodanthe p Leichhardtia Atriplex bur Ptilotus heli Rumex ves Cheilanthes siebei Roepera e Austrostip Enneapogon c Rhodanthe Sida sp. Golden ca Acacia tetrag Ptilotus sc Ptilotus Eragrostis Eriachis e Maireana Maireana	ii subsp. forrestii yx subsp. Leonora ggnorum Midwest Cuneata diacantha oropinqua a australis aburyana pteroides icarius* ri subsp. sieberi remaea a nitida aerulescens maryonii alyces glabrous tonophylla hwartzii eroei eriopoda laccida sedifolia triptera maea sans lat		





		Project Name: St Barba	ara Ltd Leonora Project			
Date:	13/09/2022	-	Botanist:	Eren Reid		
Location:	GDA94 121.3743	97 -28.926763	Quadrat:	Q11		
Quadrat size:	20x20		•			
Vegetation group:	ation group: Mulga woodland					
WP:	wpt061					
Photo number:	•		22			
Landform:			Flat/Plain			
Land surface/disturbance:			No effective dis	sturbance except grazing by hoofe	ed animals	
Fire History:			Greater than 10			
Coarse fragments on the surface	e (abundance/size/shape):		Very slightly; ve	ery few/Medium gravelly; mediun	n pebbles/Subrounded	
Rock outcrop (abundance/runo			No bedrock exp			
Soil (profile/field texture/soil su				clay loam/Firm		
% Cover leaf litter:			10	,		
% Cover bare ground:			65			
			1 2			
Tallest st	tratum	Mid	-stratum	Lowe	er stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	6-12m	Height:	1-3m	Height:	0.25-0.5m	
Crown cover %:	S 10-30	Crown cover %:		Crown cover %:	V <10	
Dominant taxa:	•	Dominant taxa:	•	Dominant taxa:		
Acacia aneura		Acacia tetragonophylla		Eremophila metallicorum		
Acacia mulganeura		Eremophila platycalyx sul	osp. Leonora	Ptilotus obovatus		
Acacia craspedocarpa						
		ALL SF	PECIES			
		Acacia	aneura			
		Acacia mu	ulganeura			
		Acacia cras	pedocarpa			
		Acacia tetra	gonophylla			
		Eremophila platyca	alyx subsp. Leonora			
		Eremophila r	metallicorum			
		Ptilotus o	obovatus			
		Teucrium te	eucriiflorum			
		Brachyscom	e iberidifolia			
		Rhodanthe	charsleyae			
		Erodium (cygnorum			
		Rhodanthe	propinqua			
		Nicotiana	rosulata			
· · · · · · · · · · · · · · · · · · ·	<u> </u>		<u> </u>			
	<u> </u>	Out	side			
		Acacia ramulos	a var. ramulosa			
		Dianella revolut	a var. divaricata			
		Eremophila	compacta			
		Hakea recurva	subsp. recurva			
		Ptilotus s	chwartzii			
·		Cantalum	spicatum			





		Project Name: St Ran	rbara Ltd Leonora Pro	niect		
Date:	13/09/2022	Froject Name. 3t Dai	Botani		Eren Reid	
Location:	GDA94 121.37444	-28 052827	Quadra		Q12	
Quadrat size:	20x20	-20.332027	Quadra	at.	Q12	
Vegetation group:	Mulga woodland					
WP:	wpt062					
Photo number:	WPtOOZ		23			
andform:			Flat/Pla	lain		
and surface/disturbance:				ective disturba	ance	
ire History:				er than 10 year		
Coarse fragments on the surface (abunda	ance/size/shane)				Medium gravelly; medium peb	hles/Rounded
Rock outcrop (abundance/runoff):	ance, size, snape,			drock exposed		ibles/Nourlaca
Soil (profile/field texture/soil surface):				m/Sandy clay	•	
% Cover leaf litter:			15	in/Sandy clay	ioaniyi iiiii	
% Cover lear litter:			60			
o Cover nate ground:			DU			
Tallest stratum		NA.	lid-stratum		Lower	stratum
Growth form:	S Shrub	Growth form:	S Shru	uh	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	, IU	Height:	0.25-0.5m
Crown cover %:	S 10-30	Crown cover %:	1-3111		Crown cover %:	V <10
Dominant taxa:	3 10-30	Dominant taxa:	<u> </u>		Dominant taxa:	A /10
Acacia aneura		Acacia tetragonophylla			Eremophila metallicorum	
Acacia mulganeura		Eremophila platycalyx s		-	Ptilotus obovatus	
Acacia craspedocarpa		Liemopinia piatycaryx s	завър. сеопога		Fillotus obovatus	
Acacia craspedocarpa		All	SPECIES			
			ia aneura			
			mulganeura			
			raspedocarpa			
			tragonophylla			
			calyx subsp. Leonora			
		Егетпорина ріацу	caryx subsp. Leonora			
		Framanhil	a matalliaarum			
			a metallicorum Is obovatus			
		Ptilotu	IS ODOVALUS			
		Teucrium	teucriiflorum			
			me iberidifolia			
			he charsleyae			
			n cygnorum			
			he propinqua			
			ina rosulata			
			va subsp. recurva			
			luta var. divaricata			
			caesaneura			
			lasiophyllum			
			ana georgei			
			nila compacta			
			m spicatum			
			drummondii			
			na thesioides	-		
			ax rigidula			
		0	utside			





		Project Name: St Barba	a Ltd Leonora Project			
Date:	13/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.3745	25 -28.956852	Quadrat:	Q13		
Quadrat size:	20x20		1 2000000	1		
Vegetation group:	Mulga woodland	1				
WP:	wpt064					
Photo number:			no pic			
Landform:			Flat/Plain			
Land surface/disturbance:			No effective dis	turbance		
Fire History:			Greater than 10			
Coarse fragments on the sui	rface (abundance/size/shape):			ny/Medium gravelly; medium pel	bles/Rounded	
Rock outcrop (abundance/r			No bedrock exp			
Soil (profile/field texture/so			Uniform/Sandy			
% Cover leaf litter:	•		20	•		
% Cover bare ground:			60			
			ı			
Talle	est stratum	Mic	d-stratum	Lower	stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	6-12m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	V <10	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Acacia caesaneura		Scaevola spinescens		Eremophila compacta		
Acacia mulganeura		Exocarpos aphyllus		Eragrostis eriopoda		
Acacia craspedocarpa		Acacia tetragonophylla		Ptilotus obovatus		
		ALL SPI	CIES			
		Acacia cae	saneura			
		Acacia mu	ganeura			
		Acacia crasp	edocarpa			
		Scaevola sp	inescens			
		Exocarpos	aphyllus			
	·	Acacia tetrag	gonophylla			
	·	Eremophila	compacta			
		Eragrostis				
		Ptilotus o				
		Goodenia				
		Rhodanthe o				
		Maireana t				
		Maireana				
		Senna artemisioid				
		Erodium cy				
		Dianella revoluta				
		Santalum s				
		Rhagodia dr				
		Teucrium tei	ıcriiflorum			
		Outs	ae			



	Project Name: St I	Barbara Ltd Leonora Project				
Date:	13/09/2022	Botanist:	Eren Reid			
Location:	GDA94 121.372083 -28.952807	Quadrat:	Q14			
Quadrat size:	20x20					
Vegetation group:	Open low chenopod shrubland					
WP:	wpt067					
Photo number: 25						
Landform:		Flat/Plain				
Land surface/disturbance:			ance except grazing by hoofed animals			
Fire History:		Greater than 10 year				
Coarse fragments on the surface (abundance	e/size/shape):	No qualifier; commo	on/Medium gravelly; medium pebbles/Su	brounded		
Rock outcrop (abundance/runoff):		No bedrock exposed	d/No runoff			
Soil (profile/field texture/soil surface):		Uniform/Sandy clay	loam/Firm			
% Cover leaf litter:		<5				
% Cover bare ground:		90				
Tallest stratum	Mid-strat	tum	Lower strat	um		
Growth form:	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	Height:	0.5-1m	Height:	0.25-0.5m		
Crown cover %:	Crown cover %:	V <10	Crown cover %:	S 10-30		
Dominant taxa:	Dominant taxa:		Dominant taxa:			
	Maireana pyramidata		Frankenia cinerea			
				Maireana tomentosa		
			Maireana tomentosa			
			Maireana tomentosa			
	A	LL SPECIES	Maireana tomentosa			
	A	LL SPECIES	Maireana tomentosa			
	A	LL SPECIES	Maireana tomentosa			
	A	LL SPECIES	Maireana tomentosa			
		LL SPECIES ana pyramidata	Maireana tomentosa			
			Maireana tomentosa			
			Maireana tomentosa			
	Maire		Maireana tomentosa			
	Maire Fran	ana pyramidata	Maireana tomentosa			
	Maire Frar Maire	ana pyramidata skenia cinerea ana tomentosa	Maireana tomentosa			
	Maire Frar Maire Goode	ana pyramidata ikenia cinerea rana tomentosa inia sp. Midwest	Maireana tomentosa			
	Maire Frar Maire Goode	ana pyramidata skenia cinerea ana tomentosa	Maireana tomentosa			
	Maire Fran Maire Goode Sclero	ana pyramidata ikenia cinerea rana tomentosa inia sp. Midwest	Maireana tomentosa			
	Maire Fran Maire Goode Sclero Atripli	ana pyramidata ukenia cinerea ana tomentosa unia sp. Midwest laena diacantha	Maireana tomentosa			
	Maire Fran Maire Goode Sclero Atriple Sclero	ana pyramidata ukenia cinerea ana tomentosa unia sp. Midwest laena diacantha ex codonocarpa	Maireana tomentosa			
	Maire Fran Maire Goode Sclero Atripl Sclero Calance	ana pyramidata kenia cinerea ana tomentosa mia sp. Midwest laena diacantha ex codonocarpa laena densiflora	Maireana tomentosa			
	Maire Frar Maire Goode Sclero Atripi Sclero Calant	ana pyramidata skenia cinerea ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra	Maireana tomentosa			
	Maire Fran Maire Goode Sclero Atripl Sclero Calanc Enchylaena toi Ereme Sclerola	ana pyramidata kenia cinerea ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa pphila compacta ena patenticuspis	Maireana tomentosa			
	Maire Fran Maire Goode Sclero Atripl Sclero Calanc Enchylaena toi Ereme Sclerola	ana pyramidata akenia cinerea ana tomentosa ania sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa aphila compacta	Maireana tomentosa			
	Maire Frar Maire Goode Sclero Atriph Sclero Calant Enchylaena tot Sclerola Erymophyllum r	ana pyramidata kenia cinerea ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa pphila compacta ena patenticuspis	Maireana tomentosa			
	Maire Frar Maire Goode Sclero Atriph Sclero Calant Enchylaena tot Sclerola Erymophyllum r	ana pyramidata skenia cinerea ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta ena patenticuspis amosum subsp. ramosum	Maireana tomentosa			





Solutions					
		Project Name: St Barbara	Ltd Leonora Project		
Date:	13/09/2022	-	Botanist:	Eren Reid	
Location:	GDA94 121.37035	3 -28.949332	Quadrat:	Q15	
Quadrat size:	20x20		•		
Vegetation group:	Open mulga Creel	line over chenopod			
WP:	wpt072				
Photo number:			26		
Landform:			Open depressio	n (vale)/Drainage depression	
Land surface/disturbance:				turbance except grazing by hoofed	d animals
Fire History:			Greater than 10		
Coarse fragments on the surface (abunda	ance/size/shape):			ny/Coarse gravelly; large pebbles	/Rounded
Rock outcrop (abundance/runoff):	, , , , , , , , , , , , , , , , , , , ,		No bedrock exp		
Soil (profile/field texture/soil surface):			Uniform/Sandy		
% Cover leaf litter:			5	,	
% Cover bare ground:			70		
cover sure ground.			70		
Tallest stratum		Mid-st	ratum	Lower	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.25-0.5m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	V <10
Dominant taxa:	3 10-30	Dominant taxa:	A /10	Dominant taxa:	A /10
Acacia mulganeura		Eremophila youngii subsp. y	oungii	Cratystylis subspinescens	
ncacia muiganeura		Liemopinia youngii subsp. y	oungii	Frankenia cinerea	
				Flankenia cinerea	
		ALL SPEC	TIFC .		
		Acacia mulg			
		Eremophila youngii	subsp. youngii		
		Cratystylis subs	pinescens		
		Frankenia c	inerea		
		Goodenia sp.			
		Senna artemisioides Maireana ti			
		Podolepis ca	pillaris		
		Maireana tor			
		Sclerolaena d			
		Asphodelus fis			
		Atriplex codo			
		Acacia tetrago			
		Calandrinia e			
		Calandrinia p	•		
		Eragrostis er			
		Maireana pyr	amidata		
		Sclerolaena er	iacantha		
		Sisymbrium ery	simoides*		
		Sclerolaena pat	enticuspis		
		Atriplex bunk	ouryana		<u> </u>
		Ptilotus diva	ricatus	<u> </u>	·
		Frankenia in	terioris		
		Gnephosis bi	revifolia		
		Outsid	e		





		Project Name: St Barba	ara Ltd Leonora Project			
Date:	14/09/2022	•	Botanist:	Eren Reid		
Location:	GDA94 121.3688	45 -28.928178	Quadrat:	Q16		
Quadrat size:	20x20					
Vegetation group:	mulga woodland					
WP:	wpt074					
Photo number:			28			
Landform:			Flat/Plain			
Land surface/disturbance:			No effective dis	turbance except grazing by hoofed	d animals	
Fire History:			Greater than 10	years ago		
Coarse fragments on the surface (a	abundance/size/shape):		Very; abundant	/Coarse gravelly; large pebbles/Su	brounded	
Rock outcrop (abundance/runoff):			No bedrock exp	osed/No runoff		
Soil (profile/field texture/soil surfa	ace):		Uniform/Sandy	clay loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			75			
			•			
Tallest strat	tum	Mid	-stratum	Lowe	r stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	3-6m	Height:	1-3m	Height:	0.25-0.5m	
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Acacia aneura		Eremophila platycalyx sul	osp. Leonora	Eremophila compacta		
		Acacia tetragonophylla		Ptilotus obovatus		
				Sida sp. Golden calyces gla	brous	
		ALL SI	PECIES			
		Acacia	aneura			
		Eremophila platyca	lyx subsp. Leonora			
		Acacia tetra	gonophylla			
		Eremophila	compacta			
		Ptilotus	obovatus			
		Sida sp. Golden	calyces glabrous			
		Podolepi	s lessonii			
		Teucrium te	eucriiflorum			
		Santalum la	anceolatum			
		Erodium	cygnorum			
		Solanum la	siophyllum			
		Acacia cras	pedocarpa			
			togama			
			ipa nitida			
			triptera			
		Out	side			
		Ch-li-t				





		Project Name: St Barb	ara Ltd Leonora Project			
Date:	14/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.368	625 -28.931255	Quadrat:	Q17		
Quadrat size:	20x20					
Vegetation group:	Eremophila you	Eremophila youngii over chenopod and Tecticornia				
WP:	wpt076					
Photo number:			29			
Landform:			Flat/Plain			
Land surface/disturbance:			No effective dis	turbance except grazing by hoofed	d animals	
Fire History:			Greater than 10	years ago		
Coarse fragments on the surfac	e (abundance/size/shape):			ny/Medium gravelly; medium pel	obles/Subrounded	
Rock outcrop (abundance/runo	off):		No bedrock exp	osed/No runoff		
Soil (profile/field texture/soil s	urface):			clay loam/Surface crust		
% Cover leaf litter:			15			
% Cover bare ground:			55			
Tallest st			tratum		er stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m	
Crown cover %:	V <10	Crown cover %:	V <10	Crown cover %:	M 30-70	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Eremophila youngii subsp. youn	gii	Cratystylis subspinescens		Tecticornia disarticulata		
		Maireana pyramidata				
			PECIES			
		Eremophila your	gii subsp. youngii			
			ubspinescens			
		Maireana	oyramidata			
			P. 11.			
		Tecticornia	disarticulata			
		Dtiletus	obovatus			
			p. Midwest			
			elegantissima			
			osa var. tomentosa			
			ossanthus			
			a triptera			
			na cuneata			
			patenticuspis			
			er paradoxus			
			tomentosa			
			oxytrichum			
			nispidula			
			donocarpa			
		, tanpiex ee				
		Out	side			
		- Cut				





	Project Name: St F	Barbara Ltd Leonora Proje	ect	
Date:	14/09/2022	Botanist:	Eren Reid	
Location:	GDA94 121.368545 -28.951028	Quadrat:	018	
Quadrat size:	20x20	quantiti	420	
Vegetation group:	Low open shrubland			
WP:	wpt084			
Photo number:	_ mptee:	30		
Landform:		Flat/Plain		
Land surface/disturbance:			urbance except grazing by hoofed animals	
Fire History:		Greater than 10 y		
Coarse fragments on the surface (abundance	o/size/shane)		y/Coarse gravelly; large pebbles/Subrounded	
Rock outcrop (abundance/runoff):	узігсузнарсу.	No bedrock expos		
Soil (profile/field texture/soil surface):		Uniform/Sandy cl		
% Cover leaf litter:		5	lay loanly i i i i	
% Cover hear litter:		85		
70 Cover bare ground.		- 65		
Tallest stratum	Mid-strat	tum	Lower stratu	m
Growth form:	Growth form:	S Shrub	Growth form:	S Shrub
Height:	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:	Dominant taxa:	V 110	Dominant taxa:	3 10 30
	Maireana pyramidata		Frankenia cinerea	
	Wali cana pyramiaaca		Maireana tomentosa	
			Walledia Comencosa	
		LL SPECIES		
	Maire	ana pyramidata		
		kenia cinerea		
		kenia cinerea ana tomentosa		
	Maire Goode	ana tomentosa nia sp. Midwest		
	Maire Goode Sclerol	ana tomentosa nia sp. Midwest laena diacantha		
	Maire Goode Scierol Atriple	ana tomentosa nia sp. Midwest Iaena diacantha ex codonocarpa		
	Maire Goode Sclerol Atriple Sclerol	nia sp. Midwest laena diacantha ex codonocarpa laena densiflora		
	Maire Goode Sclerol Atriple Sclerol Calanc	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Fremo Sclerola	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta ena patenticuspis		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa pphila compacta ena patenticuspis amosum subsp. ramosum		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola Erymophyllum ra	ana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta ema patenticuspis amosum subsp. ramosum otis hispidula		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola Erymophyllum ra Cala	rana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta ena patenticuspis amosum subsp. ramosum otis hispidula reana triptera		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola Erymophyllum ra Cale Mai	ana tomentosa mia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa uphila compacta ena patenticuspis amosum subsp. ramosum otis hispidula reana triptera ma crassifolium		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola Erymophyllum ra Cale Mai	rana tomentosa nia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa ophila compacta ena patenticuspis amosum subsp. ramosum otis hispidula reana triptera		
	Maire Goode Sclerol Atriple Sclerol Calanc Enchylaena tor Eremo Sclerola Erymophyllum ra Cale Mai	ana tomentosa mia sp. Midwest laena diacantha ex codonocarpa laena densiflora drinia polyandra mentosa var. tomentosa uphila compacta ena patenticuspis amosum subsp. ramosum otis hispidula reana triptera ma crassifolium		



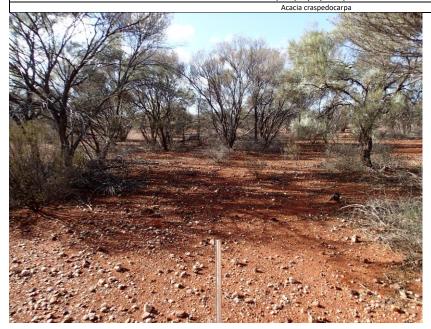


Dotations		Duningt Names Ct David	ava I tad I a a va va Dvair - t		
D-4	14/09/2022	Project Name: St Barb	ara Ltd Leonora Project Botanist:	From Doild	
Date:		2025 20 02445		Eren Reid	
Location:		5825 -28.934115	Quadrat:	Q19	
Quadrat size:	20x20				
Vegetation group:		opod shrubland			
WP:	wpt093		T 2.		
Photo number:			31		
Landform:			Flat/Plain		
Land surface/disturbance:				turbance except grazing by hoofed	animais
Fire History:	(Greater than 10		/C la d = d
Coarse fragments on the surfa				ny/Coarse gravelly; large pebbles,	Subrounded
Rock outcrop (abundance/run			No bedrock exp		
Soil (profile/field texture/soil	surface):		Uniform/Sandy	clay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			70		
Tallect	stratum	Mid	-stratum	Lower	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	<1	Crown cover %:	<1	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Hakea preissii		Eremophila youngii subsp	. voungii	Maireana pyramidata	
nakea preissii		Eremoprina youngii saasip	1 70011611	Cratystylis subspinescens	
				Maireana triptera	
		ALL SI	PECIES		
			preissii		
		Eremophila your	gii subsp. youngii		
		, , , , , , , , , , , , , , , , , , , ,	0		
		Maireana	pyramidata		
			ubspinescens		
			a triptera		
			a diacantha		
			tomentosa		
			obovatus		
			p. Midwest		
			unburyana		
			subsp. artemisioides		
			me ciliaris		
			nispidula		
			siophyllum		
			n drummondii		
			trichoptera		
			cygnorum		
-			-70		
		Out	side		
		Out			





		Project Name: St Barbara	Ltd Leonora Project		
Date:	14/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.366558	-28.925045	Quadrat:	Q20	
Quadrat size:	20x20				
Vegetation group:	Mulga woodland				
WP:	wpt099				
Photo number:	L		32		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective dis	turbance	
Fire History:			Greater than 10		
Coarse fragments on the surface (abunda	ance/size/shape):			any/Coarse gravelly; large pebbles	/Subangular
Rock outcrop (abundance/runoff):	,,			osed/No runoff	,
Soil (profile/field texture/soil surface):			Uniform/Sandy		
% Cover leaf litter:			20		
% Cover hear litter:			60		
, a core, build ground.			00		
Tallest stratum		Mid-st	ratum	Lower	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	I <1	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:	· ·	Dominant taxa:	
Acacia caesaneura		Grevillea berryana		Dianella revoluta var. divaricata	
Acacia aneura		,		Eremophila compacta	
Acacia incurvaneura				Acacia tetragonophylla	
		ALL SPEC	IES		
		Acacia caesa			
		Acacia ane			
		Acacia incurv	aneura		
		Grevillea be			
			7		
		Dianella revoluta v	ar. divaricata		
		Eremophila co			
		Acacia tetrago			
		Eremophila forrestii			
		Ptilotus obo			
		Sida ectog			
		Sida sp. Golden cal			
		Sida calyxhy			
		Teucrium teuc			
		Maireana tr			
		Eragrostis er			
		Li agi USUS El	тороши		
		Outside	P		
		Outside Eremophila platycalyx			





Solutions					
		Project Name: St Barba			
Date:	14/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3643	32 -28.944615	Quadrat:	Q21	
Quadrat size:	20x20				
Vegetation group:		rginea over rocky plain			
WP:	wpt111				
Photo number:			35		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective dis		
Fire History:			Greater than 10	, 0	
Coarse fragments on the surfa				any/Cobbly; or cobbles/Subangul	ar tabular
Rock outcrop (abundance/run			Very rocky/Slov		
Soil (profile/field texture/soil s	surface):			clay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			70		
Tallest:	stratum	Mid-	stratum	Lowe	er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
leight:	3-6m	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	V <10
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia quadrimarginea		Eremophila glandulifera		Ptilotus obovatus	
Acacia aneura				Ptilotus schwartzii	
		ALL SP	ECIES		
		Acacia quad	rimarginea		
		Acacia a	aneura		
		Eremophila g	glandulifera		
		Ptilotus o	bovatus		
		Ptilotus so			
		Eriachne m	nucronata		
		Brachychito			
		Ptilotus gau			
		Goodeni			
		Sclerolaena			
		Cheilanthes siebe			
		Solanum las			
		Erodium c			
		Leichhardti			
		Rhodanthe			
		Sida calyx			
		Acacia tetra			
		Helipterum cr			
		Chrysocepha			
		Stylidium 1			
		Ptilotu	s roei		
		Outs	side		



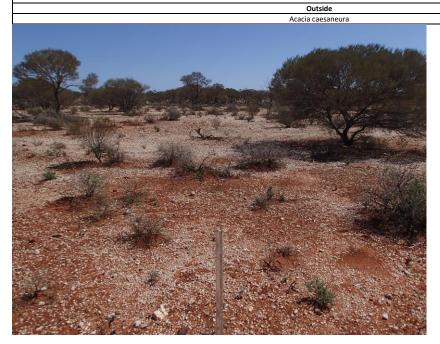


		Project Name: St Barbara				
Date:	14/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.36220	05 -28.95395	Quadrat:	Q22		
Quadrat size:	20x20					
Vegetation group:	Mulga over Erem	ophila Forrestii and Eremophila co	mpacta			
WP:	wpt120					
Photo number:			36			
Landform:			Flat/Plain			
Land surface/disturbance:			No effective dist	urbance except grazing by hoofed	l animals	
Fire History:			Greater than 10	years ago		
Coarse fragments on the surfa	ace (abundance/size/shape):		No coarse fragme	ents		
Rock outcrop (abundance/run	noff):		No bedrock expo	sed/No runoff		
Soil (profile/field texture/soil	surface):		Uniform/Sandy lo	oam/Loose		
% Cover leaf litter:			35			
% Cover bare ground:			45			
·						
	t stratum		stratum		stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	6-12m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	M 30-70	Crown cover %:	S 10-30	Crown cover %:	S 10-30	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Acacia caesaneura		Acacia tetragonophylla		Eremophila compacta		
Acacia aneura		Eremophila forrestii subsp	. forrestii	stii Eragrostis eriopoda		
Acacia craspedocarpa				Ptilotus obovatus		
		ALL SPEC	CIES			
		Acacia caesa	aneura			
		Acacia an				
		Acacia craspe				
		Acacia tetrago	<u> </u>			
		Eremophila forrestii	subsp. forrestii			
		Eremophila co				
		Eragrostis er				
		Ptilotus obo				
		Dianella revoluta v				
		Maireana the				
		Leichhardtia a				
		Rhagodia drur				
		Aristida cor				
		Maireana pyr				
		Goodenia				
		Erodium cri				
		Erodium cyg				
		Thysanotus mai	•			
		Senna artemisioides				
		Acacia ramulosa v	ar. ramulosa			
		Outsid	e			





		Project Name: St Barbara	Ltd Leonora Project		
Date:			Botanist:	Eren Reid	
Location:	GDA94 121.3564	105 -28.934007	Quadrat:	Q23	
Quadrat size:	20x20				
Vegetation group:	Mulga over cher	opod and sclerophyll shrubland			
WP:	wpt165				
Photo number:			40		
Landform:			Flat/Plain		
Land surface/disturbance:				turbance except grazing by hoofed	d animals
Fire History:			Greater than 10		
Coarse fragments on the surfa				/Coarse gravelly; large pebbles/Su	brounded
Rock outcrop (abundance/run			No bedrock exp		
Soil (profile/field texture/soil :	surface):		Uniform/Sandy	clay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			70		
	stratum		tratum		stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Senna artemisioides subsp.	. artemisioides	Maireana pyramidata	
				Cratystylis subspinescens	
			0150	Maireana triptera	
		ALL SPEC			
		Acacia an	leura		
		Senna artemisioides su	then artemicioides		
		Serina ai terriisioldes su	iosp. ai terriisioides		
		Maireana pyr	ramidata		
		Cratystylis sub			
		Maireana t			
		Ptilotus ob	•		
		Erodium cyg			
		Sclerolaena d			
		Eremophila platycaly	x subsp. Leonora		
		Eremophila me			
		Solanum lasio			
		Atriplex bun			
		Sida calyxh			
		Sclerolaena e			
		Cephalipterum			
		Goodenia sp.			
		Sida ector			
		Brachyscom			
		Acacia tetrago			
		Scaevola spi	• •		
		Outsio	le		





		Project Name: St Barbara			
Date:	14/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3538	375 -28.932923	Quadrat:	Q24	
Quadrat size:	20x20				
Vegetation group:	Mulga over cher	opod			
WP:	wpt181				
Photo number:			41 & 42		
Landform:			Flat/Plain		
Land surface/disturbance:				urbance except grazing by hoofed	animals
Fire History:			Greater than 10		
Coarse fragments on the surface				Coarse gravelly; large pebbles/Sub	rounded
Rock outcrop (abundance/runoff			No bedrock expo		
Soil (profile/field texture/soil sur	face):		Uniform/Sandy of	clay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			70		
Tallest str			stratum		stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Acacia sibirica		Maireana pyramidata	
Acacia mulganeura		Hakea preissii		Maireana triptera	
		ALLEDE	CIFC		
		ALL SPE Acacia ar			
		Acacia mula			
		Acacia mui	ganeura		
		Acacia si	hirica		
		Hakea pr			
		пакеа рі	CISSII		
		Maireana py	ramidata		
		Maireana t			
		ividiredila	ptc.u		
		Scaevola spi	inescens		
		Cephalipterum			
		Erodium cy			
		Enchylaena tomentos			
		Roepera er			
		Brachyscom			
		Calotis mul			
		Rhodanthe c			
		Calandrinia p	-		
		Ptilotus ob			
		Aristida co			
		Goodenia sp.			
		Lepidium ox			
		Lepiaium ox	ytriciiuiii		
		·			
		Asphodelus fi			





Solutions		Duningt Names Ct Boul	ara Ltd Leonora Project		
Date:	14/09/2022	Project Name: St Barb	Botanist:	Eren Reid	
Location:		457 -28.926007	Quadrat:	Q25	
Quadrat size:	20x20	437 -28.320007	Quaurat.	Q23	
Vegetation group:	Open mulga ov	or changed			
WP:	wpt185	ег спепорой			
Photo number:	wpt185		43		
Landform:			Flat/Plain		
Land surface/disturbance:				turbance except grazing by hoofed	d animals
Fire History:			Greater than 10		u attititats
	face (abundance/size/shape):			/Coarse gravelly; large pebbles/Su	brounded
Rock outcrop (abundance/ru				osed/No runoff	ibi ourided
Soil (profile/field texture/so			Uniform/Sandy		
% Cover leaf litter:	iii surrace).		10	ciay loaniyi iiiii	
% Cover lear litter. % Cover bare ground:			70		
/o Cover Date ground:			70		
Talles	st stratum	Mid	-stratum	Lowe	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	I <1	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:	•	Dominant taxa:		Dominant taxa:	•
Acacia aneura		Hakea preissii		Maireana pyramidata	
		·		Maireana triptera	
				Phebalium lepidotum	
		ALL S	PECIES		
		Acacia	aneura		
		Hakea	preissii		
		Maireana	pyramidata		
		Mairean	a triptera		
		Phebalium	n lepidotum		
		Scaevola	spinescens		
		Mairean	a sedifolia		
		Mairean	a georgei		
		Sclerolaen	a diacantha		
		Goodenia	sp. Midwest		
			m drummondii		
			elipteroides		
			diosperma		
			obovatus		
			a polyandra		
			trichoptera		
		Erodium	cygnorum		
		Out	tside		





		Project Name: St Barbara	Itd Leonora Project		
Date:	14/09/2022	Project Name. 3t Barbara	Botanist:	Eren Reid	
Location:		2363 -28.945712	Quadrat:	Q26	
Quadrat size:	20x20	2303 -28.943712	Quaurat.	Q20	
Vegetation group:		er chenopod and Tecticornia			
WP:	wpt194	er cheriopoù anu Tecticornia			
Photo number:	wpt194		44		
Landform:					
			Flat/Plain		
Land surface/disturbance:			No effective distu		
Fire History:	/-bd/-b		Greater than 10 y		de a series
Coarse fragments on the surface				oarse gravelly; large pebbles/Su	ıbangular
Rock outcrop (abundance/run			No bedrock expos		
Soil (profile/field texture/soil s	surface):		Uniform/Sandy cla	ay loam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			60		
Tallest s		Mid-str			er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	I <1	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Eremophila youngii subsp. your	ngii	Maireana pyramidata		Disphyma crassifolium	
Hakea preissii		Cratystylis subspinescens		Tecticornia disarticulata	
		ALL SPE			
		Eremophila youngi			
		Hakea pr	eissii		
		Maireana py			
		Cratystylis sub	spinescens		
		Disphyma cra			
		Disphyma cra Tecticornia dis			
		Tecticornia di Atriplex ve	sarticulata sicaria		
		Tecticornia di Atriplex ve Ptilotus ob	sarticulata sicaria ovatus		
		Tecticornia di Atriplex ve	sarticulata sicaria ovatus		
		Tecticornia di Atriplex ve Ptilotus ob	sarticulata sicaria ovatus Midwest		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp.	sarticulata sicaria ovatus Midwest gantissima		
		Tecticornia di Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele	sarticulata sicaria ovatus Midwest gantissima sa var. tomentosa		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus		
		Tecticornia di Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena Monachather	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena Austrostipa ele Enchylaena tomentos Senecio glos Maireana tomentos Maireana tomentos	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa /trichum		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena pa Monachather Maireana to Lepidium oxy Calotis his	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa pitula		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena pa Monachather Maireana to Lepidium ox	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus rriptera cuneata tenticuspis paradoxus mentosa ytrichum pidula onocarpa		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena Monachather Maireana to Lepidium ox Calotis his Atriplex code Atriplex bun	sarticulata sicaria ovatus Midwest gantissima a a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa trichum pidula onocarpa buryana		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena Monachather Maireana to Lepidium ox Calotis his Atriplex bun Podolepis c	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa ytrichum pidula onocarpa buryana apillaris		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena pa Monachather Maireana to Lepidium ox Calotis his Atriplex codd Atriplex bun Podolepis c Calandrinia p	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa /trichum pidula onocarpa buryana apillaris olyandra		
		Tecticornia dis Atriplex ve Ptilotus ob Goodenia sp. Austrostipa ele Enchylaena tomentos Senecio glos Maireana t Sclerolaena Sclerolaena Monachather Maireana to Lepidium ox Calotis his Atriplex bun Podolepis c	sarticulata sicaria ovatus Midwest gantissima a var. tomentosa santhus riptera cuneata tenticuspis paradoxus mentosa /trichum pidula onocarpa buryana apillaris olyandra		



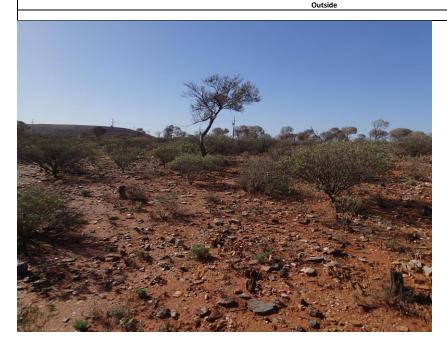


		Project Name: St Barbara	Ltd Loonara Braiast		
Deter	14/00/2022	Project Name: St Barbar		From Doid	
Date:	14/09/2022	20.050220	Botanist:	Eren Reid Q27	
Location:	GDA94 121.350025	-28.950238	Quadrat:	Q27	
Quadrat size:	20x20	1.1.6 1 1 1			
Vegetation group:		hila forrestii and grassland			
WP:	wpt197				
Photo number:			45		
Landform:			Flat/Plain		
Land surface/disturbance:				turbance except grazing by hoofe	ed animals
Fire History:			Greater than 10		
	urface (abundance/size/shape):		No coarse fragm		
Rock outcrop (abundance/	•		No bedrock exp		
Soil (profile/field texture/s	soil surface):		Uniform/Sandy	loam/Loose	
% Cover leaf litter:			15		
% Cover bare ground:			45		
	llest stratum		-stratum		er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	M 30-70	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia caesaneura		Acacia tetragonophylla		Eremophila compacta	
Acacia aneura		Eremophila forrestii subs	o. forrestii	Eragrostis eriopoda	
Acacia craspedocarpa				Ptilotus obovatus	
		ALL SPE	CIES		
		Acacia caes	aneura		
		Acacia ar	neura		
		Acacia crasp	edocarpa		
		Acacia tetrag	onophylla		
		Eremophila forresti	subsp. forrestii		
			•		
		Eremophila o	ompacta		
		Eragrostis e			
		Ptilotus ob			
		Dianella revoluta			
		Maireana th			
		Leichhardtia			
		Rhagodia dru			
		Aristida co			
		Maireana py			
		Goodenia			
		Erodium ci			
		Erodium cy			
		Thysanotus ma			
		Senna artemisioide			
		Acacia ramulosa			
		Calandrinia			
		Scaevola spi			
		Scaevola spi Eremophila			
		Enchylaena tomentos			
		Haloragis	Rossei		
		<u> </u>	Ja		
		Outsi	ae		



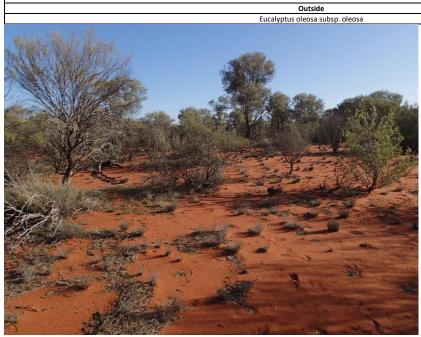


		Project Name: St Barbara	Ltd Leonora Project		
Date:	14/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3506	22 -28.929467	Quadrat:	Q28	
Quadrat size:	20x20	22 20.323 107	- Quantum	Q20	
Vegetation group:	Mulga over Senn	a shrubland			
WP:	wpt206				
Photo number:	L Pi ii		46 & 47		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective dist	urbance	
Fire History:			Greater than 10		
Coarse fragments on the surface (abund	dance/size/shape):			ny/Coarse gravelly; large pebbles/S	Subangular tabular
Rock outcrop (abundance/runoff):			No bedrock expo		-
Soil (profile/field texture/soil surface):			Uniform/Sandy of		
% Cover leaf litter:			5	•	
% Cover bare ground:			65		
			1		
Tallest stratum		Mid-	-stratum	Lowers	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	6-12m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:	•	Dominant taxa:		Dominant taxa:	
Acacia aneura		Senna artemisioides subsp	. ×sturtii	Maireana sedifolia	
		Eremophila oldfieldii subsp		Maireana triptera	
			-	Ptilotus obovatus	
		ALL SPEC	CIES		
		Acacia an	neura		
		Acacia an	neura		
		Acacia an	neura		
		Acacia an Senna artemisioide:			
			s subsp. ×sturtii		
		Senna artemisioide:	s subsp. ×sturtii		
		Senna artemisioide:	s subsp. ×sturtii subsp. angustifolia		
		Senna artemisioide: Eremophila oldfieldii s	s subsp. ×sturtii subsp. angustifolia edifolia		
		Senna artemisioidei Eremophila oldfieldii s Maireana si	s subsp. ×sturtii subsp. angustifolia edifolia riptera		
		Senna artemisioide: Eremophila oldfieldii s Maireana s Maireana t	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus		
		Senna artemisioide: Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob	s subsp. ×sturtii ubsp. angustifolia edifolia riptera ovatus ramidata		
		Senna artemisioide Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Maireana pyi	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata mmondii		
		Senna artemisioide: Eremophila oldfieldii s Maireana si Maireana t Ptilotus ob Maireana pyi Rhagodia dru	s subsp. ×sturtii iubsp. angustifolia edifolia riptera ovatus ramiondii ia var. tomentosa		
		Senna artemisioide: Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Maireana dru Enchylaena tomentos	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus rammondii ia var. tomentosa nescens		
		Senna artemisioide: Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Maireana ptru Enchylaena tomentos Scaevola spi	s subsp. ×sturtii uubsp. angustifolia edifolia riiptera ovatus ramidata mmondii aa var. tomentosa nescens		
		Senna artemisioide Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Maireana pyr Rhagodia dru Enchylaena tomentos Scaevola spi Sclerolaena d	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata mmondii ai var. tomentosa nescens liacantha cinerea		
		Senna artemisioide: Eremophila oldfieldii s Maireana si Ptilotus ob Maireana py Rhagodia dru Enchylaena tomentos Scaevola spi Sclerolaena d	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata mmondii ia var. tomentosa nescens liiacantha inerea		
		Senna artemisioide Eremophila oldfieldii s Maireana si Maireana t Ptilotus ob Maireana pyi Rhagodia dru Enchylaena tomentos Scaevola spi Sclerolaena d Frankenia c	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata ramidati sa var. tomentosa nescens liacantha cinerea etallicorum Midwest		
		Senna artemisioide: Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Rhagodia dru Enchylaena tomentos Scaevola spi Sclerolaena d Frankenia c Eremophila me Goodenia sp.	s subsp. ×sturtii uubsp. angustifolia edifolia riptera oovatus ramidata manorii aa var. tomentosa nescens liacantha cinelica citalicorum Midwest aneura		
		Senna artemisioide Eremophila oldfieldii s Maireana s Maireana t Ptilotus ob Maireana pyi Rhagodia drtus Enchylaena tomento Scaevola spi Sclerolaena d Frankenia ne Goodenia sp.	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata mmondii sa var. tomentosa nescens liacantha cinerea etallicorum Midwest aneura s subsp. filifolia		
		Senna artemisioide Eremophila oldfieldii s Maireana si Maireana t Ptilotus ob Maireana pyi Rhagodia dru Enchylaena tomentos Scaevola spi Sclerolaena Frankenia c Eremophila me Goodenia sp. Acacia pter	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata mmondii sa var. tomentosa nescens liacantha iinerea etallicorum Midwst a subsp. filifolia sp. chatelainiana		
		Senna artemisioide: Eremophila oldfieldii s Maireana si Ptilotus ob Maireana pi Rhagadia dru Enchylaena tomentos Scaevola spi Sclerolaena d Frankenia c Eremophila me Goodenia spt. Senna artemisioide Senna glutinosa subs	s subsp. ×sturtii subsp. angustifolia edifolia riptera ovatus ramidata ramidata ramidati sa var. tomentosa nescens liiacantha cinerea etallicorum Midwest as subsp. silifolia sp. chatelainiana eissii		
		Senna artemisioide Eremophila oldfieldii s Maireana si Maireana t Ptilotus ob Maireana pyr Ringodia dyr Enchylaena tomentos Scaevola spi Sclerolaena Eremophila me Goodenia sp. Acacia pide Senna glutinosa subs	s subsp. ×sturtii uubsp. angustifolia edifolia riiptera oovatus ramidata manodii aa var. tomentosa nescens liiacantha cinteria ezitalicorum Midwest aneura S subsp. filifolia sp. sp. chatelainiana eissii mentosa		
		Senna artemisioide Eremophila oldfieldii s Maireana t Ptilotus ob Maireana t Ptilotus ob Maireana pyr Rhagodia dru Enchyleana tometos Scaevola spi Sclerolaena d Frankenia ne Goodenia sp. Acacia pter Senna artemisioide Senna glutinosa subs Hakea pr	s subsp. ×sturtii ubsp. angustifolia edifolia riptera ovatus ramidata mmondii aa var. tomentosa nescens liacantha cinerea etallicorum Midwest aneura subsp. chatelainiana eissii mentosa pyetalum		



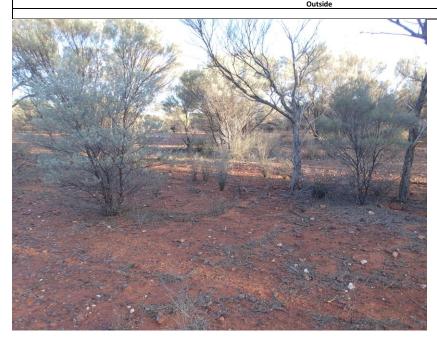


		Project Name: St Barbara Lt	d Leonora Project			
Date:	14/09/2022	-	Botanist:	Eren Reid		
Location:	GDA94 121.34814	18 -28.948588	Quadrat:	Q29		
Quadrat size:	20x20					
Vegetation group:	Mulga over Ereme	ophila forrestii				
WP:	wpt220					
Photo number:			48			
Landform:			Flat/Plain			
Land surface/disturbance:		No effective dist	turbance except grazing by hoofe	d animals		
Fire History:				years ago		
Coarse fragments on the su	rface (abundance/size/shape):	No coarse fragm	nents			
Rock outcrop (abundance/r	unoff):		No bedrock expo			
Soil (profile/field texture/so			Uniform/Sandy			
% Cover leaf litter:			10	•		
% Cover bare ground:			60			
Tall	est stratum	Mid-str	atum	Lower	stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	6-12m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	M 30-70	Crown cover %:	S 10-30	Crown cover %:	S 10-30	
Dominant taxa:	1 22.0	Dominant taxa:	1	Dominant taxa:	1 00	
Acacia caesaneura		Acacia tetragonophylla		Eremophila compacta		
Acacia aneura		Eremophila forrestii subsp. fo	rrestii	Eragrostis eriopoda		
Acacia craspedocarpa		Eremophila for restir subspirite		Ptilotus obovatus		
		ALL SPECIES	3			
		Acacia caesano				
		Acacia aneu				
		Acacia craspedo				
		Acacia tetragono				
		Eremophila forrestii su				
		Eremophila forrestii su	bsp. forrestii			
		Eremophila forrestii su Eremophila com	bsp. forrestii pacta			
		Eremophila forrestii su	bsp. forrestii pacta poda			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obova	pacta poda utus			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var	pacta poda itus divaricata			
		Eremophila forrestii su Eremophila com Eragrostis eriop Ptilotus obova Dianella revoluta var. Maireana thesi	pacta poda titus divaricata pides			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obova Dianella revoluta var Maireana thesi	pacta pacta pooda titus divaricata pides stralis			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obova Dianella revoluta var. Maireana thesi Leichhardtia aus. Rhagodia drumn	pacta pacta poda itus divaricata pioides stralis			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia au; Rhagodia drumn Aristida conto	pacta pacta poda ttus divaricata pides stralis nondii			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia aus Rhagodia drumn Aristida contc Maireana pyram	pacta pacta pooda tus divaricata pides stralis nondii rrta			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia aus Rhagodia drumn Aristida conto Maireana pyram Goodenia ros	pacta pacta booda tus divaricata pides stralis condii rrta iidata ea			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obova Dianella revoluta var. Maireana thesi Leichhardtia aus. Rhagodia drumn Aristida conte Maireana pyram Goodenia ros Erodium crinit	pacta pacta poda vitus divaricata pioides stralis pondii rta pidata ea um			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var Maireana thesis Leichhardtia aus Rhagodia drumn Aristida conto Maireana pyram Goodenia ros Erodium crinit Erodium cygno	pacta pacta poda ttus divaricata pides stralis tondii urta uidata ea uum rum			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var Maireana thesi Leichhardtia aus Rhagodia drumn Aristida conte Maireana pyram Goodenia ros Erodium crinte Erodium crinte Thysanotus mangl	pacta pacta pooda ttus divaricata pides stralis nondii rrta pidata ea um rum esianus			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia aus Rhagodia drumn Aristida conte Maireana pyram Goodenia ros Erodium crinit Erodium cygno Thysanotus mangl	pacta pacta pacta boto itus divaricata pides stralis nondii rrta pidata ea um rrum esianus bbsp. filifolia			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obova Dianella revoluta var. Maireana thesi Leichhardtia aus. Rhagodia drumn Aristida conte Maireana pyram Goodenia ros Erodium crinit Erodium cygno Thysanotus mangl Senna artemisioides su Acacia ramulosa var.	pacta pacta pacta poda itus divaricata pides stralis pondii rrta pidata ea pum rum esianus pbp, filifolia ramulosa			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var Maireana thesis Leichhardtia auu Rhagodia drumn Aristida conto Maireana pyram Goodenia ros Erodium crinit Erodium crinit Erodium cryano Thysanotus mangl Senna artemisioides su Acacia ramulosa var. Eremophila mi	bsp. forrestii pacta pacta poda ttus divaricata olides strtalis rondii rrta iidata ea um rum esianus usbp. filifolia ramulosa niata			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia au: Rhagodia drumn Aristida conto Maireana pyram Goodenia ros Erodium crinti Erodium crinti Erodium sangi Senna artemisioides si Acacia ramulosa var. Eremophila mi	pacta pacta pooda ttus divaricata pides stralis rondii rrta pidata ea um rum esianus pasp, filifolia ramulosa piata part, tomentosa			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var Maireana thesi Leichhardtia aus Rhagodia drumn Aristida conte Maireana pyram Goodenia ros Erodium criniti Erodium criniti Erodium sygno Thysanotus mangl Senna artemisioides st Acacia ramulosa var. Eremophila mii Enchylaena tomentosa v Haloragis gos	pacta pacta pacta pooda ttus divaricata pides stralis nondii rrta pidata ea um rrum esianus pisps, filifolia ramulosa piata ar. tomentosa sei			
		Eremophila forrestii su Eremophila com Eragrostis erioj Ptilotus obove Dianella revoluta var. Maireana thesi Leichhardtia au: Rhagodia drumn Aristida conto Maireana pyram Goodenia ros Erodium crinti Erodium crinti Erodium sangi Senna artemisioides si Acacia ramulosa var. Eremophila mi	pacta			





		Project Name: St Barbara Ltd Lec					
Date:	15/09/2022		Botanist:	Eren Reid			
Location:	GDA94 121.339487 -28.938457		Quadrat:	Q30			
Quadrat size:	20x20						
Vegetation group:	Mulga woodland over ironstone	hillslopes					
WP:	wpt246						
Photo number:			49				
Landform:				illslope			
Land surface/disturbance:			No effective dis	turbance except grazing by hoc	fed animals		
Fire History:			Greater than 10) years ago			
Coarse fragments on the	surface (abundance/size/shape):		Moderately; ma	any/Medium gravelly; medium	pebbles/Subangular tabu		
Rock outcrop (abundance	e/runoff):		No bedrock exp	osed/No runoff			
Soil (profile/field texture	/soil surface):		Uniform/Sandy	clay loam/Firm			
% Cover leaf litter:	•		30	•			
% Cover bare ground:			60				
	Tallest stratum	Mid-	tratum	Lower	stratum		
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	6-12m	Height:	1-3m	Height:	0.5-1m		
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30		
Dominant taxa:	0 10 00	Dominant taxa:	1 120	Dominant taxa:	3 10 30		
Acacia caesaneura		Acacia tetragonophylla	1	Eremophila latrobei subsp. latrobei			
Acacia mulganeura		ricacia tetragonopriyin	•	Sida ectogama			
Acacia craspedocarpa				Ptilotus obovatus			
Acacia craspeacearpa		ALL SPECIES		T thotas obovatas			
		Acacia caesaneura					
		Acacia mulganeura					
		Acacia craspedocarpa					
		Acacia tetragonophyll					
		Acacia tetragonophyn	d				
		Formankila latachai autom	-tb-:				
		Eremophila latrobei subsp.	atropei				
		Sida ectogama					
		Ptilotus obovatus					
		Acacia aneura					
		Eremophila clarkei					
		Sida sp. Golden calyces gla					
		Teucrium teucriiflorui	n				
		Teucrium teucriiflorui Cheilanthes sieberi subsp.	n				
		Teucrium teucriifloru Cheilanthes sieberi subsp. Maireana thesioides	n sieberi				
		Teucrium teucriiflorur Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp.	n sieberi				
		Teucrium teucriiflorui Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia	n sieberi filifolia				
		Teucrium teucriiflorur Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia Rhagodia drummond	n sieberi filifolia i				
		Teucrium teucriiflorur Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia Rhagodia drummond Dianella revoluta var. diva	n sieberi filifolia i				
		Teucrium teucriiflorur Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia Rhagodia drummond Dianella revoluta var. diva Goodenia havilandii	n sieberi filifolia i ricata				
		Teucrium teucriiflorui Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia Rhagodia drummond Dianella revoluta var. diva Goodenia havilandii Isoetopsis graminifoli	n sieberi filifolia i ricata				
		Teucrium teucriiflorur Cheilanthes sieberi subsp. Maireana thesioides Senna artemisioides subsp. Sida calyxhymenia Rhagodia drummond Dianella revoluta var. diva Goodenia havilandii	n sieberi filifolia i ricata				





	Project Name: St I	Barbara Ltd Leonora Project		
Date:		Barbara Ltd Leonora Project	Botanist:	Eren Reid
	15/09/2022			
Location:	GDA94 121.339685 -28.942046		Quadrat:	Q31
Quadrat size:	20x20			
Vegetation group:	Mulga over Eremophila forrestii			
WP:	wpt248			
Photo number:			50	
Landform:			Flat/Plain	
Land surface/disturbance:			No effective disturb	pance except grazing by hoofed anima
Fire History:	Greater than 10 year	ars ago		
Coarse fragments on the surface (abu	indance/size/shape):		No coarse fragmen	ts
Rock outcrop (abundance/runoff):			No bedrock expose	
Soil (profile/field texture/soil surface	1:		Uniform/Sandy loa	
% Cover leaf litter:	<u>r</u> -		20	, 20032
% Cover bare ground:			65	
/o Cover pare ground:			00	
	Hook abrokum	B 41-1	h	I aura atuat una
	llest stratum	Mid-stra	lum	Lower stratum
Growth form:	M Tree Mallee (> 8m)	Growth form:		Growth form:
Height:	6-12m	Height:		Height:
Crown cover %:	S 10-30	Crown cover %:		Crown cover %:
Dominant taxa:		Dominant taxa:		Dominant taxa:
Acacia caesaneura		Acacia tetragonophylla		Eremophila compacta
Acacia aneura		Eremophila forrestii subsp. fe	orrestii	Eragrostis eriopoda
Acacia craspedocarpa				Ptilotus obovatus
	А	ALL SPECIES		
		cia caesaneura		
		cacia aneura		
		a craspedocarpa		
		tetragonophylla		
		forrestii subsp. forrestii		
	Eremophila	orrestii subsp. forrestii		
		1.9		
		ophila compacta		
		rostis eriopoda		
		otus obovatus		
		voluta var. divaricata		
	Maire	eana thesioides		
	Leichl	hardtia australis	· · · · · · · · · · · · · · · · · · ·	
	Rhago	dia drummondii		
		stida contorta		
		eana pyramidata		
		odenia rosea		
		dium crinitum		
		lium cygnorum		
		otus manglesianus		
	·			
		nisioides subsp. filifolia		
		nulosa var. ramulosa		
		hila metallicorum		
		mentosa var. tomentosa		
	Hal	loragis gossei		<u> </u>
	Scae	vola spinescens	· · · · · · · · · · · · · · · · · · ·	
	Sid	da ectogama		
		ndrinia eremaea		
		rax suaveolens		
-	,-			



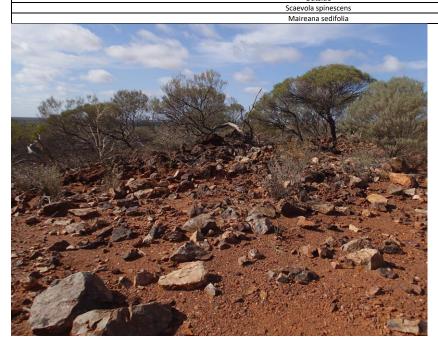


Solutions					
		Project Name: St Barba	ra Ltd Leonora Project		
Date:	15/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.33604	2 -28.931813	Quadrat:	Q32	
Quadrat size:	20x20		1 2 2 2 2 2		
Vegetation group:	Mulga over bif				-
WP:	wpt255				-
Photo number:			55-57		
Landform:			Crest/Hill Crest		
Land surface/disturbance:			Limited clearing		
Fire History:			Greater than 10	vears ago	
	urface (abundance/size/shape):			/Stony; stones/Angular tabular	
Rock outcrop (abundance/			Very rocky/Rapi		
Soil (profile/field texture/s			Uniform/Sandy		
% Cover leaf litter:	J. Juliuce,		25	olay looniy i iiii	
% Cover bare ground:			75		
70 COVEL DATE GLOUILU.			13		
Tall	est stratum	Mid	-stratum	Lower	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Eremophila oldfieldii subs	n angustifolia	Eremophila latrobei subsp.	latrohei
Acacia caesaneura		Senna charlesiana	p. angastrona	Ptilotus obovatus	100000
Acacia mulganeura		Acacia tetragonophylla		Maireana pyramidata	
ricacia maiganeara		ALL SP	FCIES	maneana byrannaata	
		Acacia a			
		Acacia cae			
		Acacia mu			
		Eremophila oldfieldii			
		Senna cha			
		Acacia tetra			
		Eremophila latrobe			
		Ptilotus o	•		
		Maireana p			
		Atriplex bu			
		Sisymbrium e			
		Maireana			
		Maireana			
		Maireana to			
		Enchylaena tomento			
		Scaevola sp			
		Cheilanthes siebe			
		Erodium c			
		Rhagodia dr			
		Teucrium tei			
		Sclerolaena			
		Ptilotus e			
		Hakea p			
		Atriplex v Enneapogon o			
		Rhagodia (
		Rumex ve			
		Acacia quad			
	-	Sida ect			
			-		
		Outs			
		Senna artemisioides s			
		Dodonae	a rigida		





		Project Name: St Barb	ara Ltd Leonora Project				
Date:	15/09/2022		Botanist:	Eren Reid			
Location:	GDA94 121.3362	65 -28.938267	Quadrat:	Q33			
Quadrat size:	20x20						
Vegetation group:	Mulga on bif						
WP:	wpt258						
Photo number:			58				
Landform:			Crest/Hill Crest				
Land surface/disturbance:			Limited clearing				
Fire History:			Greater than 10	years ago			
Coarse fragments on the surface	(abundance/size/shape):		Very; abundant,	/Stony; stones/Angular tabular			
Rock outcrop (abundance/runof	f):		Very rocky/Rapi	d			
Soil (profile/field texture/soil su	rface):		Uniform/Sandy	clay loam/Firm			
% Cover leaf litter:			10				
% Cover bare ground:			70				
Tallest st		Mi	d-stratum	Lower	stratum		
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	3-6m	Height:	1-3m	Height:	0.5-1m		
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30		
Dominant taxa:		Dominant taxa:		Dominant taxa:			
Acacia aneura		Acacia tetragonophylla	Acacia tetragonophylla		Eremophila latrobei subsp. latrobei		
Acacia quadrimarginea				Ptilotus schwartzii			
Acacia mulganeura				Ptilotus obovatus			
			PECIES				
			aneura				
			drimarginea				
			ulganeura				
		Acacia tetra	agonophylla				
			pei subsp. latrobei				
			obovatus				
			cygnorum				
			eri subsp. sieberi				
			rigidula				
			ea rigida				
			oxytrichum				
			ila clarkei				
			havilandii				
			lipteroides				
			Meekatharra				
			subsp. recurva				
			subsp. artemisioides				
			lrummondii				
			togama				
		Sidd CC					
		Out	side				
		Scaevola					





	Proj	ect Name: St Barbara Ltd Leonora P	roject		
Date:	15/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.333738 -28.944087		Quadrat:	Q34	
Quadrat size:	20x20				
Vegetation group:	Ac duriuscula on sand plain and che	nopod shrubland.			
WP:	wpt262				
Photo number:		59			
Landform:					
Land surface/disturbance:				sturbance except grazing by h	oofed animals
Fire History:			Greater than 1	0 years ago	
Coarse fragments on the	surface (abundance/size/shape):		No coarse frag	ments	
Rock outcrop (abundance	e/runoff):		No bedrock ex	posed/No runoff	
Soil (profile/field texture	/soil surface):		Uniform/Sand	y loam/Loose	
% Cover leaf litter:			30		
% Cover bare ground:			65		
	Tallest stratum	Mid-str	atum	Lowers	tratum
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:	•	Dominant taxa:	•	Dominant taxa:	
Acacia duriuscula		Eremophila pantonii		Maireana sedifolia	
Acacia craspedocarpa		Eremophila oldfieldii sub	sp. angustifolia	Ptilotus obovatus	
		Senna artemisioides subs	sp. filifolia	Maireana triptera	
		ALL SPECIES	•		
		Acacia duriuscula			
		Acacia craspedocarpa			
		Eremophila pantonii			
	E	remophila oldfieldii subsp. angustifo	olia		
		Senna artemisioides subsp. filifolia			
		Maireana sedifolia			
		Ptilotus obovatus			
		Maireana triptera			
		Solanum nummularium			
		Calandrinia eremaea			
		Atriplex bunburyana			
		Scaevola spinescens			
		Rhagodia drummondii			
		Maireana pyramidata			
		Enchylaena tomentosa var. tomentos	sa		
			sa		
		Enchylaena tomentosa var. tomentos	sa		
		Enchylaena tomentosa var. tomentos Cratystylis subspinescens	sa		



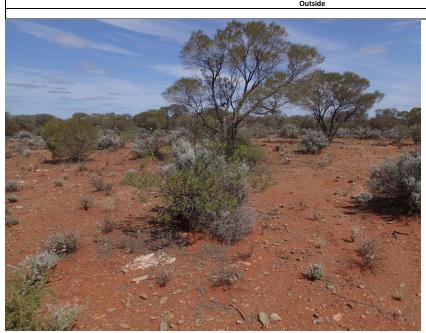


	Pro	ect Name: St Barbara Ltd Leonora F	Project			
Date:	15/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.33369 -28.93309		Quadrat:	Q35		
Quadrat size:	20x20					
Vegetation group:	Ac duriuscula over Maireana sedifo	lia and Scaevola spinescens on rocky	substrate			
WP:	wpt270					
Photo number:		60				
Landform:		Hillock/Mound	ı			
Land surface/disturbance	:		No effective d	sturbance except grazing by	hoofed animals	
Fire History:			Greater than 1	0 years ago		
Coarse fragments on the s	surface (abundance/size/shape):		No qualifier; c	ommon/Bouldery; or boulder	s/Subangular tabu	
Rock outcrop (abundance	/runoff):		No bedrock ex	posed/No runoff		
Soil (profile/field texture/	soil surface):		Uniform/Sand	y clay loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			70			
	Tallest stratum	Mid-st		Lowers		
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	3-6m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
Acacia duriuscula		Eremophila oldfieldii sul	Eremophila oldfieldii subsp. angustifolia		Maireana sedifolia	
				Ptilotus obovatus		
				Scaevola spinescens		
		ALL SPECIES				
		Acacia duriuscula				
	I	remophila oldfieldii subsp. angustife	olia			
		Maireana sedifolia				
		Ptilotus obovatus				
		Scaevola spinescens				
		Sclerolaena diacantha				
		Eremophila platycalyx subsp. Leono	ra			
		Maireana pyramidata				
		Maireana triptera				
		Erodium cygnorum				
		Eremophila latrobei subsp. latrobe	i			
		Senna charlesiana				
		Rhagodia drummondii				
		Maireana tomentosa				
		Solanum lasiophyllum				





	Proi	ect Name: St Barbara Ltd Leonora Pi	roject				
Date:	15/09/2022		Botanist:	Eren Reid			
Location:	GDA94 121.331312 -28.940967		Quadrat:	Q36			
Quadrat size:	20x20						
Vegetation group:	Ac duriuscula over Maireana sedifo	lia and Scaevola spinescens					
WP:	wpt278						
Photo number:	•		61				
Landform:				ı			
Land surface/disturbance:				sturbance except grazing by	hoofed animals		
Fire History:			Greater than 1				
Coarse fragments on the surf	ace (abundance/size/shape):			nany/Cobbly; or cobbles/Sub	angular tabular		
Rock outcrop (abundance/ru	noff):			posed/No runoff	_		
Soil (profile/field texture/soil	surface):		Uniform/Sand	y clay loam/Firm			
% Cover leaf litter:	•		5				
% Cover bare ground:			75				
			•				
	Tallest stratum	Mid-str	atum	Lower	stratum		
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	3-6m	Height:	1-3m	Height:	0.5-1m		
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30		
Dominant taxa:	•	Dominant taxa:	•	Dominant taxa:	•		
Acacia duriuscula		Eremophila oldfieldii sub	subsp. angustifolia Maireana sedifolia				
					Ptilotus obovatus		
				Scaevola spinescens			
				Scaevola spiliescens			
		ALL SPECIES Acacia duriuscula		Scaevola spinescens			
	F	Acacia duriuscula	lia	Julies Cells			
	E		lia	Scaevola spiniescens			
	E	Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia	lia	Scaevola spiniescens			
	E	Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus	lia	Scaevola spiniescens			
	E	Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens	lia	Judevola spiniescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha		Scaevola spinescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor		Scaevola spinescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata		- Statevola spiniescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera		Judevola spiniescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana triptera Erodium cygnorum	a	Scaevola spinescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei	a	Scaevola spiniescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana	a	- Statevola spiniescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii	a	- Statevola spiniescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa	a	Scaevora spiniescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum	a	Julius Spinissens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia	a	Julius Spinescens			
		Acacia duriuscula Eremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia Enneapogon caerulescens	a	- Statevola spiniescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia Enneapogon caerulescens Haloragis trigonocarpa	a	- Scaevola spinescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia Enneapogon caerulescens Haloragis trigonocarpa Atriplex bunburyana	a	July State Volta Spinissens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia Enneapogon caerulescens Haloragis trigonocarpa Atriplex bunburyana Sclerolaena cuneata	a	Scaevola spinescens			
		Acacia duriuscula Fremophila oldfieldii subsp. angustifo Maireana sedifolia Ptilotus obovatus Scaevola spinescens Sclerolaena diacantha Eremophila platycalyx subsp. Leonor Maireana pyramidata Maireana triptera Erodium cygnorum Eremophila latrobei subsp. latrobei Senna charlesiana Rhagodia drummondii Maireana tomentosa Solanum lasiophyllum Senna artemisioides subsp. filifolia Enneapogon caerulescens Haloragis trigonocarpa Atriplex bunburyana	a	Scaevola spinescens			





			ne: St Barbara Ltd L			
Date:	15/0	9/2022	Botanist:	Eren Reid		
Location:	GDA	94 121.323544 -28.935713	Quadrat:	Quadrat: Q37		
Quadrat size:	20x2	20				
Vegetation group:	Tect	icornia shrubland				
WP:	wpt2	293				
Photo number:			72			
Landform:			Flat/Plain			
Land surface/disturbance:			Limited clearing	S		
Fire History:			Greater than 10	years ago		
Coarse fragments on the surface (abund	dance/s	size/shape):	Very; abundant	/Coarse gravelly; large pebbles/Sub	rounded	
Rock outcrop (abundance/runoff):			No bedrock exp	osed/No runoff		
Soil (profile/field texture/soil surface):			Uniform/Silty c	ay loam/Firm		
% Cover leaf litter:			<5			
% Cover bare ground:			90			
Tallest stratum		Mid-stratun	n		Lower stratum	
Growth form:		Growth form:		Growth form:	C Chenopod shrub	
Height:		Height:		Height:	0.25-0.5m	
Crown cover %:		Crown cover %:		Crown cover %:	V <10	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
				Tecticornia undulata		
				Tecticornia indica subsp. bide	ens	
				Tecticornia pruinosa		
			ALL SPECIES			
			Tecticornia undula	ta		
		Tect	icornia indica subsp	. bidens		
			Tecticornia pruino	sa		
·		·	Disphyma crassifoli	um		
			Sclerolaena diacant	ha		
		Franke	enia pauciflora var. p	pauciflora		
			Maireana triptera	1		
		S	clerolaena patentici	ıspis		
			Sclerolaena drummo	ndii		
			Maireana carnos	9		
			ivialiealia caffiosi	1		
			Outside			





		Project Name: St Barbara Ltd	conora Broject		
Date:	15/09/2022	Project Name. 3t Barbara Etu	Botanist:	Eren Reid	
Location:	GDA94 121.32335	20 027525	Quadrat:	Q38	
Quadrat size:	20x20	-26.537323	Quaurat.	Q36	
Vegetation group:					
WP: wpt294			id dulle		
Photo number:			73-74-75		
Landform:			Dune rise		
Land surface/disturbance:				pance except grazing by hoofed a	nimale
Fire History:			Greater than 10 ye		111111013
Coarse fragments on the surface (abundance/size/shape):			No coarse fragmen		
Rock outcrop (abundance/runoff):	ance/size/snape/.		No bedrock expose		
Soil (profile/field texture/soil surface):			Uniform/Sandy loa		
% Cover leaf litter:			5	III/ Loose	
% Cover bare ground:			80		
% Cover bare ground:			80		
Tallest stratum		Mid-stratur	n	Lower	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	V <10	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Melaleuca interioris	Scaevola spinescens		
		Hakea preissii			
		Eremophila miniata			
		ALL SPECIES			
		Acacia aneura			
		Melaleuca interio	ris		
		Hakea preissii			
		Eremophila minia	ita		
		Scaevola spinesce			
		эсастою эртезес			
		Rumex vesicariu:	5*		
		Maireana pyramid	ata		
		Calandrinia erema	iea		
		Aristida contort	а		
		Outside			
		Tecticornia pruino	osa		
		Tecticornia undul	ata		





		Project Name	: St Barbara Ltd Leon	ora Project	
Date:	15/	/09/2022	Botanist:	Eren Reid	
Location:	GD	A94 121.321543 -28.936477	Quadrat:	Q39	
Quadrat size:	20>	κ 20		-	
Vegetation group:	Tec	ticornia shrubland			
WP:	wp	t295			
Photo number:			76		
Landform: Closed depression/Playa					
Land surface/disturbance:			No effective disturb	pance except grazing by hoofed anima	als
Fire History:			Greater than 10 year	ars ago	
Coarse fragments on the surface (abund	ance	/size/shape):	No coarse fragmen	ts	
Rock outcrop (abundance/runoff):			No bedrock expose	d/No runoff	
Soil (profile/field texture/soil surface):			Uniform/Silty clay I	oam/Firm	
% Cover leaf litter:			5		
% Cover bare ground:			60		
Tallest stratum		Mid-stratum	Lower stratum		ver stratum
Growth form:		Growth form:		Growth form:	C Chenopod shrub
Height:		Height:		Height:	0.25-0.5m
Crown cover %:		Crown cover %:		Crown cover %:	M 30-70
Dominant taxa:		Dominant taxa:		Dominant taxa:	
				Tecticornia indica subsp. bidens	
				Tecticornia undulata	
				Tecticornia pruinosa	
			ALL SPECIES		
			ornia indica subsp. bio	ens	
			ecticornia undulata		
		Т	ecticornia pruinosa		
			Outside		





		Project Nar	me: St Barbara Ltd Leo	nora Project		
Date:	15,	/09/2022	Botanist:	Eren Reid		
Location:	GE	A94 121.319675 -28.935043	Quadrat:	Q40		
Quadrat size:	20	x20				
Vegetation group:	Te	cticornia shrubland				
WP:	wp	t296				
Photo number:			77			
Landform:			Closed depression	n/Playa		
Land surface/disturbance:			No effective distu	rbance		
Fire History:			Greater than 10 y	ears ago		
Coarse fragments on the surface (abu	ndance	/size/shape):	No coarse fragme			
Rock outcrop (abundance/runoff):			No bedrock expos	ed/No runoff		
Soil (profile/field texture/soil surface)	:		Uniform/Silty clay	loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			60			
			•			
Tallest stratum		Mid-stratur	n		Lower stratum	
Growth form:		Growth form:		Growth form:	C Chenopod shrub	
Height:		Height:		Height:	0.25-0.5m	
Crown cover %:		Crown cover %:		Crown cover %:	M 30-70	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
				Tecticornia indica subsp	. bidens	
				Tecticornia undulata		
				Tecticornia pruinosa		
			ALL SPECIES			
_			•	•		
			•	•		
·		Tect	ticornia indica subsp. b	idens		
			Tecticornia undulata			
			Tecticornia pruinosa			
						





		Project Name: St Barbara	Ltd Leonora Project			
Date:	15/09/2022		Botanist:	Eren Reid		
Location:	GDA94 121.319	71 -28.935485	Quadrat:	Q41		
Quadrat size:	20x20					
Vegetation group:	Mulga over Mel	aleuca interioris and Eremophila n	niniata			
WP:	wpt297					
Photo number:	<u> </u>		78	78		
Landform:			Hillock/Dune*	Hillock/Dune*		
Land surface/disturbance:			No effective dist	No effective disturbance except grazing by hoofed animals		
Fire History:			Greater than 10	ears ago		
Coarse fragments on the sur	face (abundance/size/shape):		No coarse fragm	ents		
Rock outcrop (abundance/ru	unoff):		No bedrock expo	sed/No runoff		
Soil (profile/field texture/so	il surface):		Uniform/Sandy le	pam/Loose		
% Cover leaf litter:	-		10			
% Cover bare ground:			70			
			•			
Talles	t stratum	Mid-st	ratum	Lower	stratum	
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub	
Height:	3-6m	Height:	1-3m	Height:	0.5-1m	
Crown cover %:	V <10	Crown cover %:	S 10-30	Crown cover %:	S 10-30	
Dominant taxa:	<u> </u>	Dominant taxa:		Dominant taxa:		
Acacia caesaneura		Melaleuca interioris		Scaevola spinescens		
		Hakea preissii		·		
		Eremophila miniata				
		ALL SPEC	CIES			
		Acacia caes	aneura			
	•	Melaleuca ir	nterioris			
		Hakea pr	eissii			
			eissii miniata			
		Hakea pr Eremophila	eissii miniata			
		Hakea pr Eremophila	eissii miniata			
		Hakea pr Eremophila	eissii miniata nescens			
		Hakea pr Eremophila Scaevola spi	eissii miniata nescens carius*			
		Hakea pr Eremophila Scaevola spi Rumex vesi	eissii miniata nescens carius* ramidata			
		Hakea pr Eremophila Scaevola spi Rumex vesi Maireana pyi	eissii miniata nescens carius* ramidata eremaea			
		Hakea pr Eremophila Scaevola spi Rumex vesi Maireana pyi Calandrinia e	eissii miniata nescens carius* ramidata eremaea ntorta			
		Hakea pr. Eremophila Scaevola spi Rumex vesi Maireana pyi Calandrinia e Aristida co	eissii miniata nescens carius* ramidata eremaea ntorta stralis			
		Hakea pr Eremophila Scaevola spi Rumex vesi Maireana pyi Calandrinia e Aristida co Salsola au	eissii miniata nescens carius* ramidata eremaea ntorta stralis eathiana			
		Hakea pr. Eremophila Scaevola spi Rumex vesi Maireana pyi Calandrinia a Aristida co Salsola au Melaleuca sh	eissii miniata nescens carius* ramidata eremaea ntorta stralis eathiana			





Solutions			1 1111 5 1 1		
	1 / /	Project Name: St B	arbara Ltd Leonora Project		
Date:	15/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.311	482 -28.931313	Quadrat:	Q42	
Quadrat size:	20x20				
Vegetation group:		thiana over Cratystylis subsp	inescens and Tecticornia		
WP:	wpt302				
Photo number:			79		
Landform:			Hillock/Dune*		
Land surface/disturbance:			No effective distu	irbance except grazing by hoofe	d animals
Fire History:			Greater than 10 y	ears ago	
Coarse fragments on the surfa	ace (abundance/size/shape):		No coarse fragme	ents	
Rock outcrop (abundance/rur	noff):		No bedrock expo	sed/No runoff	
Soil (profile/field texture/soil	surface):		Uniform/Sandy lo	pam/Loose	
% Cover leaf litter:	-		5		
% Cover bare ground:			80		
· · · · · · · · · · · · · · · · · · ·					
Tallest :	stratum	N	/lid-stratum	Low	er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	V <10	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:	<u> </u>	Dominant taxa:	
Melaleuca sheathiana		Cratystylis subspinesce	ns	Tecticornia indica subsp. b	pidens
area a sirea a		Cracysey iis subspiriesee.		Tecticornia undulata	, de la companya de l
				Atriplex vesicaria	
		A1	LL SPECIES	7 templex vesicum	
		Meiale	uca sheathiana		
		Cratystyl	lis subspinescens		
			indica subsp. bidens		
			ornia undulata		
			olex vesicaria		
			aena diacantha		
			ena drummondii		
			ostis eriopoda		
			eana amoena		
			ola spinescens		
			ena patenticuspis		
		Disphyr	ma crassifolium		
		Frankenia pau	ıciflora var. pauciflora		
		Roep	era eremaea		
		Lyci	um australe	<u> </u>	
		Exoca	rpos aphyllus		
		Eremo	ophila miniata		
		Austr	rostipa nitida		
			drinia eremaea		
			psis quadrifida		
			hella subsp. pulchella		
			io glossanthus		
		Series	- 0		
			Outside		
		·	Outside		





		Project Name: St Barba	ra Ltd Leonora Project		
Date:	15/09/2022	Project Name. 3t Barba	Botanist:	Eren Reid	
		242 20 020045			
Location:	GDA94 121.3113	213 -28.930015	Quadrat:	Q43	
Quadrat size:	20x20				
Vegetation group:		thiana over Cratystylis subspines	cens and Tecticornia		
WP:	wpt303		•		
Photo number:			80-81		
Landform:			Hillock/Dune*		
Land surface/disturbance:				bance except grazing by hoofed	d animals
Fire History:			Greater than 10 ye		
Coarse fragments on the surfa			No coarse fragme		
Rock outcrop (abundance/run			No bedrock expos		
Soil (profile/field texture/soil	surface):		Uniform/Sandy lo	am/Loose	
% Cover leaf litter:			5		
% Cover bare ground:			80		
Tallest s	tratum	Mid-s	tratum	Lowe	er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	V <10	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:	ı	Dominant taxa:	
Melaleuca sheathiana		Cratystylis subspinescens		Tecticornia indica subsp. b	idens
		, , , , , , , , , , , , , , , , , , , ,		Tecticornia undulata	
				Atriplex vesicaria	
		ALL SP	FCIES		
		Melaleuca	heathiana		
		Cratystylis su	bspinescens		
		Tecticornia indic	a suhsn hidens		
		Tecticornia			
		Atriplex			
		Sclerolaena			
		Sclerolaena			
		Eragrostis			
		Maireana			
		Scaevola s			
		Sclerolaena p			
		Dichuma c	raccifolium		
		Disphyma c			
		Frankenia pauciflo	ra var. pauciflora		
		Frankenia pauciflo Roepera (ra var. pauciflora eremaea		
		Frankenia pauciflo Roepera (Lycium a	ra var. pauciflora eremaea ustrale		
		Frankenia pauciflo Roepera (Lycium a Exocarpos	ra var. pauciflora eremaea iustrale aphyllus		
		Frankenia paucific Roepera (Lycium a Exocarpos Eremophil	ra var. pauciflora eremaea uustrale aphyllus a miniata		
		Frankenia paucific Roepera i Lycium i Exocarpos Eremophil Austrosti	ra var. pauciflora eremaea ustrale aphyllus a miniata pa nitida		
		Frankenia paucific Roepera (Lycium : Exocarpos Eremophil Austrosti Calandrinia	ra var. pauciflora eremaea sustrale aphyllus a miniata pa nitida e eremaea		
		Frankenia paucific Roepera (Lycium a Exocarpos Eremophil Austrosti Calandrinia Gunniopsis	ra var. pauciflora eremaea uustrale aphyllus a miniata pa nitida u eremaea quadrifida		
		Frankenia paucific Roepera - Lycium a Exocarpos Eremophil Austrosti Calandrinia Gunniopsis Eriachne pulchella	ra var. pauciflora eremaea sustrale aphyllus a miniata pa nitida eremaea quadrifida subsp. pulchella		
		Frankenia paucific Roepera (Lycium a Exocarpos Eremophil Austrosti Calandrinia Gunniopsis	ra var. pauciflora eremaea sustrale aphyllus a miniata pa nitida eremaea quadrifida subsp. pulchella		
		Frankenia paucific Roepera - Lycium a Exocarpos Eremophil Austrosti Calandrinia Gunniopsis Eriachne pulchella	ra var. pauciflora eremaea uustrale aphyllus a miniata pa nitida u eremaea quadrifida u subsp. pulchella		



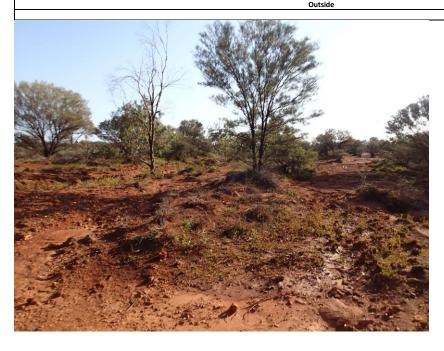


		Project Na	me: St Barbara Ltd Leo	nora Project		
Date:	15,	/09/2022	Botanist:	Eren Reid		
Location:	GE	A94 121.314113 -28.934488	Quadrat:	Q44		
Quadrat size:	20	k20				
Vegetation group:	Te	cticornia shrubland				
WP:	wp	t309				
Photo number:			84			
Landform:			Closed depression	ı/Playa		
Land surface/disturbance:			No effective distu	rbance		
Fire History:			Greater than 10 y	ears ago		
Coarse fragments on the surface (abundance/size/shape):			No coarse fragme	nts		
Rock outcrop (abundance/runoff):			No bedrock expos	ed/No runoff		
Soil (profile/field texture/soil surface):			Uniform/Silty clay	loam/Firm		
% Cover leaf litter:			5			
% Cover bare ground:			55			
				_		
Tallest stratum	_	Mid-stratu	m		wer stratum	
Growth form:	<u> </u>	Growth form:		Growth form:	C Chenopod shrub	
Height:		Height:		Height:	0.25-0.5m	
Crown cover %:		Crown cover %:		Crown cover %:	M 30-70	
Dominant taxa:		Dominant taxa:		Dominant taxa:		
				Tecticornia undulata		
				Tecticornia indica subsp. bidens		
				Frankenia pauciflora var. pauciflor	a	
			ALL SPECIES			
			Tecticornia undulata			
		Tec	ticornia indica subsp. b	idens		
			enia pauciflora var. pa			
		Trunk	Stenopetalum salicola			
		(Cratystylis subspinesce			
			Sondottia connata			
			Didymanthus roei			
		<u> </u>	Rumex vesicarius*	<u> </u>	<u> </u>	
			Outside			





	45/00/2022	Froject Name: 3t Ban	para Ltd Leonora Project	From Dollal	
Date:	16/09/2022		Botanist:	Eren Reid	
Location:	20x20	23392 -28.882643	Quadrat:	Q45	
Quadrat size:					
Vegetation group:	Creekline Veg	etation			
WP:	wpt343		1 00		
Photo number:			89	() //2 :	
Landform:				(vale)/Drainage depression	
Land surface/disturbance:				urbance except grazing by hoofed a	animais
Fire History:	(1 1 (1 (1		Greater than 10		
Coarse fragments on the surfa		<u>:</u>		ny/Coarse gravelly; large pebbles/S	ubrounded
Rock outcrop (abundance/run			No bedrock expo		
Soil (profile/field texture/soil s	surface):		Uniform/Sandy o	lay loam/Firm	
% Cover leaf litter:			10		
% Cover bare ground:			75		
T			-tt		
Tallest st			stratum		r stratum
Growth form:	T Tree	Growth form:	S Shrub	Growth form:	F Forb
Height:	6-12m	Height:	1-3m	Height:	0.25-0.5m
Crown cover %:	l <1	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Eucalyptus camaldulensis subsp	o. optusa	Acacia tetragonophylla		Rhodanthe charsleyae	
Acacia incurvaneura					
Acacia mulganeura					
			SPECIES		
			ulensis subsp. obtusa		
			curvaneura		
			nulganeura		
		Acacia tet	ragonophylla		
		81 1 11	1 1		
		Knodanth	e charsleyae		
		Gaadania	sp. Midwest		
			rium irio*		
			HUHH HIO:		
		Acacia p	oteraneura		
		Acacia p Sonchus	oteraneura oleraceus*		
		Acacia p Sonchus Cenchr	oteraneura oleraceus* us ciliaris*		
		Acacia p Sonchus Cenchr Erodium	oteraneura oleraceus* us ciliaris* i cygnorum		
		Acacia p Sonchus Cenchr Erodium Acacia cra	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa		
		Acacia p Sonchus Cenchr Erodium Acacia cra Medicag	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa go minima*		
		Acacia p Sonchus Cenchin Erodium Acacia cra Medicag Lysimach	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa so minima* ia arvensis*		
		Acacia p Sonchus Cenchr Erodium Acacia cra Medicag Lysimach Asphodelu	oteraneura oleraceus* us ciliaris* Lognorum aspedocarpa to minima* ia arvensis* us fistulosus*		
		Acacia p Sonchus Cenchr Erodium Acacia cra Medicag Lysimach Asphodel Calandrir	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa go minima* ia arvensis* us fistulosus* nia eremaea		
		Acacia p Sonchus Cenchr Erodium Acacia cr Medicag Lysimach Asphodel Calandrir Acaci	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa go minima* ia arvensis* uia fistulosus* uia eremaea a aneura		
		Acacia p Sonchus Cenchr Erodium Acacia cr Medicag Lysimach Asphodel Calandri Acaci	oteraneura oleraceus* us ciliaris* Loygnorum aspedocarpa to minima* ia arvensis* us fistulosus* nia eremaea a aneura glossanthus		
		Acacia p Sonchus Cenchr Erodium Acacia cra Medicag Lysimach Asphodelt Calandrii Acacia Senecio	oteraneura oleraceus* us ciliaris* u cygnorum aspedocarpa go minima* ia arvensis* uia fistulosus* uia eremaea a aneura		





Date: Location:		t Name: St Barbara Ltd Leonora Pro	oject		
Location:	16/09/2022		Botanist:	Eren Reid	
	GDA94 121.30249 -28.88828		Quadrat:	Q46	
Quadrat size:	20x20				
Vegetation group:	Mulga woodland				
WP:	wpt346				
Photo number:			91		
Landform:			Flat/Plain		
Land surface/disturbance:			No effective d	isturbance except grazing by h	oofed animals
Fire History:			Greater than 1	.0 years ago	
Coarse fragments on the surface	(abundance/size/shape):		Slightly; few/N	Medium gravelly; medium peb	bles/Subrounded
Rock outcrop (abundance/runoff):		No bedrock ex	posed/No runoff	
Soil (profile/field texture/soil sur	face):		Uniform/Sand	y clay loam/Firm	
% Cover leaf litter:			10		
% Cover bare ground:			65		
			•		
Т	allest stratum	Mid-stra	atum	Lower st	ratum
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:	•	Dominant taxa:	•
Acacia mulganeura		Grevillea berryana		Eremophila compacta	
Acacia craspedocarpa		·		·	
		ALL SPECIES			
		Acacia mulganeura			
		Acacia craspedocarpa			
		Grevillea berryana			
		Eremophila compacta			
		Ptilotus obovatus			
		Ptilotus schwartzii			
		Amyema fitzgeraldii			
		Erodium cygnorum			
		Cheilanthes sieberi subsp. sieberi			
		Dianella revoluta var. divaricata			
		Eremophila clarkei			
		Eremophila clarkei Rhagodia drummondii			





		Project Name: St Barbara	Ltd Leonora Project		
Date:	16/09/2022		Botanist:	Eren Reid	
ocation:	GDA94 121.2975	12 -28.918365	Quadrat:	Q47	
Quadrat size:	20x20		•		
/egetation group:	Mulga over Mela	leuca interioris and Eremophila m	iniata		
VP:	wpt382				
hoto number:			96		
andform:			Hillock/Dune*		
and surface/disturbance:			No effective dist	urbance except grazing by hoofed	animals
ire History:			Greater than 10	years ago	
oarse fragments on the surf	face (abundance/size/shape):		No coarse fragm	ents	
lock outcrop (abundance/ru	noff):		No bedrock expo	sed/No runoff	
oil (profile/field texture/soi	l surface):		Uniform/Sandy le	oam/Loose	
6 Cover leaf litter:			5		
6 Cover bare ground:			70		
Talles	st stratum	Mid-s	tratum	Lower	stratum
irowth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
leight:	3-6m	Height:	1-3m	Height:	0.5-1m
rown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30
ominant taxa:	<u> </u>	Dominant taxa:	•	Dominant taxa:	
cacia mulganeura		Eremophila miniata		Scaevola spinescens	
Acacia caesaneura		Melaleuca interioris		Tecticornia undulata	
				Tecticornia indica subsp. bi	dens
		ALL SPEC	CIES	•	
		Acacia mulg	aneura		
		Acacia caesa	aneura		
		Eremophila	miniata		
		Melaleuca in	nterioris		
		Scaevola spir	nescens		
		Tecticornia u	ındulata		
		Tecticornia indica:	subsp. bidens		
		Tecticornia indica : Rhagodia er	·		
			emaea		
		Rhagodia er	remaea ramidata		
		Rhagodia er Maireana pyr	remaea ramidata revifolia		
		Rhagodia er Maireana pyr Gnephosis bi	remaea ramidata revifolia eremaea		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e	emaea ramidata revifolia eremaea olyandra		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia p	emaea ramidata revifolia eremaea olyandra iacantha		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia p Sclerolaena d	remaea ramidata revifolia eremaea olyandra iacantha reorgei		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia pi Sclerolaena d Maireana g	remaea ramidata revifolia eremaea olyandra iacantha eorgei illiaris*		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Sclerolaena d Maireana g Cenchrus ci	remaea ramidata revifolia revenaea olyandra iacantha reorgei illiaris*		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia p Sclerolaena d Maireana g Cenchrus ci Frankenia la	remaea ramidata revifolia revenaea olyandra iacantha eorgei illiaris* axiflora australis		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia pi Sclerolaena d Maireana g Cenchrus ci Frankenia la Leichhardtia	remaea ramidata revifolia revifolia revifona olyandra iacantha eeorgei iliaris* aaxiflora australis a var. tomentosa		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia p Sclerolaena d Maireana g Cenchrus Frankenia la Leichhardtia	remaea ramidata revifolia revifolia revifolia revifolia rovifolia rovifolia rovifolia riacantha reorgei riliaris* revifora revifo		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Sclerolaena d Maireana g Cenchrus ci Frankenia la Leichhardtia Enchylaena tomentos Melaleuca sh	remaea ramidata revifolia revenaea olyandra iacantha eeorgei illiaris* axiflora australis a var. tomentosa eathiana santhus		
		Rhagodia er Maireana pyr Gnephosis bi Calandrinia e Calandrinia p Sclerolaena d Maireana g Cenchrus ci Frankenia la Leichhardtia . Enchylaena t omentos Melaleuca sh	remaea ramidata revifolia revernaea olyandra iacantha eeorgei ililaris* axifilora australis a var. tomentosa eathiana santhus raceus*		



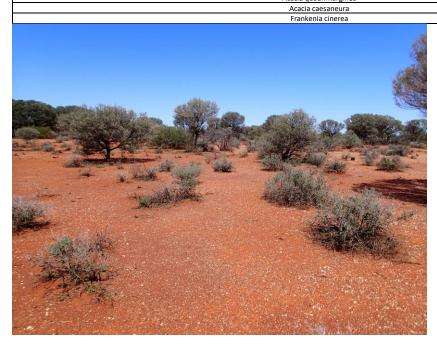


	Due	ject Name: St Barbara Ltd Leonora P	luninet.		
Date:	16/09/2022	ject Name: St Barbara Ltd Leonora P	Botanist:	Eren Reid	
ocation:	GDA94 121.29843 -28.899157		Quadrat:	Q48	
Quadrat size:	20x20		Quadrat:	Q48	
/egetation group:	Creekline Vegetation				
vegetation group: NP:	wpt393				
	wpt393		1.00		
Photo number:			98	(1 1/5 : 1 :	
andform:				on (vale)/Drainage depression	n
and surface/disturbance:			No effective di		
ire History:			Greater than 1		
	urface (abundance/size/shape):		No coarse frag		
Rock outcrop (abundance/				posed/No runoff	
oil (profile/field texture/	soil surface):			y clay loam/Cracking	
6 Cover leaf litter:			10		
6 Cover bare ground:			60		
	= "				
	Tallest stratum	Mid-stra			stratum
irowth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	F Forb
leight:	6-12m	Height:	1-3m	Height:	<0.25m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	M 30-70
Oominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Acacia tetragonophylla		Rhodanthe charsleyae	
Acacia incurvaneura				Erodium cygnorum	
Acacia mulganeura					
		ALL SPECIES			
		Acacia aneura			
		Acacia incurvaneura			
		Acacia mulganeura			
		Acacia tetragonophylla			
		Rhodanthe charsleyae			
		Erodium cygnorum			
		Podolepis canescens			
		Cuscuta planiflora*			
		Wahlenbergia gracilenta			
		Asphodelus fistulosus*			
		Calandrinia eremaea			
		Eremophila clarkei			
		Cheilanthes sieberi subsp. sieberi			
		Walshia kendallii			
		Vittadinia sulcata			
		Rhodanthe propinqua			
		Goodenia havilandii			
		Calandrinia creethae			
		Wahlenbergia tumidifructa			
		Plantago turrifera			
		Plantago turrifera Crassula colorata var. acuminata			
		Crassula colorata var. acuminata			
		Crassula colorata var. acuminata			



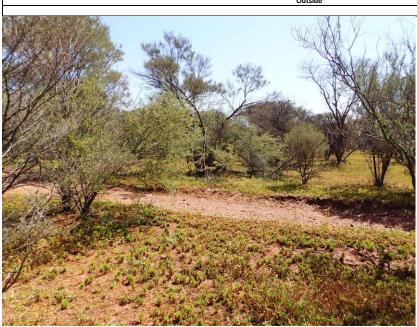


		Project Name: St Barbara	Ltd Leonora Project		
Date:	16/09/2022	. Tojece Hume. Se Darbara	Botanist:	Eren Reid	
Location:	GDA94 121.3014	22 -28 913897	Quadrat:	Q49	
Quadrat size:	20x20		-quunut.	, 4.5	
Vegetation group:	Mulga over cheno	ppod shrubland			
WP:	wpt400				
Photo number:	мрстоо		101		
Landform:			Flat/Plain		
Land surface/disturbance:				sturbance except grazing by hoofe	d animals
Fire History:			Greater than 1		a arminuis
•	rface (abundance/size/shape):			any/Medium gravelly; medium pel	hhles/Rounded
Rock outcrop (abundance/r				oosed/No runoff	oo.co, nounaca
Soil (profile/field texture/so				clay loam/Firm	
% Cover leaf litter:	on surrucej.		5	ciay ioaniyi iiiii	
% Cover bare ground:			75		
70 COVEL DATE STOUTH.			/3		
Talla	est stratum	Mid-s	tratum	Lower	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	I <1	Crown cover %:	S 10-30
Dominant taxa:	3 10 30	Dominant taxa:	1 12	Dominant taxa:	3 10 30
Acacia aneura		Acacia tetragonophylla		Maireana pyramidata	
Acacia craspedocarpa		, icacia tett agonophyna		Maireana triptera	
Acacia mulganeura		+		Cratystylis subspinescens	
, todala maiganeara		ALL SPE	TIFS	Cracystyns sabspinestens	
		Acacia ar			
		Acacia craspe			
		Acacia craspe	•		
		Acacia tetrago			
		Acacia tetrago			
		Maireana py	ramidata		
		Maireana t			
		Cratystylis sub			
		Ptilotus ob			
		Eremophila c			
		Atriplex bun			
		Erodium cy			
		Rhodanthe p			
		Sclerolaena d			
		Scierolaena			
		Maireana to			
		Eremophila forrestii			
		Cephalipterum (
		Goodenia sp.			
		Calandrinia e			
		Calandrinia p			
		Enchylaena tomentos			
		Senna char			
		Sida ecto			
		Leichhardtia 			
		Teucrium teu	criiflorum		
		Outsio			
		Eremophila me			
		Acacia quadri	•		
		Acacia caes	aneura		





	Dro	ject Name: St Barbara Ltd Leonora P	Project		
Date:	16/09/2022	Ject Name. 3t Barbara Eta Leonora F	Botanist:	Eren Reid	
Location:	GDA94 121.303447 -28.896702		Quadrat:	Q50	
Quadrat size:	20x20		Quadrat:	Ų30	
Vegetation group:	Creekline vegetation				
vegetation group: NP:	wpt410				
Photo number:	wpt410		102		
andform:				(I-) /D: d	
				on (vale)/Drainage depression	on
and surface/disturbance	9:		No effective di		
ire History:			Greater than 1		
	surface (abundance/size/shape):		No coarse frag		
Rock outcrop (abundance				posed/No runoff	
Soil (profile/field texture	/soil surface):			y clay loam/Cracking	
% Cover leaf litter:			10		
6 Cover bare ground:			60		
	Tallest stratum	Mid-stra			r stratum
Growth form:	Y Shrub Mallee (< 8m)	Growth form:	S Shrub	Growth form:	F Forb
Height:	6-12m	Height:	1-3m	Height:	<0.25m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	M 30-70
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Acacia tetragonophylla		Rhodanthe charsleyae	
Acacia incurvaneura				Erodium cygnorum	
Acacia mulganeura					
		ALL SPECIES			
		Acacia aneura			
		Acacia incurvaneura			
		Acacia mulganeura			
		Acacia mulganeura			
		Acacia mulganeura Acacia tetragonophylla			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae			
		Acacia mulganeura Acacia tetragonophylla			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora*			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus*			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii Calandrinia creethae			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii Calandrinia creethae Wahlenbergia tumidifructa			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii Calandrinia creethae Wahlenbergia tumidifructa Plantago turrifera			
		Acacia mulganeura Acacia tetragonophylla Rhodanthe charsleyae Erodium cygnorum Podolepis canescens Cuscuta planiflora* Wahlenbergia gracilenta Asphodelus fistulosus* Calandrinia eremaea Eremophila clarkei Cheilanthes sieberi subsp. sieberi Walshia kendallii Vittadinia sulcata Rhodanthe propinqua Goodenia havilandii Calandrinia creethae Wahlenbergia tumidifructa Plantago turrifera Crassula colorata var. acuminata			





		Project Name: St Barbara	Ltd Leonora Project		
Date:	16/09/2022	1 Toject Name. St Barbare	Botanist:	Eren Reid	
Location:	GDA94 121.3074	97 -28.915712	Quadrat:	Q51	
Quadrat size:	20x20	3, 20,313,12	- Quantum	431	
Vegetation group:		reekline vegetation			
WP:	wpt424	recimie regetation			
Photo number:	where:		103		
Landform:				(vale)/Drainage depression	
and surface/disturbance:				urbance except grazing by hoofe	d animals
Fire History:			Greater than 10		a animais
	rface (abundance/size/shape):			ny/Coarse gravelly; large pebbles	/Subrounded
Rock outcrop (abundance/r			No bedrock expo		, 5001 0 011 0 C
Soil (profile/field texture/so			Uniform/Sandy of		
% Cover leaf litter:	m surface).		10	ciay ioaniyi iiii	
% Cover bare ground:			55		
o cover bare ground.			33		
Talle	st stratum	Mid-s	tratum	Lowe	r stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:	3 10-30	Dominant taxa:	3 10-30	Dominant taxa:	3 10-30
Acacia burkittii		Myoporum montanum		Atriplex bunburyana	
Acacia burkittii		Scaevola spinescens		Tecticornia pruinosa	
		ocaevoia spinescens			
				Tecticornia undulata	
		ALI SDE	CIEC	Tecticornia undulata	
		ALL SPE (Acacia bu	rkittii	Tecticornia undulata	
			rkittii	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi	ontanum nescens	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun	ontanum nescens buryana	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p	ontanum nescens buryana oruinosa	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia v	ontanum nescens buryana oruinosa	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia u Rumex vesi	ontanum nescens buryana oruinosa indulata carius*	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia c Rumex vesi Lysimachia a	ontanum nescens buryana pruinosa indulata carius* rvensis*	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia ¡ Tecticornia u Rumex vesi Lysimachia a Cenchrus c	ontanum nescens buryana oruinosa indulata carius* rvensis* iliaris*	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia c Rumex vesi Lysimachia Cenchrus c Sisymbriur	ontanum nescens buryana oruinosa indulata carius* rvensis* illiaris* in rio*	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos	ontanum nescens buryana poruinosa indulata carius* rvensis* inio* in irio* in a var. tomentosa	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia q Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos	ontanum nescens buryana pruinosa undulata carius* rvensis* iliaris* m irio* a var. tomentosa subsp. youngli	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia q Tecticornia t Rumex vesi Lysimachia a Cenchrus c Sisymbrut Enchylaena tomentos Eremophila youngii	ontanum nescens buryana pruinosa undulata carius* rvensis* iliaris* n rior* a var. tomentosa subsp. youngii raceus*	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi	ontanum nescens buryana pruinosa indulata carius* rvensis* illiaris* in irio* a var. tomentosa subsp. youngli raceus*	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia a Tecticornia a Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana to Maireana pyi	ontanum nescens buryana oruinosa indulata carius* rvensis* illiaris* in irio* ia var. tomentosa subsp. youngii raceus* mentosa ramidata	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia I Tecticornia I Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana to Maireana pyi Atriplex ve	ontanum nescens buryana orutinosa undulata carius* rvensis* ilitaris* mirio* a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria	Tecticornia undulata	
		Acacia bu Myoporum m Scaevola spi Atriplex bun Tecticornia t Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana tor Maireana pyi Atriplex ve	ontanum nescens buryana pruinosa undulata carius* rvensis* iliaris* m irio* a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi Maireana toi Maireana you Atriplex ve Eucalyptus camaldulei	ontanum nescens buryana pruinosa indulata carius* rvensis* illiaris* in irio* a var. tomentosa subsp. youngli raceus* mentosa ramidata sisicaria nsis subsp. obtusa cuneata	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia o Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi Maireana pyi Atriplex ve Eucalyptus camaldule Sclerolaena	ontanum nescens buryana oruinosa indulata carius* rvensis* illiaris* in irio* ia var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsiss subsp. obtusa cuneata liacantha	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia p Tecticornia o Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana tor Maireana tor Maireana tor Sclerolaena c Sclerolaena	ontanum nescens buryana poruinosa undulata carius* rvensis* illiaris* ni irio* aa var. tomentosa usubsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iliacantha tenticuspis	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia p Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi Maireana pyi Atriplex ve Eucalyptus camaldulei Sclerolaena Sclerolaena c Sclerolaena p	ontanum nescens buryana oruinosa undulata carius* rvensis* iiliaris* mi rior* a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata liacantha tenticuspis uadrifida	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia t Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi Maireana pyi Atriplex ve Eucalyptus camaldulei Sclerolaena Sclerolaena Sclerolaena pa Gunniopsis q Leichhardtia	ontanum nescens buryana oruinosa indulata carius* rvensis* illiaris* in irio* ia var. tomentosa subsp. youngli raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata liacantha tenticuspis uadrifida australis	Tecticornia undulata	
		Myoporum m Scaevola spi Atriplex bun Tecticornia p Tecticornia p Tecticornia c Rumex vesi Lysimachia a Cenchrus c Sisymbriur Enchylaena tomentos Eremophila youngii Sonchus ole Maireana toi Maireana pyi Atriplex ve Eucalyptus camaldulei Sclerolaena Sclerolaena c Sclerolaena p	ontanum nescens buryana oruinosa indulata carius* rvensis* ililaris* in irio* ia var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata liiacantha teenticuspis uadrifidia australis ovatus	Tecticornia undulata	





		Project Name: St Barbara	Ltd Leonora Project		
Date:	16/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.3072	48 -28.917792	Quadrat:	Q52	
Quadrat size:	20x20		•	•	
Vegetation group:	Acacia burkittii (creekline vegetation			
WP:	wpt426				
Photo number:	•		104		
Landform:			Open depression	(vale)/Drainage depression	
Land surface/disturbance:				urbance except grazing by hoofed	animals
Fire History:			Greater than 10		
Coarse fragments on the surfa	ace (abundance/size/shape):		No qualifier; con	nmon/Bouldery; or boulders/Subre	ounded
Rock outcrop (abundance/rur	noff):		No bedrock expo	osed/No runoff	
Soil (profile/field texture/soil	surface):		Uniform/Sandy of	clay loam/Firm	
% Cover leaf litter:			10		
% Cover bare ground:			55		
Tallest	t stratum	Mid-s	tratum	Lower	stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	S 10-30
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia burkittii		Myoporum montanum		Atriplex bunburyana	
		Scaevola spinescens		Tecticornia pruinosa	
				Tecticornia undulata	
		ALL SPEC			
		Acacia bur	rkittii		
		Scaevola spir	nescens		
		Atriplex bunk			
		Tecticornia p			
	-	Tecticornia u Rumex vesio			
		Lysimachia ai			
		Cenchrus ci			
		CETICITUS CI			
		Sisymhrium	n irio*		
		Sisymbrium Enchylaena tomentosa			
		Enchylaena tomentos	a var. tomentosa		
		•	a var. tomentosa subsp. youngii		
		Enchylaena tomentosi Eremophila youngii Sonchus oler	a var. tomentosa subsp. youngii raceus*		
		Enchylaena tomentosa Eremophila youngii	a var. tomentosa subsp. youngii raceus* mentosa		
		Enchylaena tomentos: Eremophila youngii Sonchus oler Maireana ton	a var. tomentosa subsp. youngii raceus* mentosa ramidata		
		Enchylaena tomentos: Eremophila youngii Sonchus oler Maireana ton Maireana pyr	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria		
		Enchylaena tomentos Eremophila youngii Sonchus oler Maireana ton Maireana pyr Atriplex ves	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa		
		Enchylaena tomentos Eremophila youngii Sonchus olei Maireana ton Maireana pyr Atriplex ves Eucalyptus camalduler	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata		
		Enchylaena tomentos Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena c	a var. tomentosa subsp. youngii raraeus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana ton Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena c Sclerolaena di Sclerolaena di	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha tenticuspis uadrifida		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana ton Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena da Gunniopsis qu Leichhardtia	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha tenticuspis uadrifida australis		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena di Gunniopsis qu Leichhardtia i Ptilotus obo	a var. tomentosa subsp. youngii raraceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iiacantha tenticuspis uadrifida australis ovatus		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena o Sclerolaena of Sclerolaena of Gunniopsis qu Leichhardtia Ptilotus obc	a var. tomentosa subsp. youngii raceus* mentosa amidata sicaria sisi subsp. obtusa cuneata iacantha tenticuspis uadrifida australis ophyllum		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena da Sclerolaena pat Gunniopsis qu Leichhardtia Ptilotus ob Solanum lasio	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha tenticuspis uadrifida australis ovortus ophyllum phyllus		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tom Maireana pyr Atriplex vet Eucalyptus camalduler Sclerolaena of Sclerolaena di Sclerolaena di Gunniopsis qu Leichhardtia of Ptilotus obb Solanum lasio Exocarpos a	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha tenticuspis uadrifida australis ovatus ophyllum phyllus teorgei		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena di Gunniopsis qu Leichhardtia i Ptilotus obo Solanum lasio Exocarpos al Maireana g Lycium aus	a var. tomentosa subsp. youngii raraceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iiacantha tenticuspis uaustralis ovatus ophyllum phyllus teorgei strale		
		Enchylaena tomentos. Fremophila youngii Sonchus oligi Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena of Gunniopsis qu Leichhardtia a Ptilotus obo Solanum lasio Exocarpos a Maireana g Lycium aus Melaleuca in	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria sisis subsp. obtusa cuneata iacantha tenticuspis uadrifida australis ovatus ophyllum phyllus teorgei strale		
		Enchylaena tomentos. Eremophila youngii Sonchus oler Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena d Sclerolaena d Sclerolaena pat Gunniopsis qi Leichhardtia i Ptilotus obc Solanum lasio Exocarpos aj Maireana g Lycium aus Melaleuca she	a var. tomentosa subsp. youngii raceus* mentosa amidata sicaria sisis subsp. obtusa cuneata iacantha tenticuspis uadrifida australis ovatus sphyllum phyllus eergei strale teterioris eathiana		
		Enchylaena tomentos. Fremophila youngii Sonchus oligi Maireana tor Maireana pyr Atriplex ves Eucalyptus camalduler Sclerolaena of Sclerolaena of Gunniopsis qu Leichhardtia a Ptilotus obo Solanum lasio Exocarpos a Maireana g Lycium aus Melaleuca in	a var. tomentosa subsp. youngii raceus* mentosa ramidata sicaria nsis subsp. obtusa cuneata iacantha itenticuspis uadrifida australis ovortus ophyllum phyllus teorgei strale metrioris teathiana termaea		





Location: GDA94 121.30949 -28.912877 Quadrat: Q53 Quadrat size: 20x20 Vegetation group: Acacia burkittii creekline vegetation WP: wpt429 Photo number: 105 Landform: Open depression (vale)/Drainage depression Land surface/disturbance: No effective disturbance except grazing by hoofed animals Fire History: Greater than 10 years ago Coarse fragments on the surface (abundance/size/shape): No qualifier; common/Bouldery; or boulders/Subrounded Rock outcrop (abundance/runoff): No bedrock exposed/No runoff Soil (profile/field texture/soil surface): Uniform/Sandy clay loam/Firm % Cover leaf litter: 10 % Cover bare ground: 55 Tallest stratum Mid-stratum Cowth form: 5 Shrub Growth form: 5 Shrub	Solutions					
Date: 16/09/2022 Doublant: Eren Red			Project Name: St Barbara I	Ltd Leonora Project		
	Date:	16/09/2022			Eren Reid	
Quadra size: 20:20			9 -28.912877			
Macal as intrititi creekline vegetation Wet Wey			3 20.3120.7	- Quantum	433	
Without number: 105			reekline vegetation			
Photo number: Land surface/disturbance: Land surface/disturbance: Fire History: Coarse fragments on the surface (abundance/size/shape): Rose (acturce) (abundance/runoff): No update (abundance/runoff): No bedrock oppose/floor unoff Uniform/sandy clay loam/firm K Cover bare ground: Soll profile file texture/oil surface): Uniform/sandy clay loam/firm K Cover bare ground: Soll surface): Soll surface): W Cover bare ground: Talest stratum Mid-stratum Growth form: S Shrub Growth form: S Shrub Growth form: S Shrub Growth form: S Shrub Reight: S 10 30 Dominant Taxe: Dominant Taxe: Acacia buristtii Acacia craspedocarpa Acacia tetragonophylis Acacia tetragonophylis Acacia tetragonophylis Atriplex bunbunyana Senna cardiopperma Acacia tetragonophylis Atriplex bunbunyana Senna cardiopperma Rumex vesicarius* Lysimochia areensi* Lysimochia areensi* Synghrum ino* Enchylaena tomentosa war. tomentosa Malerana pyramidata Afriglex bunbunyana Senna cardiopperma Rumex vesicarius* Malerana pyramidata Afriglex bunbunyana Senna cardiopperma Acacia tetragonophylis Aca			recimie regetation			
Copen depression Viele Draining by hoofed animals		wpt+25		105		
Land surface/disturbances: No effective disturbance except graing by hoofed animals Fire History: Greater than 10 years ago Greater than 10 years ago Serial terms of the surface (abundance/size/shape): No qualifier; common/Soulderry, or boulders/Subrounded Note outcare (palmoder/unoff): No bestrick exposed/floor tunoff Soli (profile) Solid (profile) Soli					n (vala)/Drainago doprossion	
Greater than 10 years ago						d animals
Coarse fragments on the surface (abundance/ster/shape): Soil (profile/field texture/soil surface): Soil (a animais
No bedrock exposed/No runoff Solit profile/field struture/soli surface):		(- b d /-! /-b)				
Soli (profile/field texture/sold surface): Moderate Iffer: 10 15						rounded
Scover her ground:						
Tallest stratum		surface):			clay loam/Firm	
Tallest stratum						
Shrub Growth form: Shrub Growth form: Shrub	% Cover bare ground:			55		
Shrub Growth form: Shrub Growth form: Shrub						
Height: 3-6m						
Crown cover %:	Growth form:					
Dominant taxa: Acacia craspedocarpa Arriplex bumbunyana	Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Dominant taxa: Acacia burkittii Acacia craspedocarpa Arriplex bunbunyana				S 10-30	Crown cover %:	
Acacia burkittii Scaevola spinescens Senna cardiosperma Acacia tetragonophylia Atriptes bunburyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium iiro* Enchyleana tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Malireana tomentosa Malireana pyramidata Atriptes vesicaria Scierolaena acuneata Scierolaena acuneata Scierolaena acuneata Scierolaena patenticuspis Gunniopsis quadrifida Leichhardita australis Pillotus obovatus Solanum lasophylium Exocarpos aphylium Exocarpos aphylium Malireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia creemae Calandrinia polyandra Calandrinia polyandra Calandrinia polyandra Calandrinia polyandra Calandrinia creetbae Walenbergia tumidfructa		•		•		
Scaevola spinescens Acacia tetragonophyla ALL SPECIES Acacia burkittii Acacia craspedocarpa Scaevola spinescens Acacia tetragonophyla Atriplex burburyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchylaena tomentosa var. tomentosa Ribantane charsevae Sonchus oleraceus* Maireana tomentosa var. tomentosa Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena patenticuspis Gounniepsis quadrifida Leichhardta australis Pillotus obovatus Solanum laiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia permaia Melaleuca sheathiana Calandrinia remenae Calandrinia porparidir						
Acacia tetragonophylla Acacia craspedocarpa Acacia craspedocarpa Scaevola spinescens Acacia tetragonophylla Atriptex burburyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchylaena tomentosa var. tomentosa Rodanthe charsleyae Sonchus oleraceus* Maireana pyramidata Atriptex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena cuneata Sclerolaena dicantha Sclerolaena dicantha Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Ptilotus obovatus Solamu lasiophyllum Excoarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia premaea Calandrinia premaea Calandrinia premaea						
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Acacia craspedocarpa Scaevola spinescens Acacia tetragonophylla Attriplex bumburyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchyaena tomentosa var. tomentosa Rhodanthe charsievae Sonchus oleraceus* Maireana pyramidata Attriplex vesicaria Attriplex vesicaria Goodenia sp. Michwest Sclerolaena dacantha Sclerolaena dacantha Sclerolaena patenticuspis Gunniposis quadrifida Leichhardita australis Pillotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia creetnae Calandrinia creetnae Wahlenbergia tumidifructa				EC		
Acacia craspedocarpa Scaevola spinescens Acacia tetragnophylla Atriplex bunbunyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana tomentosa Maireana pyramidata Atriplex vesicaria Atriplex vesicaria Goodenia sp. Midwest Sclerolaena diacantha Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardita australis Pillotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Maireana georgei Lycium australe Melaleuca interioris Melaleuca interioria centane Calandrinia ceremae Calandrinia reremae						
Scaevola spinescens Acacia tetragonophylla Atriplex bunburyana Sena cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus cilaris* Sisymbrium irio* Enthylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana tomentosa Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena cuneata Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Ptilotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia reemaea Calandrinia polyandra Calandrinia creethae Walhenbergia tumidifructa			Acacia burk	attii		
Scaevola spinescens Acacia tetragonophylla Atriplex bunburyana Sena cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus cilaris* Sisymbrium irio* Enthylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana tomentosa Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena cuneata Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Ptilotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia reemaea Calandrinia polyandra Calandrinia creethae Walhenbergia tumidifructa						
Scaevola spinescens Acacia tetragonophylla Atriplex bunburyana Sena cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus cilaris* Sisymbrium irio* Enthylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana tomentosa Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena cuneata Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Ptilotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia reemaea Calandrinia polyandra Calandrinia creethae Walhenbergia tumidifructa						
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Acaia tetragonophylla Atriplex bunburyana Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana tomentosa Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Piliotus obovatus Solarum lasiophyllum Exocarpos aphyllus Maireana georgei Lycim australe Melaleuca interioris Melaleuca interioris Melaleuca sheathiana Calandrinia polyandra Calandrinia creethae			Scaevola spin	escens		
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Senna cardiosperma Rumex vesicarius* Lysimachia arvensis* Cenchrus ciliaris* Sisymbrium irio* Enchylaena tomentosa var. tomentosa Rhodanthe charsleyae Sonchus oleraceus* Maireana pyramidata Atriplex vesicaria Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena patenticuspis Gunniopsis quadrifida Leichhardtia australis Ptilotus obovatus Solarum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca interioris Melaleuca interioris Melaleuca interioris Melaleuca sheathinaa Calandrinia reremaea Calandrinia polyandra Calandrinia poretae				• •		
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Leichhardtia australis Ptilotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia creethae Wahlenbergia tumidifructa			Gunniopsis qu	adrifida		
Ptilotus obovatus Solanum lasiophyllum Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia oplyandra Calandrinia creethae Wahlenbergia tumidifructa						
Solanum lasiophyllum Exocarpos aphyllus Mairean georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia creethae Wahlenbergia tumidifructa						
Exocarpos aphyllus Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia oplyandra Calandrinia creethae Wahlenbergia tumidifructa						
Maireana georgei Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia creethae Wahlenbergia tumidifructa						
Lycium australe Melaleuca interioris Melaleuca sheathiana Calandrinia polyandra Calandrinia creethae Wahlenbergia tumidifructa				•		
Melaleuca interioris Melaleuca sheathiana Calandrinia eremaea Calandrinia polyandra Calandrinia creethae Wahlenbergia tumidifructa						
Melaleuca sheathiana Calandrinia eremaea Calandrinia polyandra Calandrinia creethae Wahlenbergia tumidifructa						
Calandrinia eremaea Calandrinia polyandra Calandrinia creethae Wahlenbergia tumidifructa						
Calandrinia polyandra Calandrinia creethae Wahlenbergia tumidifructa						
Calandrinia creethae Wahlenbergia tumidifructa			Calandrinia er	emaea		
Calandrinia creethae Wahlenbergia tumidifructa			Calandrinia po	lyandra		
Wahlenbergia tumidifructa						
Erodian cygnorum						
			Erouluiti Cygr	iorulli		





		Project Name: St Barbar	a Ltd Leonora Project				
Date:	16/09/2022		Botanist:	Eren Reid			
Location:	GDA94 121.317	306 -28.913124	Quadrat:	Q54			
Quadrat size:	20x20						
Vegetation group:	Eremophila you	ngii over Eremophila scoparia ove	r Tecticornia shrubland				
WP:	wpt470						
Photo number:			107				
Landform:			Flat/Plain	Flat/Plain			
Land surface/disturbance:			No effective dis	No effective disturbance except grazing by hoofed animals			
Fire History:				Greater than 10 years ago			
Coarse fragments on the surfa	ce (abundance/size/shape):		Moderately; ma	any/Medium gravelly; medium pel	obles/Subrounded		
Rock outcrop (abundance/run	off):		No bedrock exp	osed/No runoff			
Soil (profile/field texture/soil :	surface):		Uniform/Sandy	clay loam/Surface crust			
% Cover leaf litter:			15				
% Cover bare ground:			55				
Tallest s	stratum	Mid-st	ratum	Lowe	er stratum		
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m		
Crown cover %:	V <10	Crown cover %:	V <10	Crown cover %:	M 30-70		
Dominant taxa:		Dominant taxa:		Dominant taxa:			
Eremophila youngii subsp. you	ngii	Cratystylis subspinescens		Tecticornia disarticulata			
		Maireana pyramidata					
		Eremophila scoparia					
		ALL SPE					
		Eremophila young	ii subsp. youngii				
		Cratystylis sub					
		Maireana py					
		Eremophila					
		Tecticornia d	isarticulata				
		Ptilotus ol					
Goodenia sp. Midwest							
		Austrostipa el	-				
		Enchylaena tomento					
		Senecio glo					
		Maireana					
		Sclerolaena					
		Sclerolaena pa					
		Monachather					
		Maireana to					
		Lepidium ox	•				
		Calotis hi					
		Atriplex cod	onocarpa				
		Outsi	ae				





		Project Name: St Barb	ara Ltd Leonora Project		
Date:	16/09/2022		Botanist: Quadrat:	Eren Reid	
Location:		GDA94 121.319353 -28.912977		Q55	
Quadrat size:	20x20				
Vegetation group:	Eremophila yo	ungii over Eremophila scoparia o	er Tecticornia shrubland		
WP:	wpt484				
Photo number:			108		
Landform:		Flat/Plain	Flat/Plain		
Land surface/disturbance:			No effective dis	turbance except grazing by hoofe	d animals
Fire History:) years ago	
Coarse fragments on the surfac	e (abundance/size/shape)	:		any/Medium gravelly; medium pe	bbles/Subrounded
Rock outcrop (abundance/rund	off):		No bedrock exp	osed/No runoff	
Soil (profile/field texture/soil s	urface):		Uniform/Sandy	clay loam/Surface crust	
% Cover leaf litter:			15		
% Cover bare ground:			55		
			•		
Tallest st	ratum	Mid-	tratum	Low	er stratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	1-3m	Height:	0.5-1m	Height:	0.25-0.5m
Crown cover %:	V <10	Crown cover %:	V <10	Crown cover %:	M 30-70
Dominant taxa:		Dominant taxa:	· ·	Dominant taxa:	
Eremophila youngii subsp. youn	gii	Cratystylis subspinescens		Tecticornia disarticulata	
. , , , , ,	<u> </u>	Maireana pyramidata			
		Eremophila scoparia			
			PECIES		
			gii subsp. youngii		
		<u> </u>			
		Cratystylis s	ubspinescens		
			oyramidata		
			la scoparia		
			disarticulata		
		Ptilotus	obovatus		
			p. Midwest		
			elegantissima		
			osa var. tomentosa		
			ossanthus		
			a triptera		
			na cuneata		
			patenticuspis		
			er paradoxus		
			tomentosa		
			oxytrichum		
		Calotis	nispidula		
		Calotis			
		Calotis Atriplex co	nispidula		





Solutions					
		Project Name: St Barbara Ltd Leon	ora Project		
Date:	16/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.322124 -	28.908388	Quadrat:	Q56	
Quadrat size:	20x20				
Vegetation group:	Mulga over Quartz o	utcrop			
WP:	wpt489				
Photo number:			109		
Landform:			Hillock/Mound		
Land surface/disturbance:			•	ince except grazing by hoofed anima	ılc
Fire History:			Greater than 10 year		
Coarse fragments on the surface (abunda	nce/size/shane)			tony; stones/Subangular	
Rock outcrop (abundance/runoff):	mee, size, siiape,		No bedrock exposed,		
Soil (profile/field texture/soil surface):			Uniform/Sandy clay I		
% Cover leaf litter:			5	oani/Hard setting	
% Cover bare ground:			70		
% Cover bare ground.			70		
Tallest stratum		Mid-stratum		Lower stratur	m
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Growth form: Height:		Height:	1-3m	Height:	0.5-1m
Height: Crown cover %:	3-6m S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
	5 10-30		5 10-30		A <10
Dominant taxa:		Dominant taxa:		Dominant taxa:	
Acacia aneura		Acacia ramulosa var. ramulosa		Senna artemisioides subsp. ×sturt	
				Eremophila forrestii subsp. forres	
		ALL CRECUES		Eremophila platycalyx subsp. Leoi	iora
		ALL SPECIES			
		Acacia aneura			
					-
		Acacia ramulosa var. ramul	osa		
		Senna artemisioides subsp. ×	sturtii		
		Eremophila forrestii subsp. fo			
		Eremophila platycalyx subsp. L			
		Erodium cygnorum			
		Goodenia sp. Midwest			
		Sclerolaena cuneata			
		Sclerolaena diacantha			-
		Rhodanthe propingua			-
		Leichhardtia australis			
		Atriplex bunburyana			
		Ptilotus helipteroides			
		Rumex vesicarius*			
		Cheilanthes sieberi subsp. sie	eberi		
		Roepera eremaea			
		Austrostipa nitida			
		Enneapogon caerulescen	s		
		Rhodanthe maryonii	-		
		Sida sp. Golden calyces glab	rous		
		Acacia tetragonophylla	.000		
		Ptilotus schwartzii			
		Ptilotus roei			
		Eragrostis eriopoda			
		Eriachne flaccida			-
		Maireana sedifolia			-
		Maireana triptera			
		Calandrinia eremaea sans	lat		
		Caranumina eremidea Salis	iai		
		Outside			
		Outside			





		Project Name: St Barbara L	td Leonora Project				
Date:	16/09/2022		Botanist:	Eren Reid			
Location:	GDA94 121.3220	9 -28.906573	Quadrat:	Q57			
Quadrat size:	20x20						
Vegetation group:	Mulga over Senn	a Shrubland					
WP:	wpt490						
Photo number:	• •		110				
Landform:			Hillock/Mound				
Land surface/disturbance:				No effective disturbance except grazing by hoofed animals			
Fire History:			Greater than 10 y				
Coarse fragments on the surface (abund	ance/size/shape):			ny/Cobbly; or cobbles/Subangular			
Rock outcrop (abundance/runoff):			No bedrock expo				
Soil (profile/field texture/soil surface):			Uniform/Sandy c				
% Cover leaf litter:			5				
% Cover bare ground:			70				
Tallest stratum		Mid-st	ratum	Lower	stratum		
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub		
Height:	6-12m	Height:	1-3m	Height:	0.5-1m		
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10		
Dominant taxa:		Dominant taxa:		Dominant taxa:			
Acacia aneura		Senna artemisioides subsp. ×		Maireana sedifolia			
		Eremophila oldfieldii subsp. a	angustifolia	Maireana triptera			
				Ptilotus obovatus			
		ALL SPECIE					
		Acacia aneu	ıra				
			110				
			710				
		Senna artemisioides s	ubsp. ×sturtii				
			ubsp. ×sturtii				
		Senna artemisioides s Eremophila oldfieldii sub	ubsp. ×sturtii psp. angustifolia				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed	oubsp. ×sturtii osp. angustifolia lifolia				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip	subsp. ×sturtii osp. angustifolia lifolia otera				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov	subsp. ×sturtii osp. angustifolia lifolia otera vatus				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar	ubsp. ×sturtii osp. angustifolia lifolia obtera ratus midata				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumi	ubsp. ×sturtii osp. angustifolia lifolia otera vatus midata mondii				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireadia drum Enchylaena tomentosa v	oubsp. ×sturtii osp. angustifolia lifolia otera atuds mondii var. tomentosa				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireadia pyrar Rhagodia drumi Enchylaena tomentosa s Scaevola spine	oubsp. ×sturtii osp. angustifolia lifolia otera ratus miondii var. tomentosa				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumi Enchylaena tomentosa v Scaevola spine Sclerolaena dia	subsp. ×sturtii ssp. angustifolia spl. angustifolia bitera vatus midata mondii var. tomentosa escens cantha				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyra Rhagodia drum Enchylaena tomentosa v Scaevola spine Sclerolaena dial	subsp. ×sturtii psp. angustifolia lifolia ptera vartus midata mondii var. tomentosa escens cantha				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyra Rhagodia drum Enchylaena tomentosa v Scaevola spine Sclerolaena dain Frankenia din	nubsp. ×sturtii psp. angustifolia lifolia ptera ratus midata mondii var. tomentosa escens cantha lerea				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana drum Enchylaena tomentosa v Scaevola spine Scierolaena diar Frankenia cin Eremophila meta Goodenia sp. M	nubsp. ×sturtii psp. angustifolia lifolia ptera mutus				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumu Enchylaena tomentosa v Scaevola spine Sclerolaena diat Frankenia cin Eremophila meta Goodenia sp. M	subsp. ×sturtii ssp. angustifolia spl. angustifolia sobtera ratus midata mondii var. tomentosa escens cantha eielico unii lidwest				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drum Enchylaena tomentosa v Scaevola spine Sclerolaena diaa Frankenia cin Eremophila meta Goodenia sp. M Acacia pteran	subsp. ×sturtii usp. angustifolia lifolia utera ratus midata mondii var. tomentosa escents escents ellicorum lidwest lidwest lidwest eluura				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trig Ptilotus obyo Maireana pyor Rhagodia drumı Enchylaena tomentosa ı Scaevola spine Sclerolaena diai Frankenia cin Eremophila meta Goodenia sp. M Acacia pteras Senna artemisioides s Senna glutinosa subsp.	subsp. ×sturtii psp. angustifolia lifolia ptera ratus midata mondii var. tomentosa escens cantha lictorum lidwest leura leusp. filifolia c. chatelainiana				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana trip Maireana trip Maireana trip Maireana proma Maireana trip Maireana trip Maireana trip Enchylaena tomentosa v Scaevola spine Sclerolaena diai Frankenia diai Eremophila meta Goodenia sp. M Acacia spicides s Senna glutinosa subsp. Hakea preis	nubsp. ×sturtii psp. angustifolia lifolia ptera ratus miondii var. tomentosa escens cantha enerea ellicorum lidwest leursp. filifolia c. chatelainiana essi.				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumi Enchylaena tomentosa v Scaevola spine Sclerolaena diai Frankenia cin Eremophila meta Goodenia sp. M Acacia pteran Senna artemisioides s Senna glutinosa ubsp. Hakea preis Maireana tome	subsp. ×sturtii ssp. angustifolia bifolia bitera ratus midata mondii var. tomentosa escens cantha eielica eilifolia didwest eieura subsp. filifolia c. chatelainiana ssii entosa				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumi Enchylaena tomentosa v Scaevola spine Sclerolaena dia Frankenia cin Eremophila meta Goodenia sp. Ma Acacia pteran Senna artemisioides s Senna glutinosa subsp. Hakea preis Maireana tome Lepidium platyp	subsp. ×sturtii usp. angustifolia lifolia utera aratus midata mondii var. tomentosa escens escents escenta ellicorum liduwest lielura elubsp. filifolia e. chatelainiana essii entosa eletaum				
		Senna artemisioides s Eremophila oldfieldii sub Maireana sed Maireana trip Ptilotus obov Maireana pyrar Rhagodia drumi Enchylaena tomentosa v Scaevola spine Sclerolaena diai Frankenia cin Eremophila meta Goodenia sp. M Acacia pteran Senna artemisioides s Senna glutinosa ubsp. Hakea preis Maireana tome	subsp. ×sturtii psp. angustifolia lifolia ptera ratus midata mondii var. tomentosa escenta caerea allicorum lidwest esubsp. filifolia chatelainiana essii esenta caerea esubsp. filifolia chatelainiana essii esentaum				





		Project Name: St Barbara Ltd Leon	ora Project		
Date:	16/09/2022		Botanist:	Eren Reid	
Location:	GDA94 121.32274	1-28.905232	Quadrat:	Q58	
Quadrat size:	20x20			, ~~~	
Vegetation group:	Mulga over Quart	z outcrop			
WP:	wpt491				
Photo number:			111		
Landform:			Hillock/Mound		
Land surface/disturbance:			No effective distu	urbance except grazing by hoofed a	animals
Fire History:			Greater than 10 y	ears ago	
Coarse fragments on the surfac	ce (abundance/size/shape):			y/Stony; stones/Subangular	
Rock outcrop (abundance/rund	off):		Rockland/Very ra	pid	
Soil (profile/field texture/soil s	surface):		Uniform/Sandy c	lay loam/Hard setting	
% Cover leaf litter:			5		
% Cover bare ground:			70		
Tallest s	stratum	Mid-stratum		Lower s	tratum
Growth form:	S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:	3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:	S 10-30	Crown cover %:	S 10-30	Crown cover %:	V <10
Dominant taxa:		Dominant taxa:	<u> </u>	Dominant taxa:	
Acacia aneura	-	Acacia ramulosa var. ramulosa	<u> </u>	Senna artemisioides subsp.	
	-		<u> </u>	Eremophila forrestii subsp. f	forrestii
				Eremophila platycalyx subsp	. Leonora
		ALL SPECIES			
		Acacia aneura			
		Acacia ramulosa var. ramul	osa		
		Acacia ramulosa var. ramul			
		Acacia ramulosa var. ramul Senna artemisioides subsp. ×	sturtii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. x Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides	sturtii rrestii		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana	sturtii rrestii eonora		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si	sturtii rrestii eonora		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius*	sturtii rrestii eonora		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida	sturtii rrestii eonora		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. sis Roepera eremaea	sturtii rrestii eonora		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen	eberi		
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		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla	eberi		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii	eberi		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii Ptilotus roei	eberi		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii Ptilotus roei Eragrostis eriopoda	eberi		
		Acacia ramulosa var. ramul Senna artemisioides subsp. x Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. sis Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii Ptilotus roei Eragrostis eriopoda Eriachne flaccida	eberi		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii Ptilotus roei Eragrostis eriopoda Eriachne flaccida Maireana sedifolia	eberi s		
		Acacia ramulosa var. ramul Senna artemisioides subsp. × Eremophila forrestii subsp. fo Eremophila platycalyx subsp. L Erodium cygnorum Goodenia sp. Midwest Sclerolaena cuneata Sclerolaena diacantha Rhodanthe propinqua Leichhardtia australis Atriplex bunburyana Ptilotus helipteroides Rumex vesicarius* Cheilanthes sieberi subsp. si Roepera eremaea Austrostipa nitida Enneapogon caerulescen Rhodanthe maryonii Sida sp. Golden calyces glab Acacia tetragonophylla Ptilotus schwartzii Ptilotus roei Eragrostis eriopoda Eriachne flaccida Maireana sedifolia Maireana stejffolia	eberi s		





Solution	ıs					
			Project Name: St Barbara Ltd	Leonora Proiect		
Date:		16/09/2022	.,	Botanist:	Eren Reid	
Location:		GDA94 121.32371	2 -28 909788	Quadrat:	Q59	
Quadrat size:		20x20	20.505700	Quuui ut.	1 403	
Vegetation group:		Open mulga over o	henonod			
WP:		wpt493	с.тороч			
Photo number:		wpt493		112		
				_		
Landform:				Flat/Plain	shanno avenut avi birbir fil	animala
Land surface/disturb	oance:				bance except grazing by hoofed	animais
Fire History:		/ . /		Greater than 10 ye		
	the surface (abunda	ince/size/shape):			parse gravelly; large pebbles/Sub	prounded
Rock outcrop (abund				No bedrock expos		
Soil (profile/field tex	ture/soil surface):			Uniform/Sandy cla	ny loam/Firm	
% Cover leaf litter:				5		
% Cover bare ground	d:			80		
			1			
	Tallest stratum		Mid-stratur	_		stratum
Growth form:		S Shrub	Growth form:	S Shrub	Growth form:	S Shrub
Height:		3-6m	Height:	1-3m	Height:	0.5-1m
Crown cover %:		V <10	Crown cover %:	V <10	Crown cover %:	S 10-30
Dominant taxa:			Dominant taxa:		Dominant taxa:	
Acacia pteraneura			Hakea preissii		Maireana pyramidata	
Acacia aneura					Atriplex bunburyana	
					Ptilotus obovatus	
			ALL SPECIES			
			Acacia pteraneu	ra		
			Acacia aneura			
			Hakea preissii			
			riakea preissii			
			Maireana pyramic			
			Atriplex bunburya			
			Ptilotus obovatu			
			Maireana tripte	ra .		
			Cenchrus ciliaris	*		
			Sclerolaena diacar	itha		· · · · · · · · · · · · · · · · · · ·
			Maireana toment	osa		
			Enchylaena tomentosa var			
			Atriplex vesicari			
			Eremophila compa			
			Austrostipa nitio			
			Sclerolaena densif			
			Maireana georg			
			Brachyscome cilia			
			Erodium cygnoru	Ш		
			Sida intricata			
			Sida sp. Excedentii			
			Eremophila platycalyx sub			
			Rumex vesicariu			
			Solanum lasiophyl			
			Calandrinia erema			
			Calandrinia polyar	idra		
			Asphodelus fistulo	sus*		
			Sclerolaena eriacai	ntha		
			Lepidium oxytrich			
			Salvia verbenaca			
			Acacia tetragonopl			
			Senna artemisioides sub			
			Schinus molle var. a	•		
			Rhodanthe charsle			
			Tecticornia disartic	uiatd		
			Outside			

