Lake Rebecca Airstrip

Detailed Flora Survey

Prepared for AC Minerals Pty Ltd
September 2025

Prepared by
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Disclaimer

Quality Assurance

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Cover Photo: Woodland in the survey area.

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Contents

Tables

Figures

APPENDICES

1 EXECUTIVE SUMMARY

Botanica Consulting Pty Ltd (Botanica) was commissioned by AC Minerals Pty Ltd (AC Minerals), a wholly owned subsidiary of Ramelius Resources Ltd, to undertake a detailed flora and vegetation survey, of the proposed airstrip for the Lake Rebecca Project (referred to as the 'survey area'). The survey area is approximately 895 ha. It is located approximately 133 km north east of Kalgoorlie-Boulder, in the City of Kalgoorlie-Boulder, Western Australia.

The survey area lies within the Eastern Murchison (MUR1) subregion of the Murchison Bioregion, as defined by the Interim Biogeographic Regionalisation of Australia (IBRA). The survey area is located within the Yindi pastoral station.

Botanica conducted a detailed flora and vegetation survey on the 10th to 11th September 2025. The area was traversed using a four-wheel drive vehicle and on foot by two Botanica personnel.

Seven vegetation types were identified within the survey area. These vegetation types were identified within three landform types and comprised of four major vegetation groups. Seventy-eight flora taxa, representing 44 genera, was identified within the survey area. Twenty-two annual species were present. One species of introduced flora was observed in the survey area, *Mesembryanthemum crystallinum* (Iceplant) was observed in low numbers in two Quadrats and also in disturbed areas.

Based on the vegetation condition rating scale specified in the Environmental Protection Authority (EPA) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a), vegetation was all rated as 'very good'. Disturbances in the area were mostly a result of previous and current exploration and grazing by large feral herbivores.

No Threatened Flora or Threatened Ecological Communities as listed under the Western Australian *Biodiversity Conservation (BC) Act 2016* or Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* were identified within the survey area. One Priority 3 flora species (*Eremophila arachnoides* subsp. *tenera)* was identified in four quadrats and opportunistically throughout the survey area, about 260 plants were observed. No Priority Ecological Communities were identified within the survey area.

There are no Reserves in the survey area, the nearest gazetted Reserve is Queen Victoria Spring Nature Reserve which is approximately 28 km east of the survey area. There are no wetlands of international importance (Ramsar Wetlands) or national importance (Australian Nature Conservation Agency Wetlands) within the survey area.

Based on the outcomes from the survey undertaken, Botanica assessed the results of the desktop and field survey with regards to the native vegetation clearing principles listed under Schedule 5 of the *Environmental Protection (EP Act) 1986*. The assessment found that the proposed vegetation clearing activities are unlikely to be at variance with any clearing principle.

2 INTRODUCTION

Botanica Consulting Pty Ltd (Botanica) was commissioned by AC Minerals Pty Ltd (AC Minerals), a wholly owned subsidiary of Ramelius Resources Ltd, to undertake a detailed flora and vegetation survey, of the proposed airstrip for the Lake Rebecca Project (referred to as the 'survey area'). The survey area is approximately 895 ha. It is located approximately 133 km north east of Kalgoorlie-Boulder, in the City of Kalgoorlie-Boulder, Western Australia (Figure 2-1).

2.1 Objectives

The flora/vegetation assessment was conducted in accordance with the requirements of a detailed survey as defined in *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a). The objectives of the assessment were to:

- Gather background information on flora and vegetation in the desktop study area (literature review, database and map-based searches).
- Conduct a field survey to verify / ground truth the desktop assessment findings through reconnaissance survey.
- Define and map vegetation communities of the survey area to a scale appropriate for the Bioregion and described according to the National Vegetation Information System (NVIS) classification (NVIS Level V – Association).
- Record the species composition (abundance and diversity) of each vegetation community within the survey area and compile a species list for the survey area by vegetation type.
- Provide quadrat-based data from plots representative of each vegetation type (minimum of three quadrats per vegetation type) according to Environmental Protection Authority (EPA) guidelines.
- Assess the species composition of each quadrat.
- Determine the local and regional conservation significance of flora and vegetation within the survey area.
- Identify and record the locations of any conservation significant flora/vegetation within the survey area;
- Identify and record the locations of any introduced flora species (including Declared Pests) within the survey area;
- Provide a map showing the distribution of conservation significant flora/vegetation within the survey area; and
- Define and map the condition of vegetation within the survey area in accordance with the vegetation condition rating scale specified in the Environmental Protection Authority (EPA) *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a).

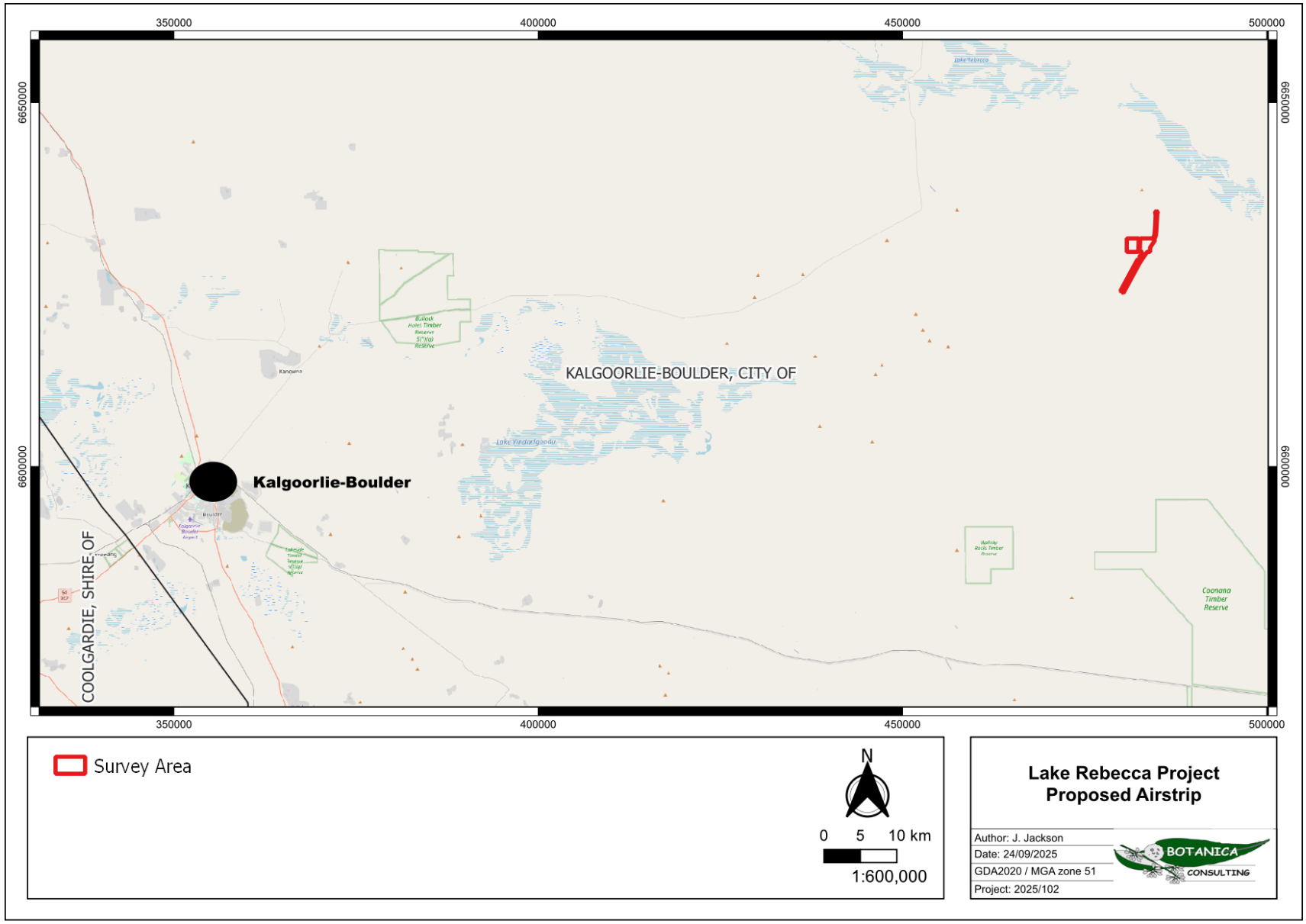

Figure 2-1: Regional map of the survey area

3 REGIONAL BIOPHYSICAL ENVIRONMENT

3.1 Regional Environment

Based on the Interim Biogeographic Regionalisation of Australia (IBRA, Version 7) (DCCEEW, 2020) the survey area is located on the western edge of within the Murchison Bioregion of WA. This bioregion is further divided into subregions with the survey area located in the Eastern Murchison subregion (MUR01) (Figure 3-1).

The landscape of the Murchison Bioregion comprises low hills, mesas of duricrust separated by flat colluvium and alluvial plains (DCCEEW, 2020). It is dominated by the Archaean (over 2500 million years ago) granite greenstone terrain of the Yilgarn Craton (DCCEEW, 2020). Alluvial soils and sands mantle the granitic and greenstone units of the Yilgarn Craton. These soils are shallow, sandy and infertile. Underlying the soil in low areas is a red-brown siliceous hard pan (Curry *et al*., 1994). The soils in the eastern half of the bioregion are typically red sands, calcareous red earth soil, duplex soil and clays. There are 41 vegetation associations (hummock grasslands, succulent steppe or low woodlands) that have at least 85 per cent of their total area in the bioregion. The bioregion is rich and diverse in both its flora and fauna, but most species are wide ranging and usually occur in adjoining regions (McKenzie, May and McKenna, 2002).

The Eastern Murchison subregion comprises the northern parts of the craton's Southern Cross and Eastern Goldfields Terrains and is characterised by internal drainage and extensive areas of elevated red desert sandplains with minimal dune development. Salt Lake systems are associated with the occluded paleodrainage system. Broad plains of red-brown soils and breakaways complexes as well as red sandplains are widespread. Vegetation is dominated by Mulga woodlands and is often rich in ephemerals, hummock grasslands, saltbush shrublands and Samphire shrublands (McKenzie, May and McKenna, 2002). The Eastern Murchison subregion comprises diverse mulga woodlands, which occur on low greenstone belts. The sand plains have red loamy earths and red deep sands which are found on the sandy banks.

3.2 Land Use

The dominant land uses of the Eastern Murchison subregion include grazing native pastures (85.47%), unallocated crown reserves (11.34%), conservation (1.4%) and mining (1.79%) (Cowan, 2001).

The survey area is within the City of Kalgoorlie-Boulder on the Yindi Pastoral Lease.

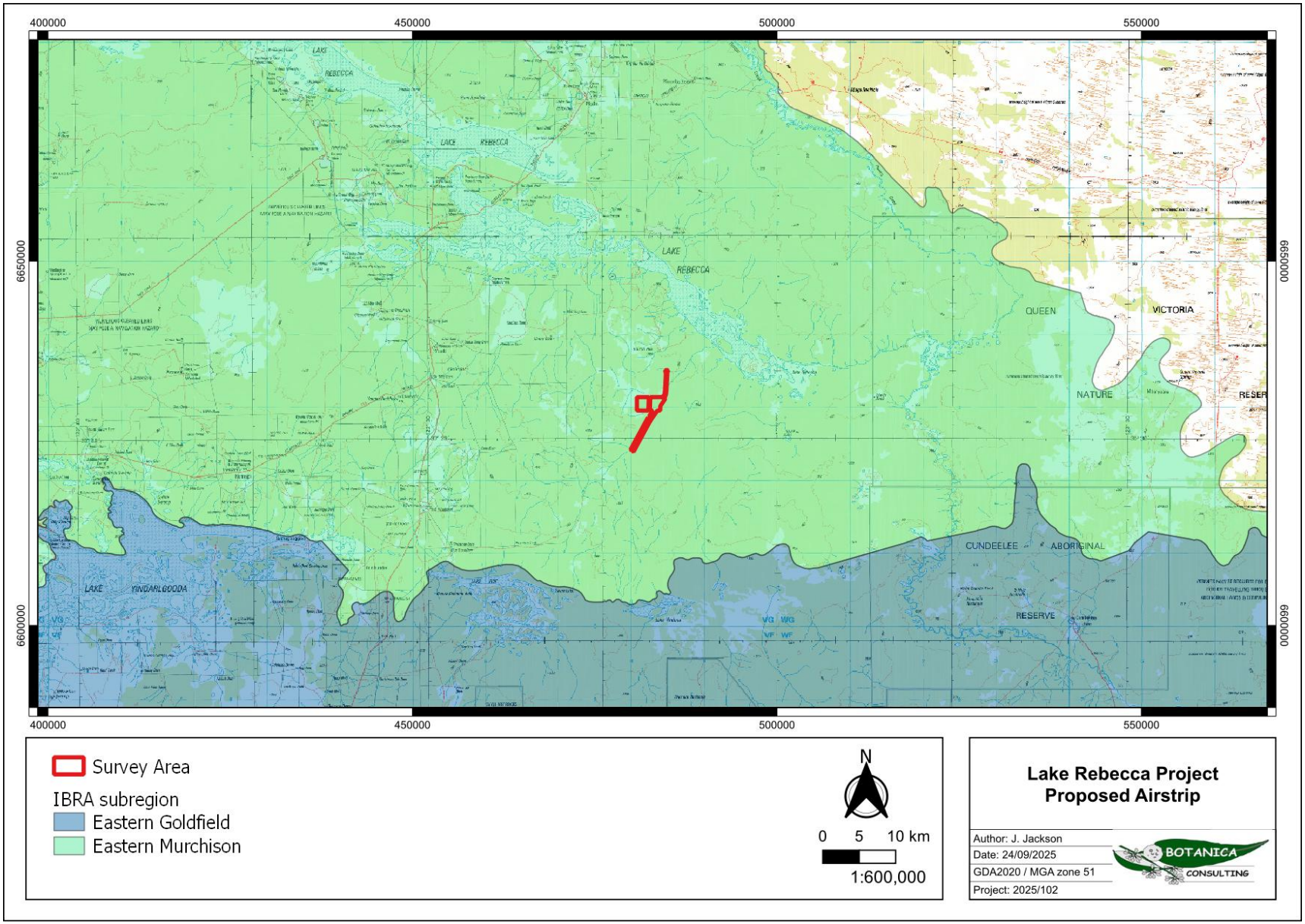

Figure 3-1: Map of IBRA subregions in relation to the survey area

3.3 Soil Landscape Systems

The survey area lies within the Kalgoorlie Province, located in the southern Goldfields between Paynes Find, Menzies, Southern Cross and Balladonia. The landscape consists of undulating plains (with some sandplains, hills and salt lakes) on the granitic rocks and greenstone of the Yilgarn Craton. Soils range from calcareous loamy earths and red loamy earths with some salt lake soils to red deep sands, yellow sandy earths, shallow loams and loamy duplexes. Vegetation communities are predominately Eucalypt woodlands with some acacia-casuarina thickets, mulga shrublands, halophytic shrublands and spinifex grasslands (Tille, 2006).

The Kalgoorlie Province is further divided into six soil-landscape zones, with the survey area located within the Kambalda Zone (265).

The Kambalda zone (265) is located in the south-eastern Goldfields between Menzies, Norseman and the Fraser Range and contains flat to undulating plains (with hills, ranges and some salt lakes and stony plains) on greenstone and granitic rocks of the Yilgarn Craton. Soils consist of calcareous loamy earths and red loamy earths with salt lakes soils and some red brown hardpan shallow loams and red sandy duplexes. Vegetation includes red mallee, blackbutt-salmon gum-gimlet woodlands with mulga and halophytic shrublands and some spinifex grasslands (Tille, 2006).

The soil landscape zones are further divided into soil landscape systems, with the survey area located within five landscape systems, as described in described in Table 3-1 and shown in Figure 3-2 (Government of Western Australia, 2019).

Table 3-1: Soil landscape systems within the survey area

Zone	Landscape System/ Mapping Unit	Description
Kambalda	Bunyip System (265 By)	Gilgaied drainage tract, draining greenstone hills supporting mixed halophytic shrublands occasionally with a black oak overstorey.
	Campsite System (265 Cm)	Alluvial plains supporting eucalypt woodlands with halophytic understoreys and acacia shrublands.
	Gundocktera System (265 Gu)	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands.
	Illaara System (265 Il)	Plains with ironstone gravel or calcrete mantles supporting eucalypt woodlands and mulga-casuarina shrublands.
	Moriarty System (265 Mo)	Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys.

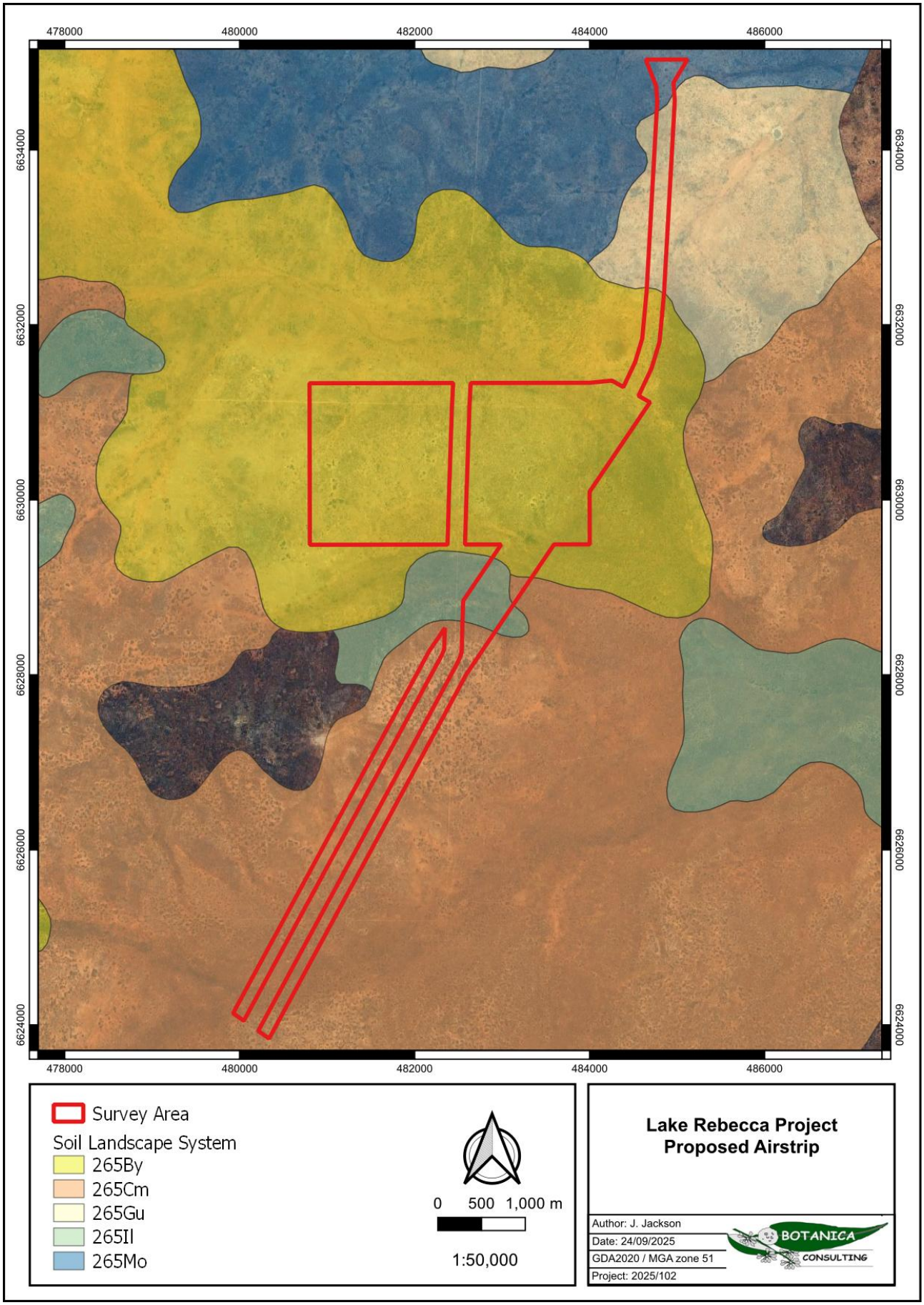

Figure 3-2: Map of soil landscape systems within the survey area

3.4 Vegetation

The survey area is situated in the Kalgoorlie Province as defined by Tille (2006). The Vegetation of the Kalgoorlie Province is described by Tille as woodlands of redwood (*Eucalyptus transcontinentalis*), red mallee (*E*. *oleosa*), Dundas blackbutt (*E*. *dundasii*), merrit (E. flocktoniae) and salmon gum (E. salmonophloia), found on undulating plains over granite. There are also some hummock grasslands with red mallee over spinifex (*Triodia scariosa*) and thickets of Acacia, Casuarina and Melaleuca spp. Plains on greenstone have woodlands of York gum (*E*. *loxophleba*), salmon gum and gimlet (*E*. *salubris*). The valley plains have woodlands of salmon gum, red mallee, Goldfields blackbutt (*E*. *lesouefii*), gimlet, York gum and morrel (*E*. *longicornis*). These sometimes have an understorey of saltbush (Atriplex spp.), pearl bluebush (*Maireana sedifolia*), sago bluebush (*M*. *pyramidata*) and *Eremophila* spp. There are areas of spinifex grasslands with red mallee, mallees (e.g., E. youngiana) and marble gum (*E*. *gongylocarpa*). Low woodlands of mulga (Acacia aneura) and black sheoak (*Casuarina pauper*) over bluebush and saltbush are also present. Apart from the bare Salt Lake surfaces, saline valley floors have shrublands of samphire (*Tecticornia* spp.) and *Frankenia* spp. in lower areas, shrublands of saltbush and bluebush on red deep sandy duplexes, and woodlands of salmon gum, merrit, red mallee, gimlet and York gum. *Acacia neurophylla*, *A*. *beauverdiana* and *A*. *resinimarginea* thickets grow on gently sloping uplands on granite, with thickets of acacia, casuarina and melaleuca. There are also scrub-heaths and York gum-salmon gum-gimlet woodlands on these uplands. The hilly terrain on greenstone supports woodlands of salmon gum, Goldfields blackbutt, coral gum (*E*. *torquata*), York gum, gimlet, morrel, Dundas blackbutt and black sheoak. Thickets of granite wattle (*Acacia quadrimarginea*) are also present. The stony plains support scattered woodlands of Goldfields blackbutt, gimlet and salmon gum, along with shrublands of saltbush and bluebush. Sandplains in the west have acacia (*A*. *coolgardiensis*, *A*. *ramulosa*, *A*. *aneura*, *A*. *burkittii* and *A*. *tetragonophylla*) shrublands, commonly with patchy native pine (*Callitris columellaris, C*. *preissii*) and mallees (*E*. *leptopoda*, *E*. *longicornis* and *E*. *loxophleba*). Native box (*Bursaria occidentalis*), *Melaleuca uncinata* and *Hakea recurva* may also be present. Hard spinifex (*T*. *basedowii*) grasslands with mulga, marble gum and mallees (e.g., *E*. *kingsmillii*) are found on sandplains to the east. The sandy-surfaced plains support acacia, casuarina and melaleuca thickets; woodlands of York gum, cypress pine (*Callitris columellaris*), salmon gum, gimlet and mulga; and shrublands of bowgada (*A*. *ramulosa*).

3.4.1 Pre-European Vegetation

The pre-European vegetation association dataset (DPIRD, 2018) identified one vegetation association occurring within the survey area (Figure 3-3). The association descriptions and their remaining extent, as specified in the 2018 Statewide Vegetation Statistics (DBCA, 2019) are provided in Table 3-2.

Areas retaining less than 30% of their pre-European vegetation extent generally experience exponentially accelerated species loss, while areas with less than 10% are considered “endangered” (EPA, 2000).

Table 3-2: Beard vegetation associations within the survey area

IBRA Subregion	Vegetation Association	Pre-European Extent Remaining (%)	% of current extent within DBCA managed lands	Vegetation Description (Beard, 1990)
Eastern Murchison (MUR1)	Barlee 20	99.78	8.9	Low woodland, open low woodland or sparse woodland. Mulga (*Acacia aneura*) and associated species.

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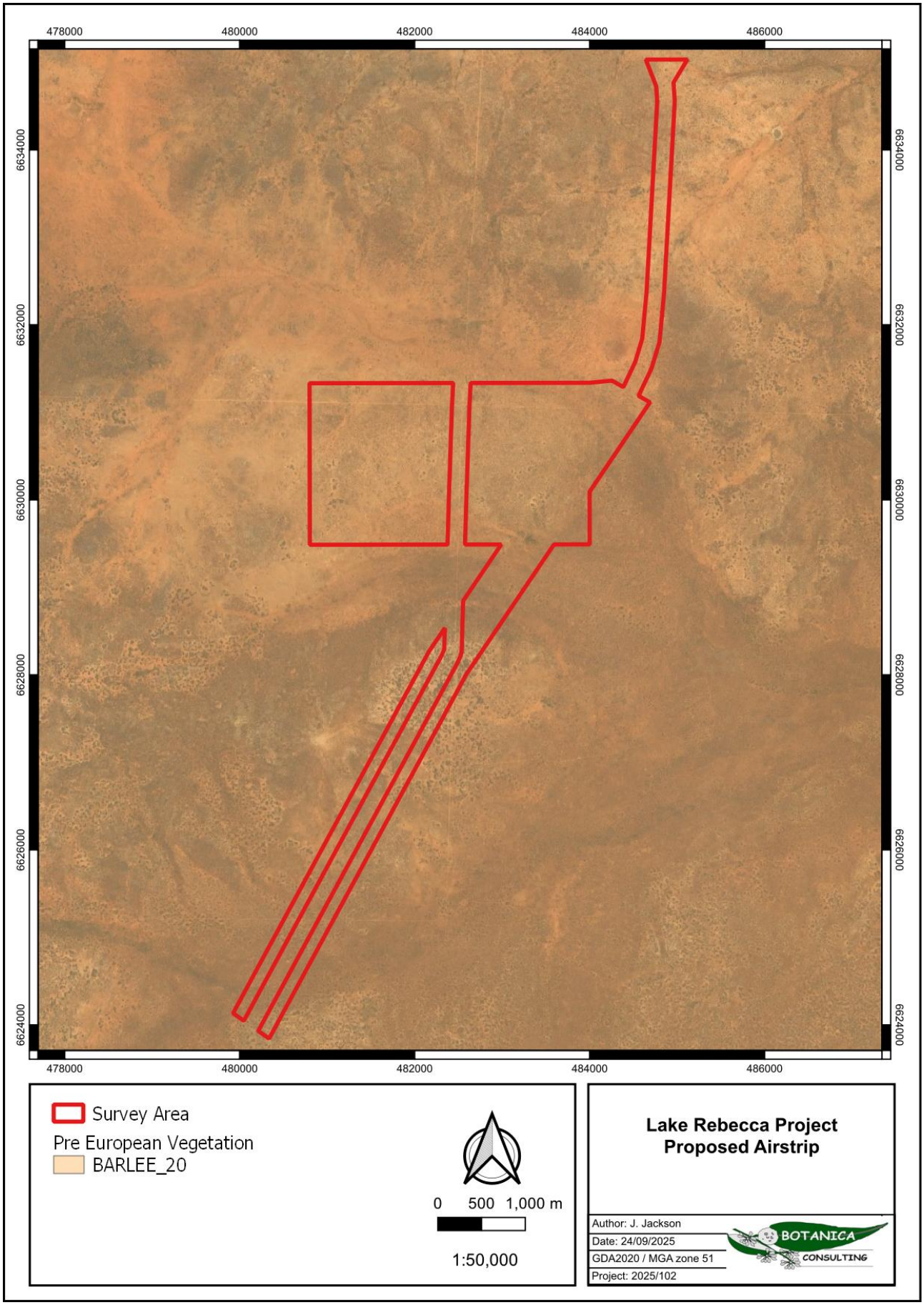
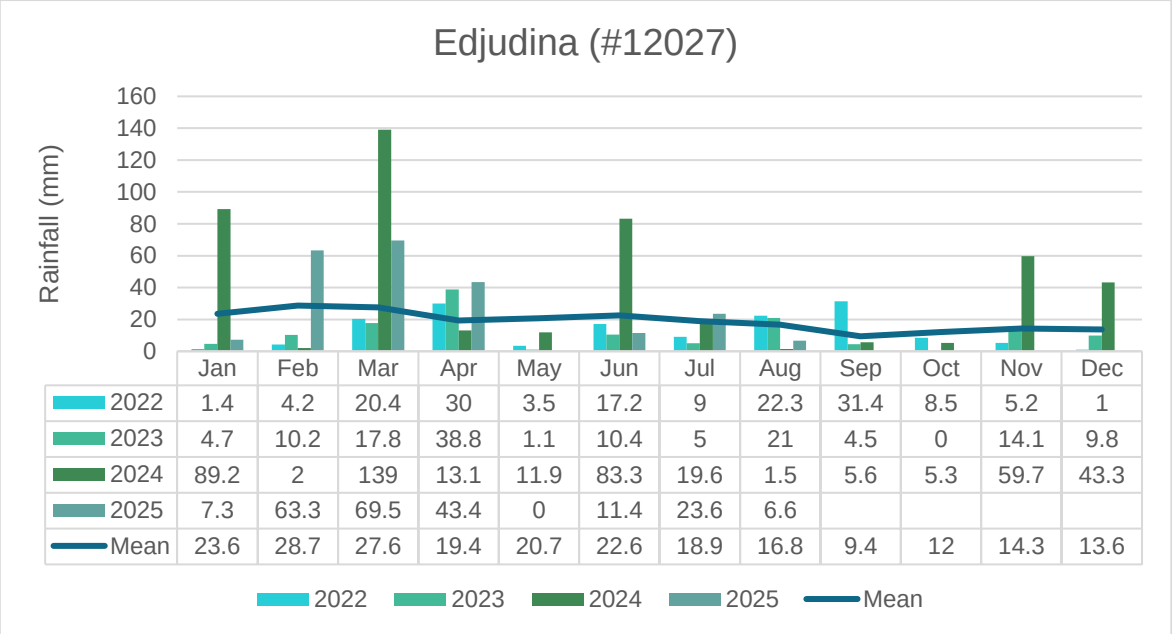


Figure 3-3: Pre-European vegetation associations within the survey area

3.5 Climate

The climate of the Eastern Murchison subregion is characterised as an arid climate with mainly winter rainfall and annual rainfall of approximately 200 millimetres (mm) (Beard, 1990; Cowan, 2001). Rainfall data for the Edjudina weather station (#12027) located approximately 82 km north west of the survey area is shown in Figure 3-4 (BoM, 2025a). Edjudina receives an annual average of 223.7 mm. The survey was conducted in September 2025, with the preceding months of April and July receiving above average rainfall (BoM, 2025a).



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	1.4	4.2	20.4	30	3.5	17.2	9	22.3	31.4	8.5	5.2	1
2023	4.7	10.2	17.8	38.8	1.1	10.4	5	21	4.5	0	14.1	9.8
2024	89.2	2	139	13.1	11.9	83.3	19.6	1.5	5.6	5.3	59.7	43.3
2025	7.3	63.3	69.5	43.4	0	11.4	23.6	6.6				
Mean	23.6	28.7	27.6	19.4	20.7	22.6	18.9	16.8	9.4	12	14.3	13.6

Figure 3-4: Monthly rainfall for the Edjudina weather station (#12027) (BoM, 2025a)

3.6 Conservation Values

No Threatened Ecological Communities (TEC) listed under the Commonwealth EPBC Act, or the Western Australian BC Act are known to occur within the survey area or within 40 km of the survey area. No DBCA listed Priority Ecological Communities (PEC) are known to occur within the survey area. Four Priority 3 PECs are located within 40 km of the survey area:

Table 3-3: PECs known to occur within 40 km of the survey area

Community	Conservation Status	Description (DBCA, 2023)	Locality
Emu Land System	Priority 3	A paperbark shrubland and wetland system. It contains fresh or brackish ephemeral lakes and swamps with cane grass, lignum and paperbark shrublands.	The nearest occurrence of this PEC is approximately 16 km east of the survey area.
Ponton Land System	Priority 3	Channels flanking alluvial plains with Eucalypts, Casuarina, and halophytic shrublands.	The nearest occurrence of this PEC is approximately 24 km east of the survey area.
Cundlegum Land System	Priority 3	No information available.	The nearest occurrence of this PEC is approximately 25 km north east of the survey area.

Community	Conservation Status	Description (DBCA, 2023)	Locality
Yellow sandplain vegetation of the Great Victoria Desert with diverse vertebrate fauna	Priority 3	Undulating yellow sandplain with an open upper stratum of *Eucalyptus gongylocarpa*, with or without a diverse mallee stratum of *E. youngiana*, *E. mannensis*, *E. platycorys*, over a sparse, though diverse shrubs over hummock grasses, *Triodia desertorum* or *T. scariosa*. Very high vertebrate diversity and unusual combinations of species (mixture of south-western and arid inter zones).	The buffer of this PEC is approximately 39 km northeast of the survey area.

There are no Ramsar wetlands of international importance or sites listed in the Directory of Important (DIWA) (i.e., wetlands of national importance) within the survey area or within 40 km of the survey area. There are no Environmentally Sensitive Areas (ESA) as listed under the EP Act within the survey area. There is one ESA 28 km east of the survey area, this is the Queen Victoria Spring Nature Reserve.

There are no Reserves in the survey area, the nearest gazetted Reserve the Queen Victoria Spring Nature Reserve (R30491) and is 28 km east of the survey area. This reserve is gazetted with the Conservation and Parks Commission of WA for the purposes of 'Conservation of flora and fauna' (Figure 3-5).

A map showing conservation areas in relation to the assessment area is provided in Figure 3-5.

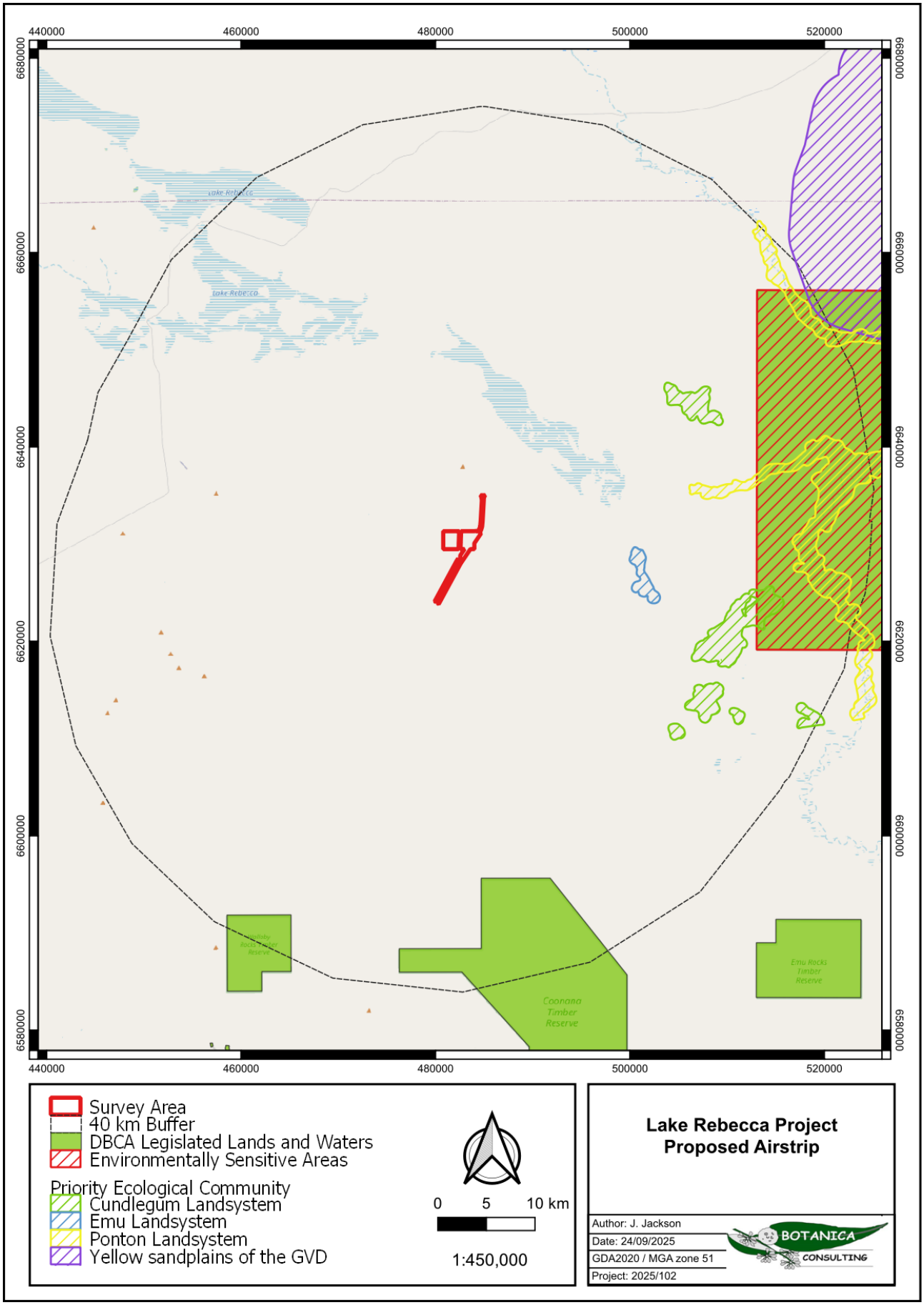


Figure 3-5: Conservation Values in relation to the survey area

3.7 Hydrology

According to the Geoscience Australia database (2015), there are no permanent/ perennial inland waters in the survey area. There are two minor ephemeral drainage lines that intersect the survey area (Geoscience Australia, 2015).

Groundwater Dependent Ecosystems (GDE) includes biological assemblages of species such as wetlands or woodlands that use groundwater either opportunistically or as their primary water source. For the purposes of this report, a GDE is defined as any vegetation community that derives part of its water budget from groundwater and must be assumed to have some degree of groundwater dependency. According to the BoM *Atlas of Groundwater Dependent Ecosystems* database (BoM, 2025b), there are no known or potential aquatic GDEs in the survey area. The survey area contains three potential terrestrial GDEs, which are rated as 'Low' potential (Table 3-4, Figure 3-6).

Table 3-4: Potential Terrestrial Groundwater Dependent Ecosystems within the survey area

Geomorphology	Ecosystem Description	Potential Groundwater Dependence (BoM, 2025b)
Undulating plains with some sandplains, ferruginous breakaways; ridges of metamorphic rocks and granitic hills and rises; calcretes, large salt lakes and dunes along valleys.	Alluvial plains, supporting eucalypt woodlands with halophytic understoreys and acacia shrublands.	Low
	Plains with ironstone gravel or calcrete mantles supporting eucalypt woodlands and mulga-casuarina shrublands.	Low
	Low greenstone rises and stony plains supporting chenopod shrublands with patchy eucalypt overstoreys.	Low

Figure 3-6: Regional hydrology of the survey area

4 SURVEY METHODOLOGY

4.1 Desktop Assessment

Prior to the field assessment a literature review was undertaken of previous flora assessments conducted within the local region. Documents reviewed included:

- Botanica Consulting, (2023). *Lake Rebecca Project: Detailed Flora and Fauna Survey.* Prepared for AC Minerals Pty. Ltd., July 2023.
- Botanica Consulting, (2024). *Lake Rebecca Project: Reconnaissance and Targeted Flora and Basic Fauna Survey.* Prepared for AC Minerals Pty. Ltd., July 2024.
- Botanica Consulting, (2025a). *Rebecca to Roe Haul Road: Detailed Flora and Basic Fauna Survey.* Prepared for AC Minerals Pty. Ltd., May 2025.
- Botanica Consulting (2025b). *Lake Roe Project: Detailed Flora Survey.* Prepared for AC Minerals Pty. Ltd., June 2025.
- Maia Environmental (2022). *Lake Rebecca Project Area Detailed Flora and Vegetation Assessment.* Prepared for Ramelius Resources Ltd., March 2022.
- Stantec (2018). *Lake Roe Gold Project: Environmental desktop assessment*. Prepared for Breaker Resources, August 2018.
- Stantec (2020). *Lake Roe Gold Project: Detailed flora and vegetation survey*. Prepared for Breaker Resources, June 2020.
- Terrestrial Ecosystems (2025). *Basic Vertebrate Fauna Survey. Lake Roe Gold Project.* Prepared for Ramelius Resources Ltd. V2. March 2025.
- Western Australian Museum (1992). *The Biological Survey of the Eastern Goldfields of Western Australia, Part 8: Kurnalpi – Kalgoorlie Study Area.* Records of the Western Australian Museum, Supplement No. 41.

Searches of the following databases were undertaken to aid in the compilation of a list of flora taxa within the survey area:

- Department of Biodiversity, Conservation and Attractions (DBCA) Priority/ Threatened Flora Database Search (Ref 47-0325FLFL) (DBCA, 2025a),
- DBCA Priority/ Threatened Ecological Communities Database Search (Ref 23-0325EC) (DBCA, 2024b)
- DBCA Dandjoo database (DBCA, 2025); and
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters search tool (DCCEEW, 2025a).

The Dandjoo and Protected Matters Search were conducted for an area encompassing a 40 km radius surrounding the survey area. It should be noted that these lists may be based on observations from a broader area than the assessment area (40 km radius) and therefore may include taxa not present. The databases also often include very old records that may be incorrect or in some cases the taxa in question have become locally or regionally extinct. Information from these sources should therefore be taken as indicative only and local knowledge and information also need to be taken into consideration when determining what actual species may be present within the specific area being investigated.

Significant flora species identified by the desktop review were assessed with regards to their population extent and distribution and preferred habitat to determine their likelihood of occurrence within the survey area. The assessment categorised flora species as follows:

- **Unlikely:** Suitable habitat is not expected to occur and/or the survey area is outside the known range of the species.
- **Possible:** Suitable habitat may be present, and the area is within the known range of the species. This option is also used when there is insufficient information to determine the preferred habitat of a species.
- **Previously Recorded:** A record for this species is located within the survey area. Field surveys will ground-truth currently occurring individuals and populations.

The conservation significance of flora taxa was assessed using data from the following sources:

- *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999*. Administered by the Australian Government (DCCEEW);
- *Biodiversity Conservation* (BC) *Act 2016*. Administered by the WA Government (DBCA);
- Red List produced by the Species Survival Commission (SSC) of the World Conservation Union (also known as the IUCN Red List – the acronym derived from its former name of the International Union for Conservation of Nature and Natural Resources). The Red List has no legislative power in Australia but is used as a framework for State and Commonwealth categories and criteria; and
- Priority Flora list. A non-legislative list maintained by DBCA for management purposes (updated July 2025).

4.2 Flora and Vegetation Field Assessment

Botanica conducted a detailed flora and vegetation survey and targeted flora survey between the 10th to the 11th September 2025. The survey area was traversed by two people using a four-wheel drive vehicle and on foot (Figure 4-1).

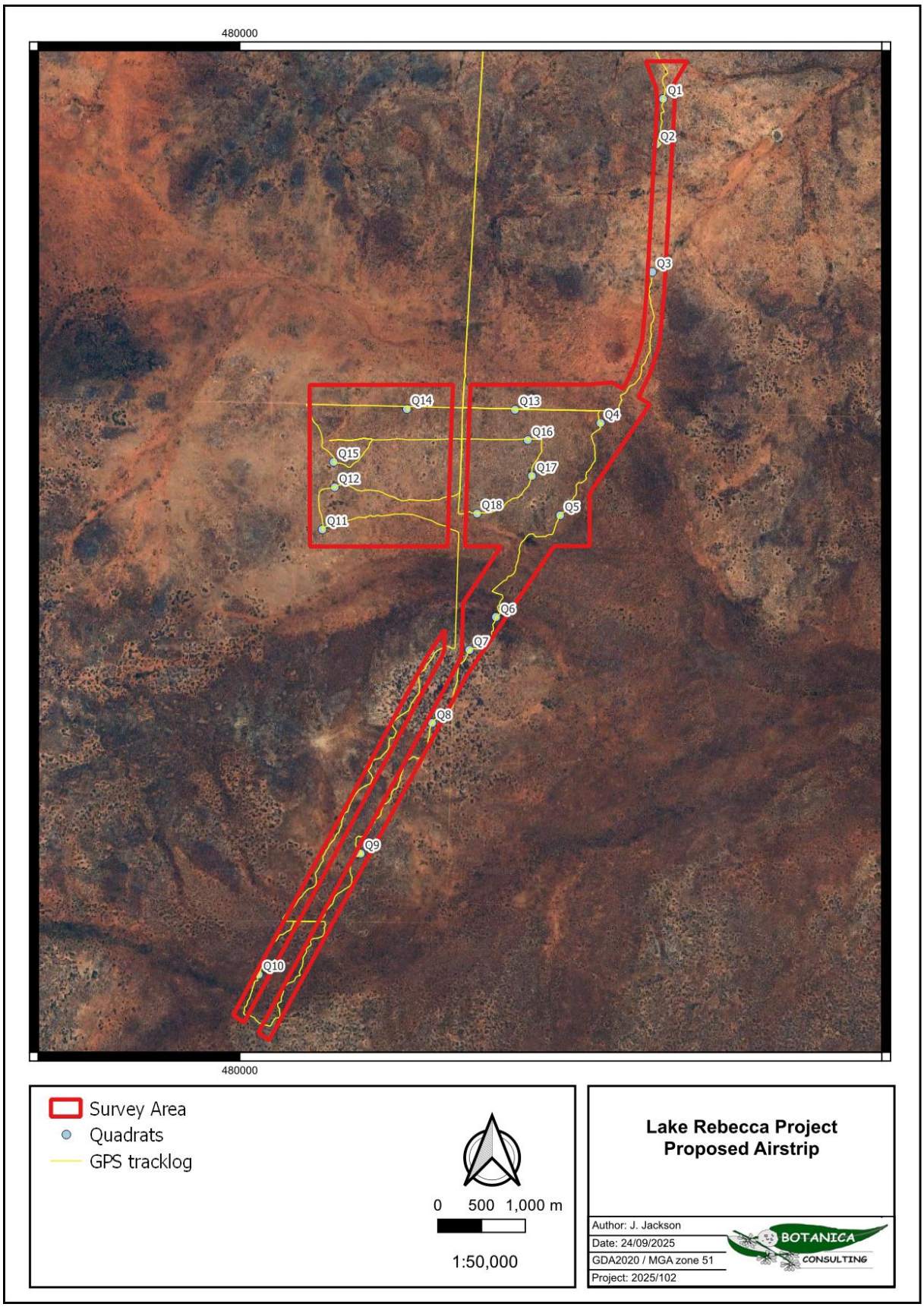


Figure 4-1: Quadrat locations, survey area boundary and tracks traversed in the survey area

4.2.1 Vegetation Mapping

Prior to the commencement of field work, aerial photography was inspected and obvious differences in the vegetation assemblages were identified. The different vegetation types identified were then inspected during the field survey to assess their validity. A handheld GPS unit was used to record the coordinates of the boundaries between vegetation types.

At each sample point, the following information was recorded:

- GPS location;
- Photograph of vegetation;
- Dominant taxa for each stratum (including height and percentage cover of dominant taxa);
- All vascular taxa (including annual taxa);
- Landform classification;
- Vegetation condition rating;
- Collection and documentation of unknown plant specimens; and
- Collection of flora of conservation significance if encountered.

Vegetation types were classified in accordance with the NVIS Level V-Association classification.

4.2.2 Detailed Flora and Vegetation Survey

Eighteen quadrats were established within the survey area (Figure 4-1 and APPENDIX D). According to the recommended quadrat size specified in the Environmental Protection Authority (EPA) Guidelines, 20m x 20m quadrats are recommended for the Murchison Bioregion. The quadrats were established by inserting survey markers into the NW corner and measuring the length of the resultant boundaries to verify the quadrats were 20 m x 20 m (square quadrats). The objective was to have at least three quadrats per vegetation type to capture the floristic variations within the survey area. Quadrats were not established within regrowth/ modified vegetation.

Following their establishment and boundary verification, the NW corner of each quadrat was recorded by GPS, and three photographs of the quadrat were taken from the NW corner (

Appendix F). All vascular plants within the quadrat were recorded (Appendix E). This included recording of dominant taxa from the upper, middle and lower stratum, and sampling of all unknown taxa. Unknown taxa were identified using Botanica's own reference herbarium and relevant taxonomic keys or by a taxonomic consultant. Data on level of disturbance, presence of coarse fragments on surface, topographical position, elevation, aspect, percentage litter, percentage bare ground, percentage surface rock (bedrock and surface deposits), soil types (colour, profile, field texture and surface type), and vegetation structure were collected from each quadrat (Appendix E). Methods of recording data from these quadrats largely follow those outlined in CSIRO's *Australian Soil and Land Survey Field Handbook* (McDonald *et al.* 2024) and in accordance with EPA Guidelines (2016). Presence/absence data of taxa from sample sites were used to compile the representative vegetation types.

4.2.3 Flora Identification

Unknown specimens collected during the survey were identified with the aid of samples housed at the Botanica Herbarium and the Western Australian Herbarium.

4.3 Data Analysis Tools

Following field assessments, vegetation types and condition were mapped using the GIS program QGIS, and the hectare area/ percentage area of each vegetation type and condition within the survey area was calculated. Spatial maps illustrating the location of vegetation types and any significant flora were generated using QGIS.

4.3.1 PATN Analysis

The PATN software package was used to assess the similarities/ dissimilarities between quadrats based on presence/absence of species. Twenty one annual taxa were recorded during the survey which were excluded from the analysis, two subspecies were reconciled into one species and 13 singleton taxa were also excluded. A total of 44 taxa recorded within the quadrats were included in the analysis.

The analysis produced a quantitative estimate of the relationship between species composition of each quadrat. The classifications were based upon a Bray-Curtis association matrix using a flexible Unweighted Pair Group Arithmetic Mean (UPGMA) method (with a beta value of -0.1) which standardises the data enabling the analysis to be completed. Semi-strong hybrid (SSH) ordination of the quadrat is then undertaken to show spatial relationships between groups and to elucidate possible environmental correlates with the classification.

The analysis also produced a stress value which is a measure of the 'strength' of the analysis (i.e. how well the quadrats are grouped together into the appropriate floristic groups). The lower the stress value the greater the strength of the analysis with a value of less than 0.3 showing that the analysis

appropriately grouped quadrats. A stress value greater than 0.3 suggests that the analysis was unable to group quadrats appropriately due to extraneous variables (i.e. other factors influencing differences in floristic groups other than species composition e.g. fire, clearing disturbance etc.).

4.3.2 EstimateS

EstimateS software was used to estimate species richness present using the Chao2 richness estimator. For any number of samples, the estimator uses the existing pattern of species accumulation to estimate the true number of species at a site. The estimators tend to under-estimate species number when sample size is small, hence the estimated number of true species can be seen to increase with sample size. This software was also used to compute Coleman rarefaction curves estimates which were used to calculate species accumulation curves.

4.4 Personnel Involved

Table 4-1: Personnel involved with the flora survey reporting

Staff Member	Position/ Qualifications	Experience	Tasks conducted during survey
Jim Williams	Environmental Consultant/Botanist/ Director (Diploma of Horticulture)	>30 years' experience across WA	Project Management (Lead Botanist). Assistance with identifying flora species within quadrats and opportunistic flora observations. Mapping vegetation types. Review of report.
Jennifer Jackson	Environmental Consultant (BSc-Honours Environmental Management)	>20 years' experience across WA	Flora and vegetation survey- identifying flora species within quadrats and opportunistic flora observations. Identifying and recording vegetation types. Assist with mapping.
Lauren Pick	Senior Environmental Consultant (BSc Conservation Biology)	>20 years' experience across WA	Statistical analysis.

4.5 Scientific Licences

Table 4-2: Scientific Licences of Botanica Staff coordinating the survey

Licensed Staff	Permit Number	Valid to
Jennifer Jackson	FB62000309-2 (licence to take flora for scientific purposes)	11/01/2027
Jim Williams	BA27001135 (Licence to take fauna for scientific purposes)	11/09/2025

4.6 Survey Limitations and Constraints

It is important to note that flora surveys will entail limitations notwithstanding careful planning and design. Potential limitations are listed in Table 4-3.

Table 4-3: Limitations and constraints associated with the flora surveys

Variable	Potential Impact on Survey	Details
Access problems	Not a constraint	The survey was conducted using a four-wheel drive vehicle and on foot. Numerous access tracks were present within the survey area providing ease of access.
Competency/ Experience	Not a constraint	The Botanica personnel that conducted the survey were regarded as suitably qualified and experienced. **Coordinating Staff**: Jim Williams (Principal Botanist) **Field Staff**: Jennifer Jackson (Botanist) **Data Interpretation**: Jim Williams, Jennifer Jackson and Lauren Pick.
Timing of survey, weather & season	Not a constraint	Fieldwork was not undertaken during the EPA's recommended primary survey time period for the Eremaean (6-8 weeks post wet season, March - June), however the survey was conducted following above average rainfall received in April and July 2025. Many annual species were present.
Area disturbance	Not a constraint	The area has been disturbed from previous exploration, cattle grazing and other human impacts; however, vegetation was mostly intact and comprised of native vegetation.
Survey Effort/ Extent	Not a constraint	Survey intensity was appropriate for the size/significance of the area with a detailed flora survey completed to identify vegetation types and significant flora and vegetation.
Availability of contextual information at a regional and local scale	Not a constraint	Conservation significant flora database searches provided by the DBCA were used to identify any potential locations of Threatened/Priority flora species. BoM, DWER, DPIRD, DBCA and DCCEEW databases were reviewed to obtain appropriate regional desktop information on the biophysical environment of the local region. Botanica has conducted numerous surveys within Murchison Bioregion and was also able to obtain information about the area from previous research conducted within the area. Results of previous assessments in the local area were reviewed to provide context on the local environment.
Data Analysis	Minor constraint	Botanica staff conducting the PATN statistical analyses are not statistical analysts and have basic statistics training. These analyses were used to provide basic information on the relationships between vegetation communities delineated in the field.
Completeness	Minor constraint	In the opinion of Botanica, the survey area was covered sufficiently to identify vegetation assemblages. Fieldwork was undertaken outside the EPA's recommended primary survey time period for the Eremaean (i.e., March to June), however the survey was conducted following above average rainfall received in April and July 2025. As a result all taxa were able to be identified to species level, and many annual species were present. The vegetation associations for this study were based on visual descriptions of locations in the field. The distribution of these vegetation associations outside the study area is not known, however vegetation associations identified were categorised via

Variable	Potential Impact on Survey	Details
		comparison to vegetation distributions throughout WA given on NVIS (DotEE, 2017).

5 RESULTS

5.1 Desktop Assessment

5.1.1 Flora

According to the results of the Dandjoo search (DBCA, 2025d), a total of 380 flora taxa have previously been collected within an approximate 40 km radius of the survey area. This search was based on records from WA Herbarium. Dominant families include Myrtaceae, Asteraceae, Fabaceae and Chenopodiaceae *(*Appendix H*).*

5.1.2 Introduced Flora

Results of the Dandjoo search (DBCA, 2025d), identified seven introduced taxa as having previously been recorded within an approximate 40 km radius of the survey area (Table 5-1). No taxa are listed as a Declared Pest under the BAM Act or a Weed of National Significance (WoNS) by the Commonwealth DCCEEW.

Table 5-1: Introduced flora previously recorded within 40 km of the survey area

Family	Taxon	Common Name	WAOL Status	WONS
Asteraceae	*Centaurea melitensis*	Maltese cockspur	Permitted - s11	No
Asteraceae	*Oligocarpus calendulaceus*	-	Permitted - s11	No
Asteraceae	*Sonchus oleraceus*	Common Sowthistle	Permitted - s11	No
Fabaceae	*Medicago laciniata*	Cutleaf medic	Permitted - s11	No
Geraniaceae	*Erodium aureum*	-	Permitted - s11	No
Poaceae	*Schismus arabicus*	Araby grass	Permitted - s11	No
Primulaceae	*Lysimachia arvensis*	Pimpernel	Permitted - s11	No

5.1.3 Conservation Significant Flora

The results of the literature review, combined search of the Flora of Conservation Significance databases (DBCA, 2025a), Dandjoo search (DBCA, 2025) and Protected Matters Search (DCCEEW, 2025a) indicated that no Threatened Flora or Priority Flora species have previously recorded within the survey area.

As listed in Table 5-2 below, eight Priority flora have previously been collected within a 40 km radius of the survey area, three of these were found in the area directly north of this survey area during previous surveys for the Lake Rebecca Project. The Protected Matters Search (DCCEEW, 2025a) listed *Hibbertia crispula* as possibly being present or having habitat present within 40 km of the survey area. A map of flora locations provided in Figure 5-1.

Table 5-2: Likelihood of occurrence for Threatened and Priority flora within the survey area

Taxon	EPBC Act	BC Act	DBCA Priority Rating	Habitat Description (WAHERB, 1998-, DBCA, 2025a)	Likelihood of Occurrence
Acacia eremophila var. Numerous-nerved variant (A.S. George 11924)			P3	Sandy soils. Flats.	Previously recorded north of this area (Maia 2022, Botanica 2024).
Eremophila arachnoides subsp. *tenera*			P3	Flat plain with calcareous sandy loam soils.	Previously recorded north of this area (Maia 2022, Botanica 2024, 2025).
Eremophila perglandulosa			P1	Sandplain adjacent to a drainage line.	Previously recorded east of this area (Botanica 2024).
Eremophila praecox			P2	Red/brown sandy loam. Undulating plains.	Previously recorded north of this area (Maia 2022, Botanica 2024).
Eucalyptus pimpiniana			P3	Red sand. Sand dunes and plains.	Unlikely, this habitat is not present in the survey area.
Goodenia jaurdiensis			P2	Red clayey loam with laterite or banded ironstone gravel or quartz pebbles. Low-lying plains and lower slopes.	Unlikely, this habitat is not present in the survey area.
Hibbertia crispula	VU		P1	Dune. Yellow sand.	Unlikely, this habitat is not present in the survey area.
Micromyrtus serrulata			P3	Brownish sandy and clayey soils over granite.	Unlikely, this habitat is not present in the survey area.
Thryptomene eremaea			P2	Red or yellow sand. Sandplains.	Unlikely, this habitat is not present in the survey area.

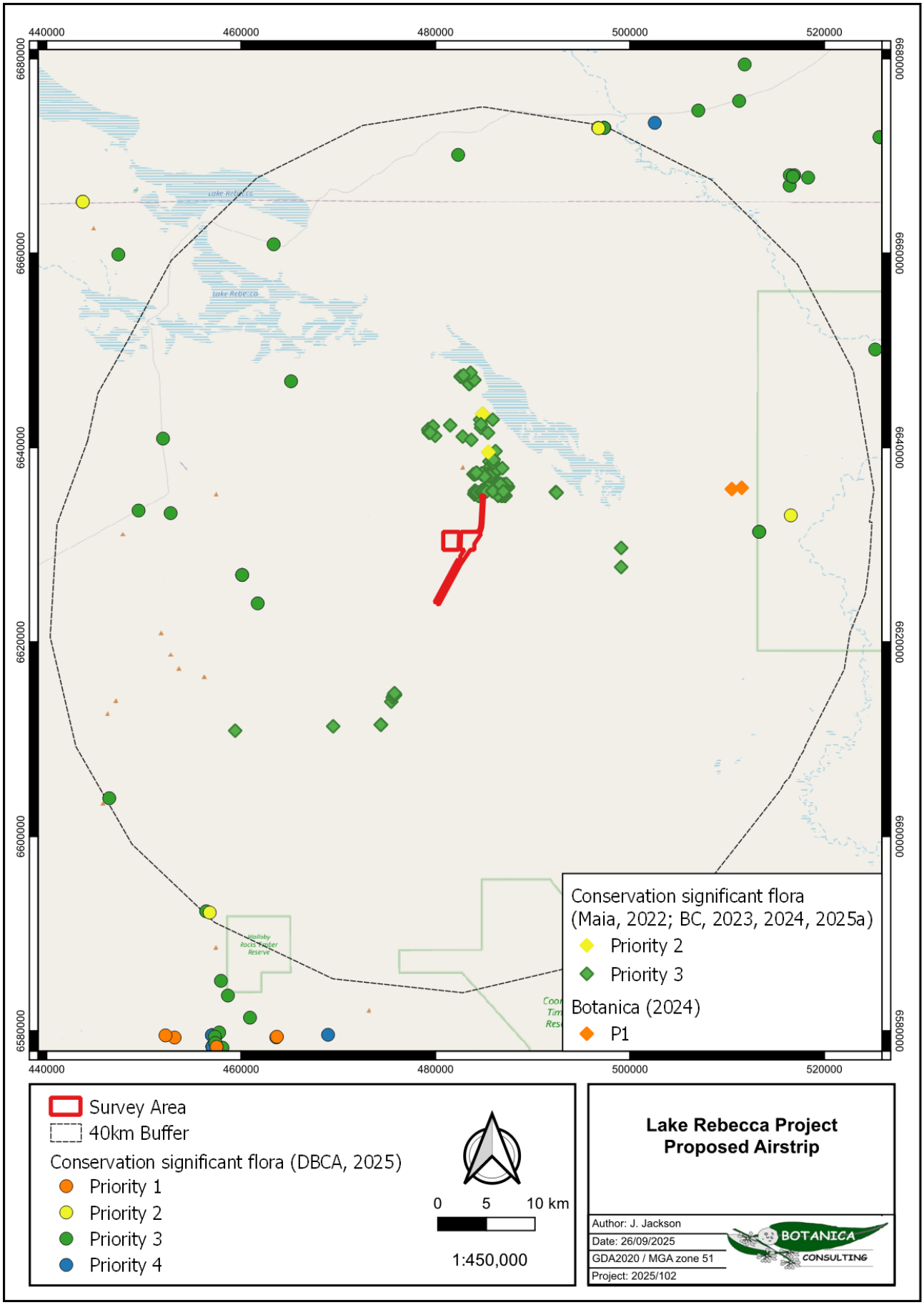


Figure 5-1: Conservation significant flora in relation to the survey area

5.2 Field Assessment

5.2.1 Flora

The field survey identified 20 Families, 44 genera and 78 taxa as occurring in the survey area. Chenopodiaceae was the dominant family with 16 species in the survey area over seven genera. Dominant genera include *Eremophila* (11 species*), Acacia* (seven species), and *Maireana* (six species). Twenty-two annual flora species were present. The total species list is provided in Appendix C.

5.2.2 Introduced Flora

One introduced flora species was observed within the survey area. *Mesembryanthemum crystallinum* (Iceplant) was observed in low numbers in Quadrats 3 and 8, and also in disturbed areas and along some tracks.

5.2.3 Conservation Significant Flora

According to the EPA *Environmental Factor Guideline for Flora and Vegetation* (EPA, 2016b) significant flora includes:

- flora being identified as threatened or priority species;
- locally endemic flora or flora associated with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems);
- new species or anomalous features that indicate a potential new species;
- flora representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- unusual species, including restricted subspecies, varieties or naturally occurring hybrids; and
- flora with relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.

No Threatened Flora taxa are previously known to occur or were identified within the survey area.

One Priority 3 species (*Eremophila arachnoides* subsp. *tenera*) was identified in four quadrats and opportunistically throughout the survey area (outside of quadrats) The locations of these are shown in Figure 5-2.

***Eremophila arachnoides subsp. tenera* (P3)**

Eremophila arachnoides subsp. *tenera* is a broom-like shrub, to 3 m high, it has branches with tubercules that are often elongated and coalescing. Flowers are white or a blue-purple. Within Western Australia, it has been recorded in the Eastern Goldfield, Eastern Murchison and Shield IBRA subregions (WA Herbarium, 1998-) (Plate 5-1).

Within the survey area, *Eremophila arachnoides* subsp. *tenera* was recorded in Quadrats 1, 3, 11 and 16, and occasionally throughout the survey area, with more than 260 plants observed.

More than 2000 plants have been recorded previously within the Lake Rebecca Project area during previous surveys (Botanica, 2023b, Botanica, 2025a).

Maia also recorded more than 500 plants in their 2022 survey of the Lake Rebecca Project.

Plate 5-1: *Eremophila arachnoides* subsp. *tenera,* photo of plant, and close up of leaves and flower.

No other Priority flora was observed in the survey area.

5.2.4 Vegetation

Seven vegetation types were identified within the survey area. These vegetation types were located within three landform types and comprised of four NVIS major vegetation groups (Table 5-3, Figure 5-3).

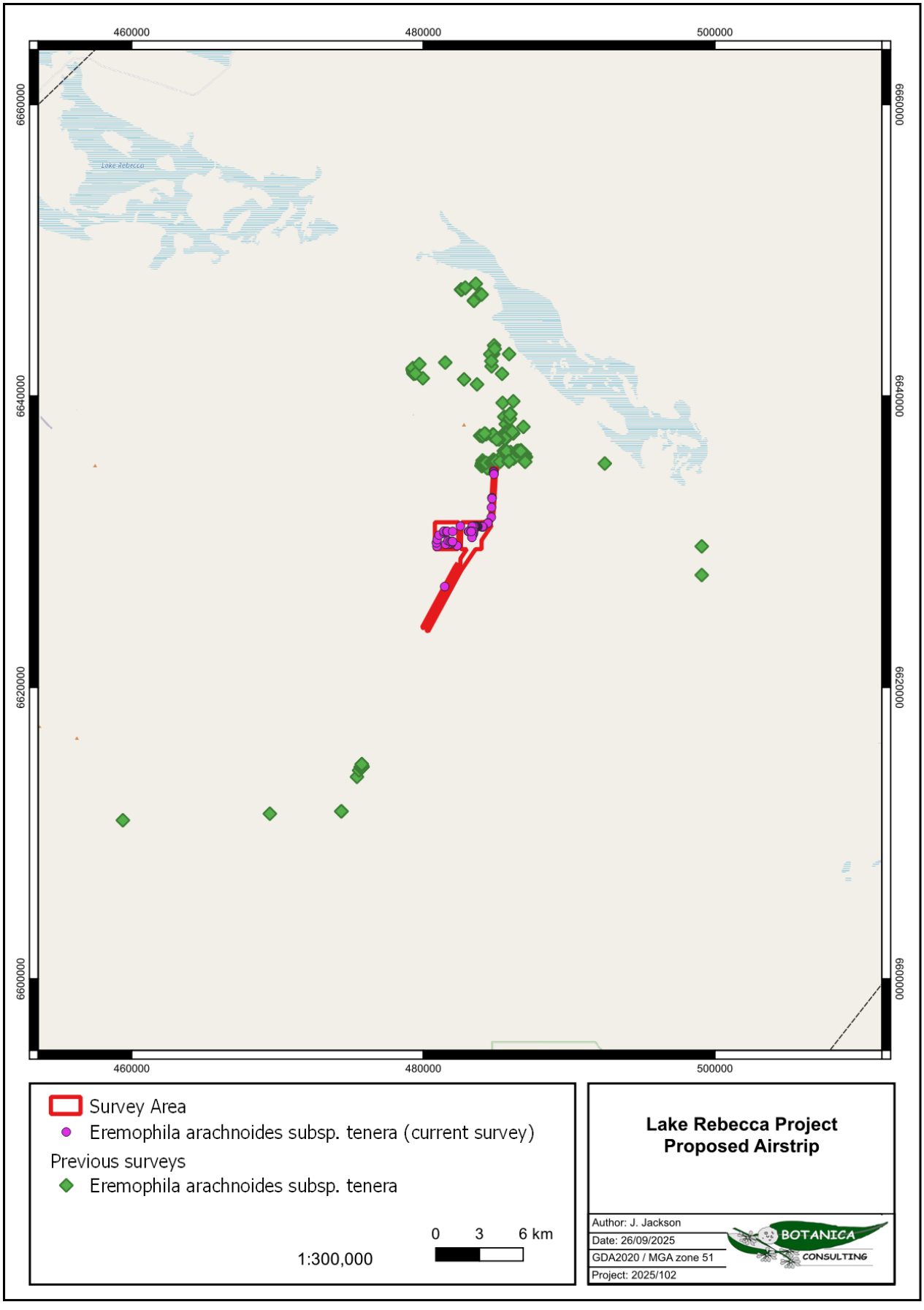


Figure 5-2: Conservation significant flora in the survey area

Table 5-3: Summary of vegetation types within the survey area

Landform	Vegetation Code	NVIS Major Vegetation Group	Vegetation Type	Quadrats	Image
Clay Loam Plain	CLP-EW1 Total area = 65.7 ha (7.3%)	Eucalypts Woodlands (MVG 5)	*Eucalyptus salmonophloia* mid woodland over *Atriplex nummularia* and *Eremophila scoparia* mid shrubland over *Atriplex vesicaria* low chenopod shrubland on clay loam plain.	Q7, Q12, Q15, Q17	
	CLP-EW3 Total area = 35.9 ha (4%)	Eucalypts Woodlands (MVG 5)	*Eucalyptus ravida* low woodland over *Maireana sedifolia* open chenopod shrubland over *Atriplex vesicaria* low open chenopod shrubland on clay loam plain.	Q8	

Landform	Vegetation Code	NVIS Major Vegetation Group	Vegetation Type	Quadrats	Image
Clay Loam Plain	CLP-CW1 Total area = 709.7 ha (79.4%)	Casuarina Woodlands (MVG 8)	*Casuarina pauper* mid open forest over *Senna artemisioides* subsp. *filifolia* and *Cratystylis subspinescens* mid open shrubland over *Maireana sedifolia* low chenopod shrubland on clay loam plain.	Q1, Q3, Q4, Q5, Q9, Q11, Q13, Q14, Q16, Q18	
	CLP-AS1 Total area = 39.9 ha (4.4%)	Acacia Shrublands (MVG 16)	Low *Acacia acuminata* shrubland over mid sparse shrubland of *Dodonaea lobulata* over low sparse shrubland of *Ptilotus obovatus* and low sod grass of *Austrostipa nitida* on clay loam plain.	Q2	

Landform	Vegetation Code	NVIS Major Vegetation Group	Vegetation Type	Quadrats	Image
Clay Loam Plain	CLP-AFW1 Total area = 14.4 ha (1.6%)	Acacia Forest and Woodland (MVG 6)	Low *Acacia incurvaneura* open forest over mid sparse shrubland of *Acacia tetragonophylla* over low sparse shrubland of *Eremophila clarkei* on clay loam plain.	Q6	
Drainage Depression	DD-EW1 Total area = 25.3 ha (2.8%)	Eucalypts Woodlands (MVG 5)	*Eucalyptus salmonophloia* mid woodland over *Eremophila scoparia* mid shrubland over *Maireana sedifolia* low sparse chenopod shrubland in drainage depression.	Q10	

Landform	Vegetation Code	NVIS Major Vegetation Group	Vegetation Type	Quadrats	Image
Rocky Slope	RS-CW1 Total area = 4.1 ha (0.5%)	Casuarina Woodlands (MVG 8)	*Casuarina pauper* low woodland over *Dodonaea lobulata, Senna artemisioides* subsp. *filifolia* and *Scaevola spinescens* shrubland over *Maireana sedifolia* and *Ptilotus obovatus* low open shrubland on hillslope.	None	
Total = 895 ha (100%					

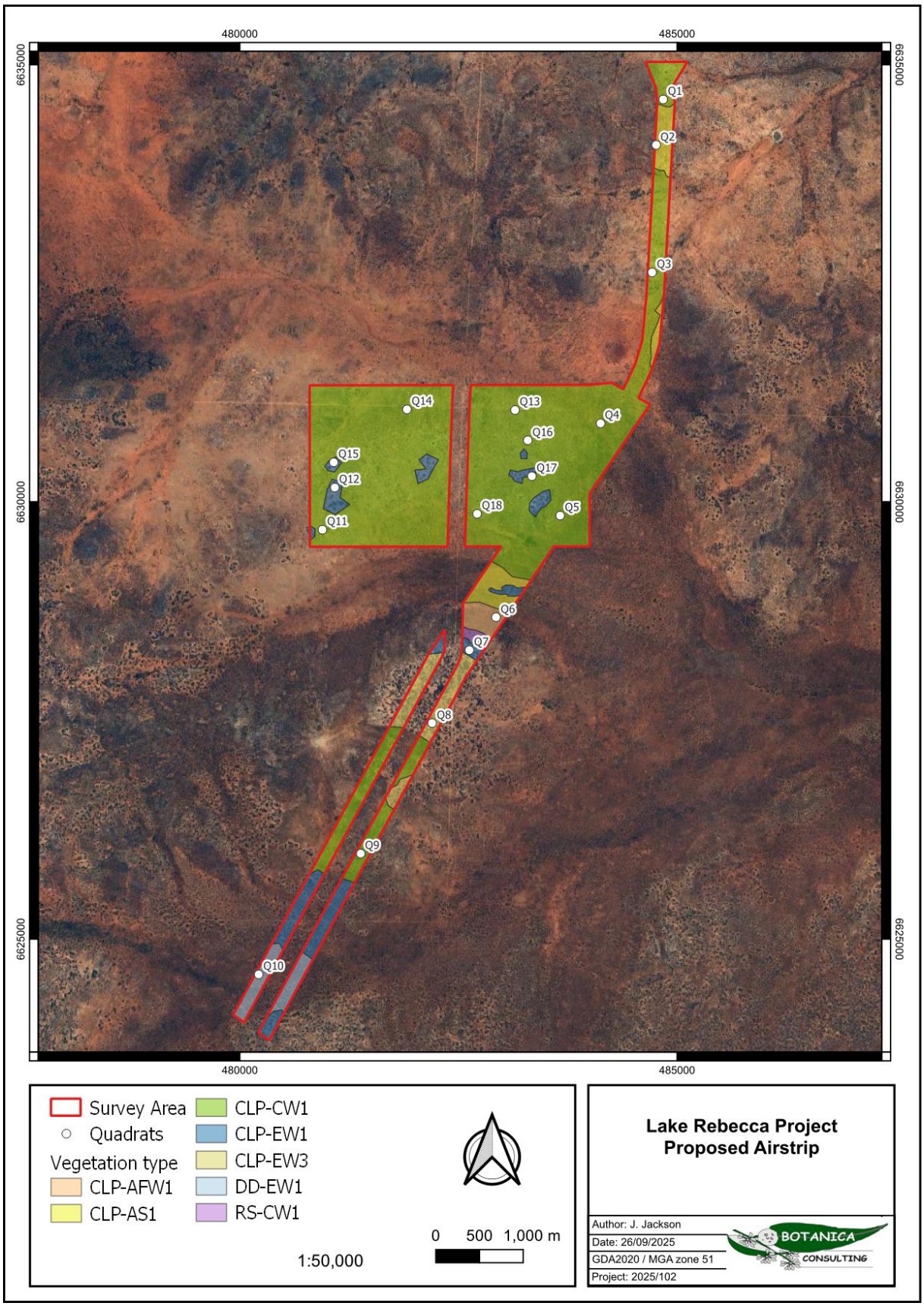


Figure 5-3: Vegetation types within the survey area

5.2.5 Floristic Composition

Statistical analysis was conducted on quadrat data obtained from the survey to determine the similarities or differences in floristic composition between vegetation associations. Appendix G provides the dendrogram, two-way table and ordination graph generated from the PATN statistical analysis. A list of the eighteen quadrats and their respective vegetation associations are provided in Table 5-4 below. The PATN analysis produced a stress value of 0.1735.

Table 5-4: **Vegetation types with corresponding quadrats**

Vegetation Type	Vegetation Code	Quadrat
Eucalyptus salmonophloia mid woodland over *Atriplex nummularia* and *Eremophila scoparia* mid shrubland over *Atriplex vesicaria* low chenopod shrubland on clay loam plain.	CLP-EW1	Q7, Q12, Q15, Q17
Eucalyptus ravida low woodland over *Maireana sedifolia* open chenopod shrubland over *Atriplex vesicaria* low open chenopod shrubland on clay loam plain.	CLP-EW3	Q8
Casuarina pauper mid open forest over *Senna artemisioides* subsp. *filifolia* and *Cratystylis subspinescens* mid open shrubland over *Maireana sedifolia* low chenopod shrubland on clay loam plain.	CLP-CW1	Q1, Q3, Q4, Q5, Q9, Q11, Q13, Q14, Q16, Q18
Low *Acacia acuminata* shrubland over mid sparse shrubland of *Dodonaea lobulata* over low sparse shrubland of *Ptilotus obovatus* and low sod grass of *Austrostipa nitida* on clay loam plain.	CLP-AS1	Q2
Low *Acacia incurvaneura* open forest over mid sparse shrubland of *Acacia tetragonophylla* over low sparse shrubland of *Eremophila clarkei* on clay loam plain.	CLP-AFW1	Q6
Eucalyptus salmonophloia mid woodland over *Eremophila scoparia* mid shrubland over *Maireana sedifolia* low sparse chenopod shrubland in drainage depression.	DD-EW1	Q10

Six species groups were identified in the analysis (species group A to F) as shown in the two-way table (Appendix G).

The first floristic group comprised of quadrats 1, 4, 7, 11 and 12 and was characterised by species group B (see two-way table provided in Appendix G) with an average species richness of 14 taxa per quadrat (ranged from 12 to 17 taxa per quadrat).

The second floristic group comprised of quadrats 3 and 8. This floristic group was characterised by species group D (Appendix G). This floristic group had an average species richness of ten taxa per quadrat (ranged from seven to 13 taxa per quadrat).

The third floristic group comprised of quadrats 5, 10, 13, 14, 16 and 17. This floristic group was characterised by species group B (Appendix G). This floristic group had an average species richness of 13 taxa per quadrat (ranged from 12 to 15 taxa per quadrat).

The fourth floristic group comprised of quadrats 15 and 18. This floristic group was mostly characterised by species group C (Appendix G). This floristic group had an average species richness of 12.5 taxa per quadrat (ranged from 12 to 13 taxa per quadrat).

The fifth floristic group comprised of quadrats 2 and 9. This floristic group was mostly characterised by species group A (Appendix G). This floristic group had an average species richness of nine taxa per quadrat (ranged from seven to 11 taxa per quadrat).

The sixth floristic group comprised of quadrat 6. This floristic group was also mostly characterised by species group E (Appendix G). This floristic group was one quadrat, species richness was nine.

Results of the PATN analysis mostly supported vegetation delineations made in field, with seven distinct floristic groups identified.

5.2.5.1 Species Richness and Accumulation Estimates

The Chao 2 richness estimator provided an estimated species richness of 84 species in 30 sample sites (quadrats). Species richness recorded for the 18 quadrats surveyed was 78 species. A species accumulation curve was created to display the rate of species accumulation. The R^2 value (0.9833) suggests that the data "fits" the species accumulation curve shown in Figure 5-4. Species accumulation ranged from eleven to five species per quadrat from 1-5 sample sites, four species per quadrat from 6-7 sample sites, three species per quadrat from 8-10 sample sites, two species per quadrat from 11-14 sample sites, and one species per quadrat beyond 15 sample sites. Botanica has determined that according to this data a sufficient number of quadrats were established in the survey area to adequately assess the floristic composition of the area.

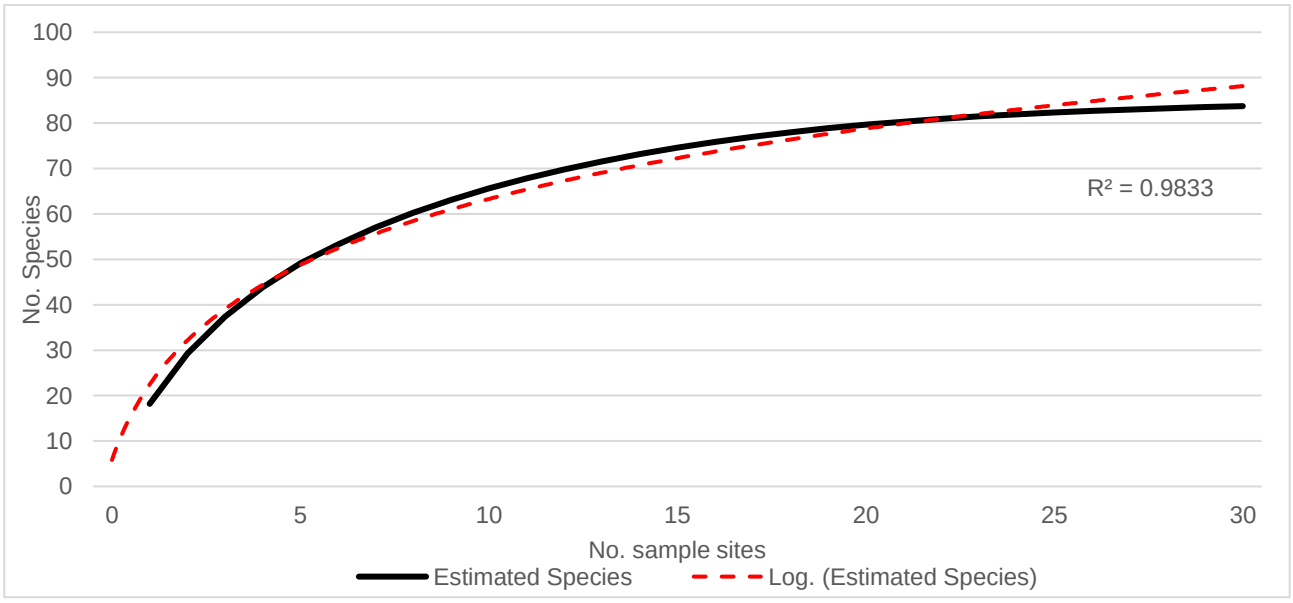


Figure 5-4: Species accumulation curve

5.2.6 Significant Vegetation

According to the EPA *Environmental Factor Guideline for Flora and Vegetation* (EPA, 2016b) significant vegetation includes:

- vegetation being identified as Threatened or Priority Ecological Communities;
- vegetation with restricted distribution;
- vegetation subject to a high degree of historical impact from threatening processes;
- vegetation which provides a role as a refuge; and
- vegetation providing an important function required to maintain ecological integrity of a significant ecosystem.

No TEC or PEC, restricted vegetation, highly disturbed vegetation, vegetation providing important refuge or significant ecological function was identified within the survey area.

5.2.7 Vegetation Condition

Based on the vegetation condition rating scale obtained from the EPA (2016a) provided in Appendix B, all of the vegetation in the survey area was rated as 'very good' condition (Table 5-5). Disturbance in the area was from exploration activities, access tracks and grazing by large feral herbivores. A map of the vegetation condition across the survey area is provided in Figure 5-5.

Table 5-5: Vegetation condition rating within the survey area

Condition rating	Description (EPA, 2016a)	Area (ha)	Area (%)
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.	895	100
TOTAL		**895**	**100**

Figure 5-5: Vegetation condition rating of the survey area

5.3 Matters of National Environmental Significance

5.3.1 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act protects Matters of National Environmental Significance (MNES) and is used by the Commonwealth DCCEEW to list threatened taxa and ecological communities into categories based on the criteria set out in the EPBC Act (www.environment.gov.au/epbc/index.html). The EPBC Act provides a national environmental assessment and approval system for proposed developments and enforces strict penalties for unauthorised actions that may affect MNES.

The EPBC Act covers 9 protected matters:

- world heritage areas
- national heritage places
- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species and ecological communities
- listed migratory species (protected under international agreements)
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- nuclear actions (including uranium mines)
- water resources (that relate to unconventional gas development and large coal mining development).

No MNES as defined by the EPBC Act were identified within the survey area.

5.4 Matters of State Environmental Significance

5.4.1 *Environmental Protection Act WA 1986*

The EP Act provides for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment. The Act is administered by The Department of Water and Environment Regulation (DWER), which is the State Government's environmental regulatory agency.

Under Section 51C of the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations) any clearing of native vegetation in Western Australia that is not eligible for exemption under Schedule 6 of the EP Act or under the Clearing Regulations requires a clearing permit from the DWER or the Department of Mines, Petroleum and Exploration (DMPE). Under Section 51A of the EP Act native vegetation includes aquatic and terrestrial vegetation indigenous to Western Australia, and intentionally planted vegetation declared by regulation to be native vegetation, but not vegetation planted in a plantation or planted with

commercial intent. Section 51A of the EP Act defines clearing as "the killing or destruction of; the removal of; the severing or ringbarking of trunks or stems of; or the doing of substantial damage to some or all of the native vegetation in an area, including the flooding of land, the burning of vegetation, the grazing of stock or an act or activity that results in the above".

Environmentally sensitive areas (ESAs) are classes or areas of native vegetation as declared in the *Environmental Protection (Environmentally Sensitive Areas) Notice 2005* for the purposes of Part V Division 2 of the EP Act, where the exemptions for clearing vegetation under the Clearing Regulations do not apply.

The following areas are declared to be ESAs:

- a declared World Heritage property as defined in section 13 of the EPBC Act;
- an area that is included on the Register of the National Estate, because of its natural heritage value, under the Australian Heritage Council Act 2003 of the Commonwealth;
- a defined wetland and the area within 50 m of the wetland. Defined wetlands include Ramsar wetlands, conservation category wetlands and nationally important wetlands;
- the area covered by vegetation within 50 m of rare flora, to the extent to which the vegetation is continuous with the vegetation in which the rare flora is located;
- the area covered by a TEC;
- a Bush Forever site listed in "Bush Forever" Volumes 1 and 2 (2000), published by the Western Australia Planning Commission, except to the extent to which the site is approved to be developed by the Western Australia Planning Commission;
- the areas covered by the following policies –
    - *Environmental Protection (Gnangara Mound Crown Land) Policy 1992*;
    - *Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002*;
- the areas covered by the lakes to which the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* applies; and
- protected wetlands as defined in the *Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998*.

No ESAs declared under the EP Act were identified within the survey area.

Additionally, in accordance with Schedule 1, Clause 4 of the Clearing Regulations, clearing of native vegetation in a 'Schedule One Area' for mining purposes is not permitted without a clearing permit.

No Schedule One Areas occur within the survey area.

5.4.2 *Biodiversity Conservation Act 2016*

The BC Act is administered by the DBCA to conserve and protect biodiversity and to promote the ecologically sustainable use of biodiversity components in the State of Western Australia,

Under the BC Act, native species are listed as Threatened when they face a high to very high risk of extinction in the wild, and ecological communities are listed as Threatened when they face a high to very high risk of collapse.

Whilst all native flora are protected throughout the State, special protection is afforded to threatened flora and ecological communities, with the authorisation of the Minister being required before such flora can be taken or communities modified.

Furthermore, The Minister may list vegetation as a 'critical habitat' if it is critical to the survival of a threatened species or ecological community. Under Section 54(1) of the BC Act, habitat is eligible for listing as critical habitat if:

a) it is critical to the survival of a threatened species or a threatened ecological community; and
b) its listing is otherwise in accordance with the ministerial guidelines.

No TECs, Threatened species or critical habitat listed under the BC Act were recorded within the survey area.

5.4.3 Other Areas of Conservation Significance

The DBCA lists 'Priority' species and communities which are under consideration for declaration as 'Threatened' under the BC Act. These Priority species/ communities have no formal legal protection until they are endorsed by the Minister as being Threatened. One Priority flora (*Eremophila arachnoides* subsp. *tenera* (P3)) was identified in the survey area. No PECs were identified in the survey area.

There are no wetlands of international importance (Ramsar Wetlands) or national importance (Australian Nature Conservation Agency Wetlands) within the survey area.

There are no Reserves in the survey area, the nearest gazetted Reserve is the Queen Victoria Spring Nature Reserve (R30491) and is 28 km east of the survey area.

5.5 Native Vegetation Clearing Principles

Based on the outcomes from the survey undertaken, Botanica assessed the results of the desktop and field survey with regards to the native vegetation clearing principles listed under Schedule 5 of the EP Act (Table 5-6). The assessment found that the proposed vegetation clearing activities are unlikely to be at variance with any clearing principle.

Table 5-6: Assessment against native vegetation clearing principles

Letter	Principle	Assessment	Outcome
Native vegetation should not be cleared if it:			
(a)	comprises a high level of biological diversity.	Vegetation identified within the survey area is not considered to be of high biological diversity and is well represented outside of the survey area.	Clearing is unlikely to be at variance with this principle
(c)	includes, or is necessary for the continued existence of rare flora.	No Threatened Flora taxa, pursuant to the BC Act and the EPBC Act were identified within the survey area.	Clearing is not at variance with this principle
(d)	comprises the whole or part of or is necessary for the maintenance of a threatened ecological community (TEC).	No TEC listed under the EPBC Act or by the BC Act occur within the survey area.	Clearing is not at variance with this principle
(e)	is significant as a remnant of native vegetation in an area that has been extensively cleared	The Pre-European vegetation association retains >99% of its original pre-European vegetation extent.	Clearing is not at variance with this principle
(f)	is growing, in, or in association with, an environment associated with a watercourse or wetland	No major drainage lines occur within the survey area, there are two minor drainage lines that intersect the survey area.	Clearing is unlikely to be at variance with this principle
(g)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	The survey area and surrounding region has not been extensively cleared. Clearing within the survey area is not considered likely to lead to land degradation issues such as salinity, water logging or acidic soils.	Clearing is unlikely to be at variance with this principle
(h)	Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	There are no Reserves in the survey area, the nearest gazetted Reserve is the Queen Victoria Spring Nature Reserve (R30491) and is 28 km east of the survey area.	Clearing is not at variance with this principle
(i)	Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.	Two minor drainage lines intersect the survey area. Disturbances within the survey area are not expected to cause deterioration in the quality of water on the surface or underground.	Clearing is unlikely to be at variance with this principle
(j)	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding	Rainfall in the Eastern Murchison subregion has an average rainfall of ~200mm and an evaporation rate of 2400 mm. Clearing within the survey area is not likely to increase the incidence or intensity of flooding within the survey area or surrounds.	Clearing is unlikely to be at variance with this principle

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APPENDIX A:
CONSERVATION CATEGORIES (BC ACT AND EPBC ACT)

Definitions of Conservation Significant Species

Code	Category
State categories of Threatened and Priority species	
Threatened Species (T) 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 BC Act.	
CR	**Critically Endangered** 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 2 Division 1 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025* for critically endangered fauna or Schedule 1 Division 1 of the *Biodiversity Conservation (Listing of Native Species) (Flora) Order 2025* for critically endangered flora.
EN	**Endangered** 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 Division 2 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025* for endangered fauna or Schedule 1 Division 2 of the *Biodiversity Conservation (Listing of Native Species) (Flora) Order 2025* for endangered flora.
VU	**Vulnerable** 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 2 Division 3 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025* for vulnerable fauna or Schedule 1 Division 3 of the *Biodiversity Conservation (Listing of Native Species) (Flora) Order 2025* 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 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 3 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025* for extinct fauna or Schedule 2 the *Biodiversity Conservation (Listing of Native Species) (Flora) Order 2025* for extinct flora.
EW	**Extinct in the Wild** 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.	
CD	**Species of special conservation interest** 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).

Code	Category
	Published as conservation dependent fauna under Schedule 1 Division 1 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025*.
IA	**International Agreement/ Migratory** 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 1 Division 2 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025*.
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 1 Division 3 of the *Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2025*.
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.	
P1	**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.
P2	**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.
P3	**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.
P4	**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.
Commonwealth categories of Threatened species	
EX	**Extinct**

Code	Category
	Taxa where there is no reasonable doubt that the last member of the species has died.
EW	**Extinct in the Wild** Taxa where it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
CR	**Critically Endangered** Taxa that are facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
EN	**Endangered** Taxa which are not critically endangered and is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
VU	**Vulnerable** Taxa which are not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
CD	**Conservation Dependent** Taxa which are the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or (b) the following subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long-term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species.

Definitions of conservation significant communities

Category Code	Category
State categories of Threatened Ecological Communities (TEC)	
PD	**Presumed Totally Destroyed**
	An ecological community will be listed as Presumed Totally Destroyed if there are no recent records of the community being extant and either of the following applies:
	• *records within the last 50 years have not been confirmed despite thorough searches or known likely habitats or;*
	• *all occurrences recorded within the last 50 years have since been destroyed.*
CR	**Critically Endangered**
	An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future, meeting any one of the following criteria:
	The estimated geographic range and distribution has been reduced by at least 90% and is either continuing to decline with total destruction imminent, or is unlikely to be substantially rehabilitated in the immediate future due to modification;
	The current distribution is limited i.e. highly restricted, having very few small or isolated occurrences, or covering a small area;
	The ecological community is highly modified with potential of being rehabilitated in the immediate future.
EN	**Endangered**
	An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. The ecological community must meet any one of the following criteria:
	The estimated geographic range and distribution has been reduced by at least 70% and is either continuing to decline with total destruction imminent in the short-term future, or is unlikely to be substantially rehabilitated in the short-term future due to modification;
	The current distribution is limited i.e. highly restricted, having very few small or isolated occurrences, or covering a small area;
	The ecological community is highly modified with potential of being rehabilitated in the short-term future.
VU	**Vulnerable**

Category Code	Category
	An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing high risk of total destruction in the medium to long term future. The ecological community must meet any one of the following criteria:
	The ecological community exists largely as modified occurrences that are likely to be able to be substantially restored or rehabilitated;
	The ecological community may already be modified and would be vulnerable to threatening process, and restricted in range or distribution;
	The ecological community may be widespread but has potential to move to a higher threat category due to existing or impending threatening processes.
Commonwealth categories of Threatened Ecological Communities (TEC)	
CE	**Critically Endangered** If, at that time, an ecological community is facing an extremely high risk of extinction in the wild in the immediate future (indicative timeframe being the next 10 years).
EN	**Endangered** If, at that time, an ecological community is not critically endangered but is facing a very high risk of extinction in the wild in the near future (indicative timeframe being the next 20 years).
VU	**Vulnerable** If, at that time, an ecological community is not critically endangered or endangered but is facing a high risk of extinction in the wild in the medium–term future (indicative timeframe being the next 50 years).
Priority Ecological Communities	
P1	**Poorly-known ecological communities**
	Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist.
P2	**Poorly-known ecological communities**
	Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, un-allocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation.
P3	**Poorly known ecological communities**
	Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:
	Communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;
	Communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system but are under threat of modification across much of their range from processes such as grazing and inappropriate fire regimes.
P4	**Ecological communities that are adequately known, rare but not threatened** or meet criteria for near threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
P5	**Conservation Dependent ecological communities**
	Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

APPENDIX B:
VEGETATION CONDITION RATING

Vegetation Condition Rating	Southwest and Interzone Botanical Provinces	Eremaean and Northern Botanical Provinces
Pristine	Pristine or nearly so, no obvious signs of disturbance or damage caused by human activities since European settlement.	
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor		Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	The structure of the vegetation is no longer intact, and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees and shrubs.	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e., areas that are cleared or ‘parkland cleared’ with their flora comprising weed or crop species with isolated native trees or shrubs.

APPENDIX C:
LIST OF SPECIES IDENTIFIED WITHIN EACH VEGETATION TYPE

(A) and blue shading denotes annual taxa; (P3) and green shading-denotes Priority flora (WAHERB, 1998-)

Family	Species	CLP-CW1	CLP-AFW1	CLP-EW3	DD-EW1	CLP-EW1	CLP-AS1	RS-CW1
Aizoaceae	*Mesembryanthemum crystallinum (W)*	*		*				
Amaranthaceae	*Ptilotus exaltatus (A)*	*		*		*		
Amaranthaceae	*Ptilotus obovatus*	*	*			*		*
Asteraceae	*Asteridea athrixioides (A)*						*	
Asteraceae	*Brachyscome ciliaris (A)*	*				*		
Asteraceae	*Cephalipterum drummondii (A)*	*					*	
Asteraceae	*Cratystylis subspinescens*	*			*	*		
Asteraceae	*Helipterum craspedioides (A)*	*					*	
Asteraceae	*Olearia muelleri*	*			*	*		*
Asteraceae	*Rhodanthe charsleyae (A)*	*						
Asteraceae	*Rhodanthe floribunda (A)*	*				*		
Asteraceae	*Rhodanthe maryonii (A)*	*						
Asteraceae	*Schoenia cassiniana (A)*		*					
Asteraceae	*Siemssenia capillaris (A)*	*	*			*	*	
Asteraceae	*Streptoglossa liatroides*	*						
Asteraceae	*Waitzia acuminata (A)*		*					
Casuarinaceae	*Casuarina pauper*	*						*
Chenopodiaceae	*Atriplex nummularia*					*		
Chenopodiaceae	*Atriplex vesicaria*	*		*	*	*		
Chenopodiaceae	*Chenopodium curvispicatum*	*						
Chenopodiaceae	*Enchylaena lanata*	*						
Chenopodiaceae	*Enchylaena tomentosa*	*				*		
Chenopodiaceae	*Eriochiton sclerolaenoides*	*		*		*		
Chenopodiaceae	*Maireana georgei*	*	*	*		*		*
Chenopodiaceae	*Maireana oppositifolia*	*				*		
Chenopodiaceae	*Maireana pyramidata*	*				*		
Chenopodiaceae	*Maireana sedifolia*	*		*	*	*	*	
Chenopodiaceae	*Maireana tomentosa*	*		*		*		
Chenopodiaceae	*Maireana triptera*	*				*		
Chenopodiaceae	*Rhagodia drummondii*	*			*	*		
Chenopodiaceae	*Sclerolaena brevifolia*	*		*				
Chenopodiaceae	*Sclerolaena uniflora*	*		*		*		
Chenopodiaceae	*Sclerolaena brevifolia*					*		*
Fabaceae	*Acacia colletioides*	*			*			
Fabaceae	*Acacia hemiteles*		*		*			
Fabaceae	*Acacia incurvaneura*	*	*					
Fabaceae	*Acacia mulganeura*		*					
Fabaceae	*Acacia tetragonophylla*		*		*			*
Fabaceae	*Acacia acuminata*	*					*	
Fabaceae	*Acacia burkittii*	*						
Fabaceae	*Senna artemisioides* subsp. *artemisioides*	*	*					
Fabaceae	*Senna cardiosperma*	*				*		
Fabaceae	*Senna artemisioides* subsp. *filifolia*	*			*	*	*	
Frankeniaceae	*Frankenia setosa*	*				*		
Geraniaceae	*Erodium crinitum (A)*	*	*				*	
Goodeniaceae	*Brunonia australis (A)*		*					
Goodeniaceae	*Goodenia pinnatifida (A)*	*					*	

Family	Species	CLP-CW1	CLP-AFW1	CLP-EW3	DD-EW1	CLP-EW1	CLP-AS1	RS-CW1
Goodeniaceae	*Goodenia rosea (A)*		*				*	
Goodeniaceae	*Goodenia pinnatifida (A)*	*						
Goodeniaceae	*Scaevola spinescens*	*			*	*	*	*
Malvaceae	*Lawrencia repens*					*		
Malvaceae	*Sida spodochroma*						*	
Myrtaceae	*Eucalyptus ravida*			*				
Myrtaceae	*Eucalyptus salmonophloia*				*	*		
Pittosporaceae	*Pittosporum angustifolium*					*		
Poaceae	*Aristida contorta (A)*		*				*	
Poaceae	*Austrostipa nitida (A)*	*	*	*	*	*	*	*
Poaceae	*Austrostipa elegantissima*	*			*			
Poaceae	*Monachather paradoxus*						*	
Poaceae	*Rytidosperma caespitosum (A)*	*						
Proteaceae	*Grevillea acuaria*				*			
Proteaceae	*Hakea kippistiana*	*						
Santalaceae	*Exocarpos aphyllus*	*				*		
Sapindaceae	*Dodonaea lobulata*	*					*	*
Scrophulariaceae	*Eremophila alternifolia*	*						
Scrophulariaceae	*Eremophila arachnoides* subsp. *tenera (P3)*	*						
Scrophulariaceae	*Eremophila clarkei*	*	*					
Scrophulariaceae	*Eremophila decipiens*	*				*		
Scrophulariaceae	*Eremophila glabra*	*				*		*
Scrophulariaceae	*Eremophila longifolia*					*		
Scrophulariaceae	*Eremophila maculata* subsp. *brevifolia*	*						
Scrophulariaceae	*Eremophila oldfieldii* subsp. *angustifolia*	*					*	
Scrophulariaceae	*Eremophila oppositifolia*	*				*		
Scrophulariaceae	*Eremophila parvifolia* subsp. *auricampi*					*		
Scrophulariaceae	*Eremophila scoparia*	*			*	*		
Solanaceae	*Solanum lasiophyllum*	*	*			*	*	*
Solanaceae	*Solanum nummularium*	*	*			*		
Thymelaeaceae	*Pimelea microcephala*	*				*		
Zygophyllaceae	*Roepera eremaea (A)*	*		*		*	*	*
Zygophyllaceae	*Roepera glauca (A)*	*						

APPENDIX D:
QUADRAT LOCATIONS (NW CORNER-GDA2020)

Quadrat	Easting	Northing
Q1	484842.6	6634604.0
Q2	484762.1	6634083.4
Q3	484716.1	6632625.5
Q4	484126.5	6630898.4
Q5	483664.2	6629843.9
Q6	482930.9	6628681.3
Q7	482626.3	6628304.4
Q8	482199.9	6627470.6
Q9	481383.2	6625977.3
Q10	480216.3	6624595.1
Q11	480945.3	6629682.4
Q12	481086.9	6630164.7
Q13	483148.0	6631051.4
Q14	481912.3	6631058.5
Q15	481074.8	6630453.0
Q16	483293.9	6630705.1
Q17	483340.9	6630294.2
Q18	482714.7	6629864.3

APPENDIX E:
QUADRAT DATASHEETS

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 533-535
Quadrat No: Q1	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 722
Coordinates (GDA2020): 484842.6E; 6634604.0N		**Elevation (m):** 369
Aspect: West	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat		
Coarse fragments on the surface: 2-10%, 6-20mm, Subrounded		
Rock outcrop (abundance/runoff): Nil / Very slow		
Soil (profile/field texture/soil surface): Uniform/ Red Brown / Clay Loam / Firm		
Cover leaf litter: 30%		
Cover bare ground: 50%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 3-6m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 10-30%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Senna artemisioides* subsp. *filifolia*	*Maireana sedifolia*

ALL TAXA
Acacia burkittii
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris
Casuarina pauper
Dodonaea lobulata
Eremophila alternifolia
*Eremophila arachnoides subsp. tenera (P3)**
Eremophila clarkei
Eriochiton sclerolaenoides
Exocarpos aphyllus
Goodenia pinnatifida (A)
Hakea kippistiana
Helipterum craspedioides (A)
Maireana georgei
Maireana pyramidata
Maireana sedifolia
Olearia muelleri
Rhodanthe charsleyae (A)
Rhodanthe floribunda (A)
Roepera glauca (A)
Scaevola spinescens
Sclerolaena uniflora
Senna artemisioides subsp. *filifolia*
Solanum lasiophyllum
Solanum nummularium

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 536-538
Quadrat No: Q2	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 726
Coordinates (GDA2020): 484762.1E; 6634083.3N		**Elevation (m):** 371
Aspect: South West	**Fire (yrs):** Long unburnt	**Condition rating:** Very good
Landform: Flat/ Plain		
Coarse fragments on the surface: 2-10%/ 20-60mm/ Subangular		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm/ Surface Crust		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Shrub	**Growth form:** Shrub	**Growth form:** Sod Grass
Height: 3-6	**Height:** 1-3m	**Height:** 0.25-0.5m
Crown cover: 30-70%	**Crown cover:** 10-30%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Acacia acuminata	*Dodonaea lobulata*	*Austrostipa nitida*

ALL TAXA
Acacia acuminata
Aristida contorta (A)
Asteridea athrixioides (A)
Austrostipa nitida (A)
Cephalipterum drummondii (A)
Dodonaea lobulata
Eremophila oldfieldii subsp. *angustifolia*
Erodium crinitum (A)
Goodenia pinnatifida (A)
Goodenia rosea (A)
Helipterum craspedioides (A)
Maireana sedifolia
Monachather paradoxus
Roepera eremaea (A)
Scaevola spinescens
Senna artemisioides subsp. *filifolia*
Siemssenia capillaris (A)
Sida spodochroma
Solanum lasiophyllum

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ + JW	**Photo number (NW corner):** 539-541
Quadrat No: Q3	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 730
Coordinates (GDA2020): 484716.1E; 6632625.5N		**Elevation (m):** 366
Aspect: South East	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain**/** No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: 2-10% / 2-6mm / Subangular		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Uniform / Sandy Clay Loam / Firm		
Cover leaf litter: 30%		
Cover bare ground: 50%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.25-0.5m
Crown cover: 10-30%	**Crown cover:** 10-30%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Senna artemisioides* subsp. *filifolia*	*Maireana pyramidata*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Chenopodium curvispicatum
*Eremophila arachnoides subsp. tenera (P3)**
Eremophila alternifolia
Eremophila glabra
Eriochiton sclerolaenoides
Maireana pyramidata
Maireana sedifolia
Maireana tomentosa
*Mesembryanthemum crystallinum (W)**
Rhagodia drummondii
Roepera eremaea (A)
Rytidosperma caespitosum (A)
Sclerolaena brevifolia
Senna artemisioides subsp. *filifolia*

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ + JW	**Photo number (NW corner):** 542-544
Quadrat No: Q4	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 734
Coordinates (GDA2020): 484126.5E; 6630898.4N		**Elevation (m):** 365
Aspect: South	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat		
Coarse fragments on the surface: Nil		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam / Firm		
Cover leaf litter:		
Cover bare ground:		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.25-0.5m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Cratystylis subspinescens*	*Maireana sedifolia*

ALL TAXA
Acacia incurvaneura
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Cephalipterum drummondii (A)
Cratystylis subspinescens
Enchylaena lanata
Eremophila clarkei
Eremophila maculata subsp. *brevifolia*
Erodium crinitum (A)
Exocarpos aphyllus
Helipterum craspedioides (A)
Maireana georgei
Maireana sedifolia
Maireana tomentosa
Maireana triptera
Pimelea microcephala
Ptilotus obovatus
Rhagodia drummondii
Rhodanthe maryonii (A)
Scaevola spinescens
Senna artemisioides subsp. *artemisioides*
Senna artemisioides subsp. *filifolia*

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ	**Photo number (NW corner):** 545-547
Quadrat No: Q5	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 738
Coordinates (GDA2020): 483664.2E; 6629843.8N		**Elevation (m):** 366
Aspect: West	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain		
Coarse fragments on the surface: <2%**,** 2-6mm, Subangular		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm/ Surface Crust		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 10-30%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Eremophila scoparia*	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Casuarina pauper
Cratystylis subspinescens
Eremophila scoparia
Frankenia setosa
Maireana georgei
Maireana sedifolia
Olearia muelleri
Ptilotus exaltatus (A)
Rhagodia drummondii
Scaevola spinescens
Sclerolaena uniflora
Senna artemisioides subsp. *filifolia*
Siemssenia capillaris (A)

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 548-550
Quadrat No: 6	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 742
Coordinates (GDA2020): 482930.9E; 6628681.6N		**Elevation (m):** 368
Aspect: North	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat**/** Plain		
Coarse fragments on the surface: <2% / 2-6mm / Subrounded		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm/ Surface crust		
Cover leaf litter: 50%		
Cover bare ground: 25%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 30-70%	**Crown cover:**10-30%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Acacia incurvaneura	*Acacia tetragonophylla*	*Eremophila clarkei*

ALL TAXA
Acacia hemiteles
Acacia incurvaneura
Acacia mulganeura
Acacia tetragonophylla
Aristida contorta (A)
Austrostipa nitida (A)
Brunonia australis (A)
Eremophila clarkei
Erodium crinitum (A)
Goodenia rosea (A)
Maireana georgei
Ptilotus obovatus
Senna artemisioides subsp. *artemisioides*
Schoenia cassiniana (A)
Siemssenia capillaris (A)
Solanum lasiophyllum
Solanum nummularium
Waitzia acuminata (A)

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 561-563
Quadrat No: Q7	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint: 746**
Coordinates (GDA2020): 482626.3E; 6628304.4N		**Elevation (m): 368**
Aspect: South East	**Fire (yrs):** Long Unburnt	**Condition rating:** Very Good
Landform: Flat / Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface:		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red-Brown/ Clay Loam / Firm		
Cover leaf litter: 50%		
Cover bare ground: 30%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.25-0.5m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** <10%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus salmonophloia	*Atriplex nummularia*	*Atriplex vesicaria*

ALL TAXA
Atriplex nummularia
Atriplex vesicaria
Austrostipa nitida (A)
Eremophila decipiens
Eremophila parvifolia subsp. *auricampi*
Eriochiton sclerolaenoides
Eucalyptus salmonophloia
Frankenia setosa
Maireana georgei
Maireana sedifolia
Maireana triptera
Olearia muelleri
Ptilotus exaltatus (A)
Ptilotus obovatus
Roepera eremaea (A)
Sclerolaena uniflora
Senna artemisioides subsp. *filifolia*

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 555-557
Quadrat No: Q8	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 750
Coordinates (GDA2020): 482199.9E; 6627470.6N		**Elevation (m):** 371
Aspect: South East	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain		
Coarse fragments on the surface: Nil		
Rock outcrop (abundance/runoff): Nil / Very slow		
Soil (profile/field texture/soil surface): Red Brown/ Sand / Clay Loam / Firm/ Surface Crust		
Cover leaf litter: 50%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Shrub Mallee (<8m)	**Growth form:** Chenopod shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 0.5-1m	**Height:** 0.25-0.5m
Crown cover: 30-70%	**Crown cover:** 10-30%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus ravida	*Maireana sedifolia*	*Atriplex vesicaria*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Eriochiton sclerolaenoides
Eucalyptus ravida
Maireana georgei
Maireana sedifolia
Maireana tomentosa
*Mesembryanthemum crystallinum (W)**
Ptilotus exaltatus (A)
Roepera eremaea (A)
Sclerolaena brevifolia
Sclerolaena uniflora

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 557 - 559
Quadrat No: Q9	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 755
Coordinates (GDA2020): 481383.3E; 6625977.3N		**Elevation (m):** 373
Aspect: South East	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat / Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: <2%/ 6-20mm/ Subangular		
Rock outcrop (abundance/runoff): Nil / Very		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam / Firm / Surface Crust		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.25-0.5m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Senna artemisioides* subsp. *filifolia*	*Maireana sedifolia*

ALL TAXA
Acacia acuminata
Austrostipa nitida (A)
Casuarina pauper
Cephalipterum drummondii (A)
Dodonaea lobulata
Eremophila decipiens
Eremophila oldfieldii subsp. *angustifolia*
Helipterum craspedioides (A)
Maireana sedifolia
Olearia muelleri
Pimelea microcephala
Ptilotus exaltatus (A)
Ptilotus obovatus
Roepera eremaea (A)
Scaevola spinescens
Senna artemisioides subsp. *filifolia*
Siemssenia capillaris (A)

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 560-562
Quadrat No: Q10	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 759
Coordinates (GDA2020): 480216.2E; 6624595.1N		**Elevation (m):** 370
Aspect: South East	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: <2%/ 2-6mm/ Subangular		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm/ Surface Crest		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 0.5-1m	**Height:** 0.25-0.5m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus salmonophloia	*Eremophila scoparia*	*Maireana sedifolia*

ALL TAXA
Acacia colletioides
Acacia hemiteles
Acacia tetragonophylla
Atriplex vesicaria
Austrostipa nitida (A)
Austrostipa elegantissima
Cratystylis subspinescens
Eremophila scoparia
Eucalyptus salmonophloia
Grevillea acuaria
Maireana sedifolia
Olearia muelleri
Rhagodia drummondii
Scaevola spinescens
Senna artemisioides subsp. *filifolia*

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 563-565
Quadrat No: Q11	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 763
Coordinates (GDA2020): 480945.2E; 6629682.4N		**Elevation (m):** 376
Aspect: South East	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: <2%/ 2-6mm/ Subangular		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm/ Surface Crust		
Cover leaf litter: 30%		
Cover bare ground: 60%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 3-6m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: <10%	**Crown cover:** 10-30%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Eremophila arachnoides* subsp. *tenera (P3)**	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Cephalipterum drummondii (A)
Dodonaea lobulata
*Eremophila arachnoides subsp. tenera (P3)**
Eremophila scoparia
Eriochiton sclerolaenoides
Exocarpos aphyllus
Frankenia setosa
Goodenia pinnatifida (A)
Helipterum craspedioides (A)
Maireana sedifolia
Pimelea microcephala
Ptilotus exaltatus (A)
Rhodanthe floribunda (A)
Roepera eremaea (A)
Rytidosperma caespitosum (A)
Sclerolaena uniflora
Senna artemisioides subsp. *artemisioides*
Siemssenia capillaris (A)

Project Name: Lake Rebecca		
Date: 10/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 566-568
Quadrat No: Q12	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 767
Coordinates (GDA2020): 481086.9E; 6630164.7N		**Elevation (m):** 377
Aspect: West	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat / Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: 2-10% / 2-6mm / Subangular		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Surface Crust		
Cover leaf litter: 30%		
Cover bare ground: 55%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Chenopod Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 10-30%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus salmonophloia	*Atriplex nummularia*	*Maireana sedifolia*

ALL TAXA
Atriplex nummularia
Atriplex vesicaria
Austrostipa nitida (A)
Eremophila glabra
Eucalyptus salmonophloia
Exocarpos aphyllus
Maireana sedifolia
Maireana tomentosa
Pimelea microcephala
Ptilotus exaltatus (A)
Rhodanthe floribunda (A)
Rhagodia drummondii
Roepera eremaea (A)
Sclerolaena uniflora
Senna artemisioides subsp. *filifolia*
Siemssenia capillaris (A)
Solanum nummularium

Project Name: Lake Rebecca		
Date: 11/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 532-534
Quadrat No: Q13	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 771
Coordinates (GDA2020): 483147.9E; 6631051.4N		**Elevation (m):** 407
Aspect: North	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: 2-10%/ 2-6mm/ Subangular		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam/ Firm/ Surface Crust		
Cover leaf litter: 30%		
Cover bare ground: 60%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 30-70%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Senna artemisioides* subsp. *filifolia*	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Chenopodium curvispicatum
Cratystylis subspinescens
Eremophila oldfieldii subsp. *angustifolia*
Eremophila oppositifolia
Frankenia setosa
Maireana georgei
Maireana sedifolia
Olearia muelleri
Pimelea microcephala
Rhodanthe charsleyae (A)
Roepera eremaea (A)
Rytidosperma caespitosum (A)
Scaevola spinescens
Sclerolaena uniflora
Senna artemisioides subsp. filifolia
Siemssenia capillaris (A)

Project Name: Lake Rebecca		
Date: 11/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 535-537
Quadrat No: Q14	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 775
Coordinates (GDA2020): 481912.3E; 6631058.5N		**Elevation (m):** 395
Aspect: West	**Fire (yrs):** Long unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain**/** No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: 2-10%/2-6mm/Subangular		
Rock outcrop (abundance/runoff): Nil		
Soil (profile/field texture/soil surface): Red Brown/ Clay Loam/ Firm / Surface Crust		
Cover leaf litter: 30%		
Cover bare ground: 60%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Senna artemisioides* subsp. *filifolia*	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa elegantissima
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Cratystylis subspinescens
Frankenia setosa
Goodenia pinnatifida (A)
Maireana georgei
Maireana sedifolia
Olearia muelleri
Pimelea microcephala
Ptilotus obovatus
Rhodanthe floribunda (A)
Rhodanthe maryonii (A)
Roepera eremaea (A)
Scaevola spinescens
Sclerolaena uniflora
Senna artemisioides subsp. *artemisioides*
Senna artemisioides subsp. *filifolia*
Siemssenia capillaris (A)
Solanum lasiophyllum
Streptoglossa liatroides

Project Name: Lake Rebecca		
Date: 11/09/2025	**Botanist:** JJ & JW	**Photo number (NW corner):** 538-540
Quadrat No: Q15	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 779
Coordinates (GDA2020): 481074.7E; 6630453.0N		**Elevation (m):** 395
Aspect: West	**Fire (yrs):** Long unburnt	**Condition rating:** Excellent
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: 2-10%/ 2-6mm/ Subangular		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam / Soft/ Surface Crust		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Chenopod Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 10-30%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus salmonophloia	*Maireana sedifolia*	*Atriplex vesicaria*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Cratystylis subspinescens
Enchylaena tomentosa
Eremophila parvifolia subsp. *auricampi*
Eucalyptus salmonophloia
Lawrencia repens
Maireana oppositifolia
Maireana pyramidata
Maireana sedifolia
Pittosporum angustifolium
Roepera eremaea (A)
Scaevola spinescens
Sclerolaena brevifolia
Sclerolaena uniflora
Siemssenia capillaris (A)
Solanum lasiophyllum
Solanum nummularium

Project Name: Lake Rebecca		
Date: 11/09/2025	**Botanist:** JJ & JW	**Photo number (NW corner):** 542-544
Quadrat No: Q16	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 783
Coordinates (GDA2020): 483293.9E; 6630705.1N		**Elevation (m):** 378
Aspect: South West	**Fire (yrs):** Long Unburnt	**Condition rating:** Excellent
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: Nil		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam / Soft/ Surface Crust		
Cover leaf litter: 30%		
Cover bare ground: 55%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Cratystylis subspinescens*	*Maireana sedifolia*

ALL TAXA
Acacia colletioides
Atriplex vesicaria
Austrostipa nitida (A)
Casuarina pauper
Cratystylis subspinescens
*Eremophila arachnoides subsp. tenera (P3)**
Frankenia setosa
Maireana sedifolia
Olearia muelleri
Pimelea microcephala
Rhagodia drummondii
Scaevola spinescens
Senna artemisioides subsp. *filifolia*

Project Name: Lake Rebecca		
Date: 11/09/2025	**Botanist:** JJ & JW	**Photo number (NW corner):** 546-548
Quadrat No: Q17	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 787
Coordinates (GDA2020): 483340.8E; 6630294.2N		**Elevation (m):** 376
Aspect: North	**Fire (yrs):** Long Unburnt	**Condition rating:** Excellent
Landform: Flat/ Plain/ No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: <2%/ 6-20mm/Subangular		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown / Clay Loam / Firm / Surface Crust		
Cover leaf litter: 40%		
Cover bare ground: 40%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 10-30%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Eucalyptus salmonophloia	*Eremophila scoparia*	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa elegantissima
Austrostipa nitida (A)
Cratystylis subspinescens
Eremophila longifolia
Eremophila oppositifolia
Eremophila scoparia
Eucalyptus salmonophloia
Frankenia setosa
Maireana sedifolia
Olearia muelleri
Pimelea microcephala
Roepera eremaea (A)
Scaevola spinescens
Sclerolaena uniflora
Senna artemisioides subsp. filifolia
Senna cardiosperma

Project Name: Lake Rebecca		
Date: 11/09/25	**Botanist:** JJ & JW	**Photo number (NW corner):** 550-552
Quadrat No: Q18	**Quadrat size/shape:** 20m x 20m/Square	**Waypoint:** 791
Coordinates (GDA2020): 482714.6E; 6629864.3N		**Elevation (m):** 374
Aspect: West	**Fire (yrs):** Long Unburnt	**Condition rating:** Very Good
Landform: Flat/ Plain / No effective disturbance except grazing by hoofed animals		
Coarse fragments on the surface: Nil		
Rock outcrop (abundance/runoff): Nil / Very Slow		
Soil (profile/field texture/soil surface): Red Brown/ Clay loam/ Soft/ Surface crust		
Cover leaf litter: 30%		
Cover bare ground: 60%		
Upper stratum	**Mid-stratum**	**Lower stratum**
Growth form: Tree	**Growth form:** Shrub	**Growth form:** Chenopod Shrub
Height: 6-12m	**Height:** 1-3m	**Height:** 0.5-1m
Crown cover: 10-30%	**Crown cover:** 30-70%	**Crown cover:** 30-70%
Dominant taxa:	**Dominant taxa:**	**Dominant taxa:**
Casuarina pauper	*Cratystylis subspinescens*	*Maireana sedifolia*

ALL TAXA
Atriplex vesicaria
Austrostipa nitida (A)
Brachyscome ciliaris (A)
Casuarina pauper
Cratystylis subspinescens
Eremophila oldfieldii subsp. *angustifolia*
Enchylaena tomentosa
Exocarpos aphyllus
Maireana pyramidata
Maireana oppositifolia
Maireana sedifolia
Rytidosperma caespitosum (A)
Sclerolaena brevifolia
Sclerolaena uniflora
Senna cardiosperma

APPENDIX F:
QUADRAT PHOTOGRAPHS

Q1			
Direction	**East**	**South-East**	**South**
Q2			
Direction	**East**	**South-East**	**South**

Q3			
Direction	**East**	**South-East**	**South**
Q4			
Direction	**East**	**South-East**	**South**

Q5			
Direction	**East**	**South-East**	**South**
Q6			
Direction	**East**	**South-East**	**South**

Q7			
Direction	**East**	**South-East**	**South**
Q8			
Direction	**East**	**South-East**	**South**

Q9			
Direction	**East**	**South-East**	**South**
Q10			
Direction	**East**	**South-East**	**South**

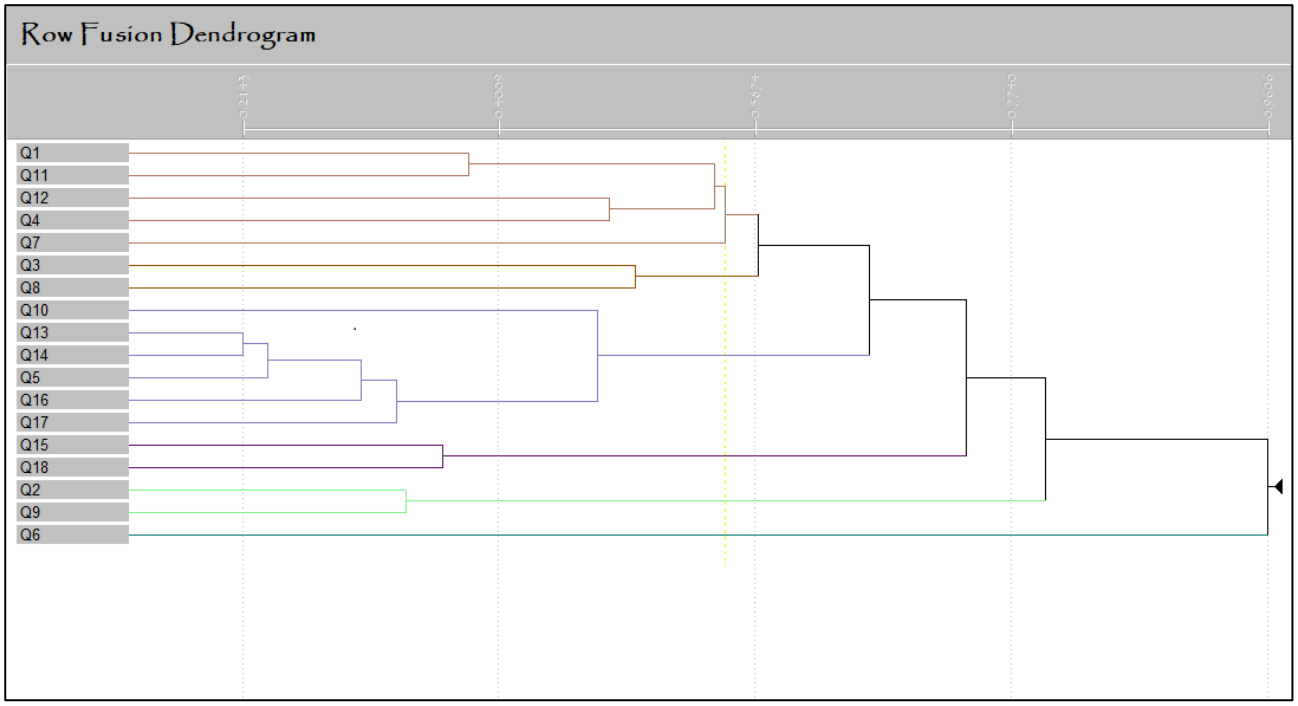
Q11			
Direction	**East**	**South-East**	**South**
Q12			
Direction	**East**	**South-East**	**South**

Q13			
Direction	**East**	**South-East**	**South**
Q14			
Direction	**East**	**South-East**	**South**

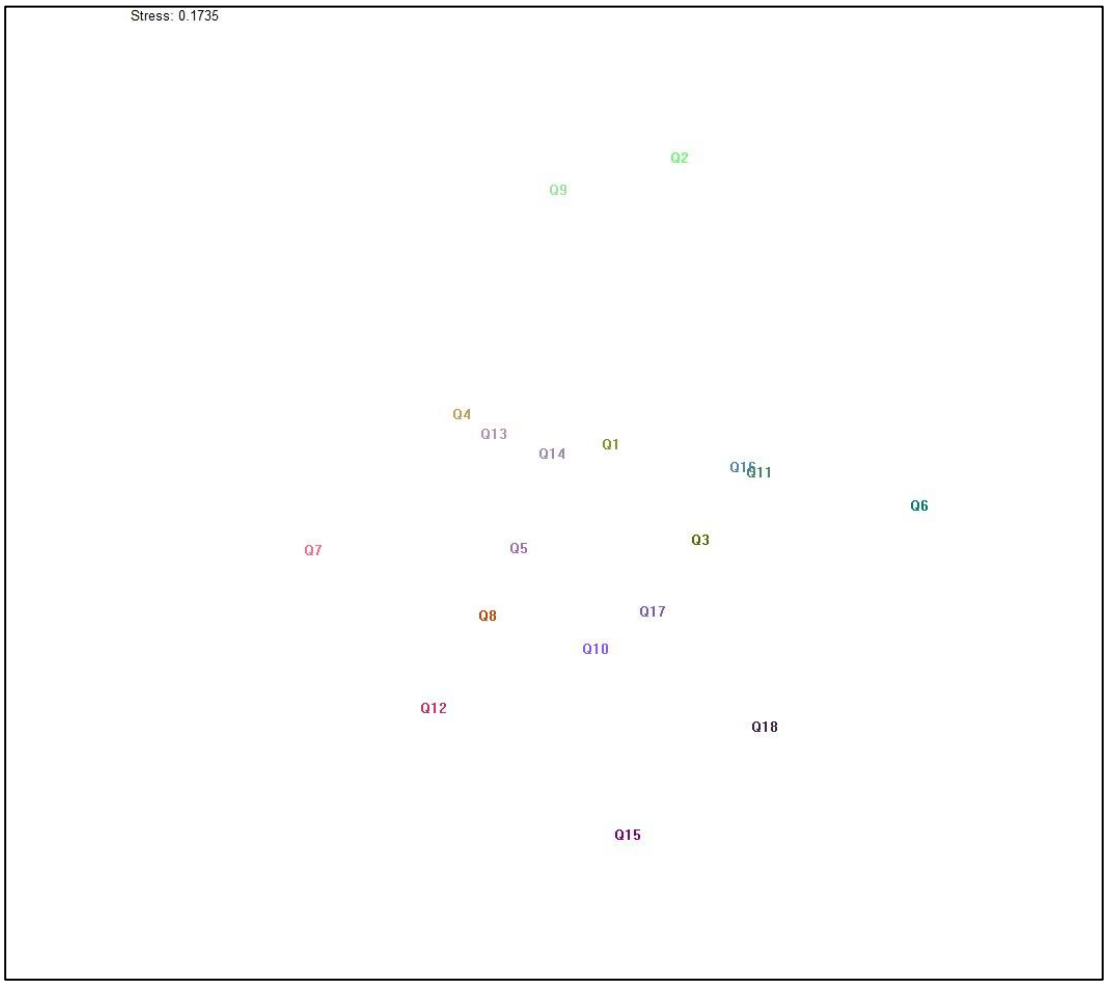
Q15			
Direction	**East**	**South-East**	**South**
Q16			
Direction	**East**	**South-East**	**South**

Q17			
Direction	**East**	**South-East**	**South**
Q18			
Direction	**East**	**South-East**	**South**

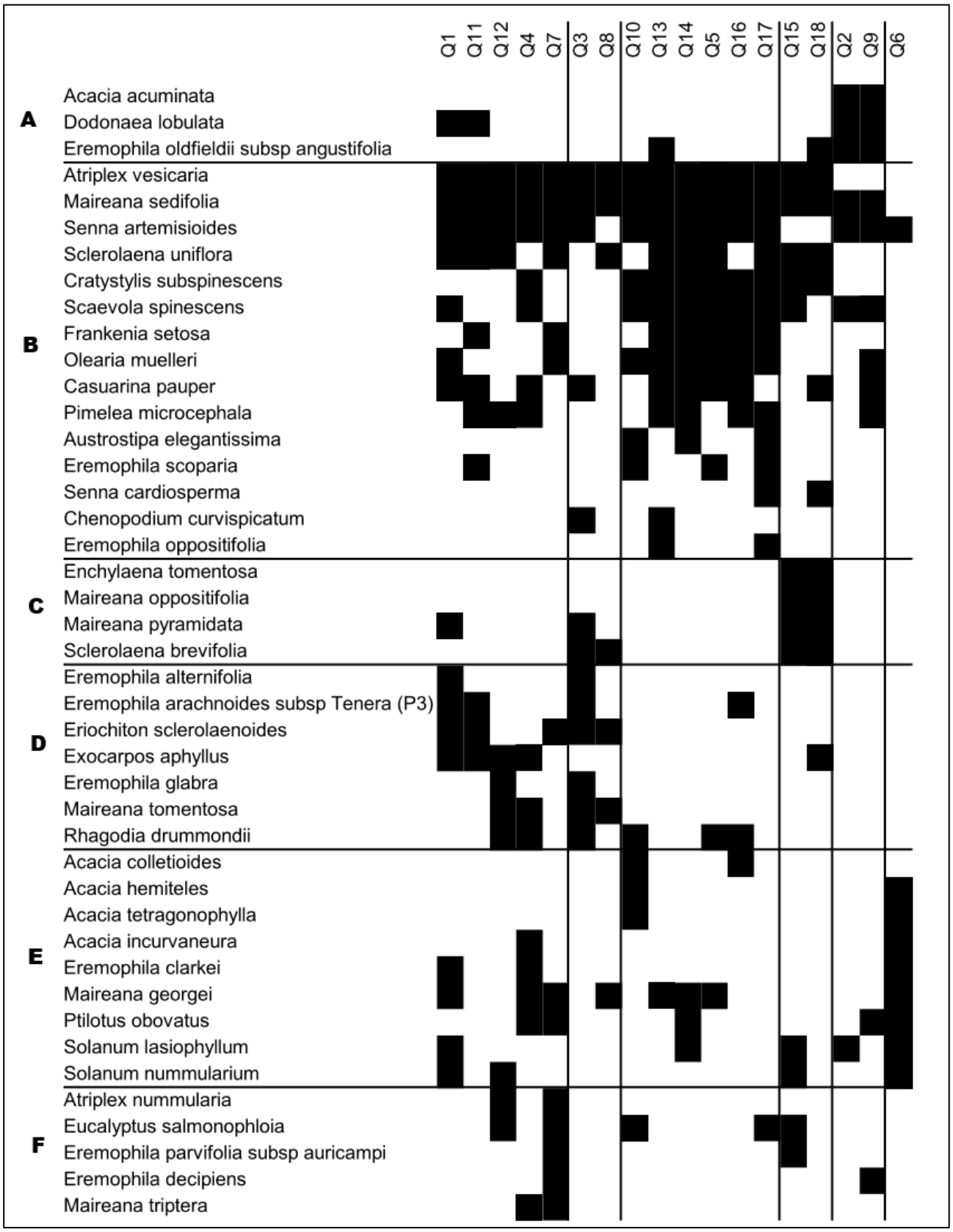
APPENDIX G:
PATN ANALYSIS RESULTS



Ordination Graph:



Two Way Table:



APPENDIX H:
DANDJOO SEARCH RESULTS

Dandjoo Vascular Flora Species List

Source: Dandjoo – Department of Biodiversity, Conservation and Attractions
Method: User defined circle: 50.0 km
Dandjoo Export: bio_species_list_public_2025-09-24T15_44_01.996136+08_00_filtered_flora.xlsm
Filter: Kingdon = Plantae

Class	Order	Family	Taxon	Common Name	Estab.	Code
Liliopsida	Alismatales	Juncaginaceae Rich.	Triglochin nana		native	
Liliopsida	Asparagales	Asparagaceae Juss.	Lomandra leucocephala subsp. robusta	Woolly Mat-rush	native	
Liliopsida	Asparagales	Asparagaceae Juss.	Thysanotus speckii		native	
Liliopsida	Asparagales	Orchidaceae Juss.	Pterostylis xerampelina	Rock Loving Rufous Greenhood	native	P1
Liliopsida	Liliales	Colchicaceae DC.	Wurmbea tenella	Eight Nancy	native	
Liliopsida	Poales	Cyperaceae Juss.	Isolepis congrua		native	
Liliopsida	Poales	Cyperaceae Juss.	Lepidosperma resinosum		native	
Liliopsida	Poales	Poaceae Barnhart	Amphipogon caricinus	Long Greybeard Grass	native	
Liliopsida	Poales	Poaceae Barnhart	Aristida contorta	Bunched Kerosene Grass	native	
Liliopsida	Poales	Poaceae Barnhart	Austrostipa platychaeta		native	
Liliopsida	Poales	Poaceae Barnhart	Austrostipa scabra		native	
Liliopsida	Poales	Poaceae Barnhart	Digitaria brownii		native	
Liliopsida	Poales	Poaceae Barnhart	Enneapogon caerulescens		native	
Liliopsida	Poales	Poaceae Barnhart	Eragrostis dielsii	Mallee Lovegrass	native	
Liliopsida	Poales	Poaceae Barnhart	Eragrostis lacunaria	Purple Lovegrass	native	
Liliopsida	Poales	Poaceae Barnhart	Monachather paradoxus		native	
Liliopsida	Poales	Poaceae Barnhart	Paspalidium gracile		native	
Liliopsida	Poales	Poaceae Barnhart	Schismus arabicus	Araby Grass	alien	
Liliopsida	Poales	Poaceae Barnhart	Triodia desertorum		native	
Liliopsida	Poales	Poaceae Barnhart	Triodia rigidissima		native	
Liliopsida	Poales	Poaceae Barnhart	Triodia scariosa		native	
Liliopsida	Poales	Poaceae Barnhart	Tripogonella loliiformis		native	
Magnoliopsid	Apiales	Apiaceae Lindl.	Daucus glochidiatus	Australian Carrot	native	
Magnoliopsid	Apiales	Apiaceae Lindl.	Platysace trachymenioides		native	
Magnoliopsid	Apiales	Araliaceae Juss.	Trachymene ornata	Spongefruit	native	
Magnoliopsid	Apiales	Pittosporaceae R.Br.	Bursaria occidentalis		native	
Magnoliopsid	Apiales	Pittosporaceae R.Br.	Pittosporum angustifolium		mixed	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Actinobole uliginosum	Flannel Cudweed	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Asteridea athrixioides		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Brachyscome ciliaris		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Brachyscome iberidifolia		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Brachyscome pusilla		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Calotis hispidula		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Centaurea melitensis	Maltese Cockspur	alien	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Chrysocephalum apiculatum subsp. glandulosum		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Chrysocephalum puteale		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Chthonocephalus pseudevax	Woolly Groundheads	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Cratystylis subspinescens	Australian Sage	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Erymophyllum ramosum subsp. ramosum		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Gnephosis angianthoides		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Helipterum craspedioides		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Hyalosperma demissum		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Hyalosperma glutinosum subsp. glutinosum		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Isoetopsis graminifolia		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Lawrencella davenportii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Leiocarpa semicalva		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Leiocarpa semicalva subsp. semicalva		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Lemooria burkittii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Millotia tenuifolia var. tenuifolia		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Minuria cunninghamii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Notisia intonsa		native	P3
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Olearia incana		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Olearia muelleri		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Olearia pimeleoides		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Olearia stuartii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Olearia subspicata		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Oligocarpus calendulaceus		alien	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Ozothamnus cassiope		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Panaetia lessonii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Pogonolepis stricta		native	

Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Pseudognaphalium luteoalbum	Jersey Cudweed	mixed	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe battii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe charsleyae		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe chlorocephala		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe chlorocephala subsp. rosea		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe laevis		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe maryonii		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe oppositifolia subsp. oppositifolia		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe pygmaea		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe sterilescens		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Rhodanthe stricta		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Schoenia cassiniana	Schoenia	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Senecio glossanthus	Slender Groundsel	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Senecio gregorii	Fleshy Groundsel	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Senecio lacustrinus		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Siemssenia capillaris	Wiry Podolepis	native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Sonchus oleraceus	Common Sowthistle	alien	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Vittadinia dissecta var. hirta		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Waitzia acuminata var. acuminata		native	
Magnoliopsid	Asterales	Asteraceae Bercht. & J.	Waitzia fitzgibbonii		native	
Magnoliopsid	Asterales	Campanulaceae Juss.	Lithotoma petraea		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Coopernookia strophiolata		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Dampiera roycei		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Dampiera tenuicaulis var. tenuicaulis		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Goodenia daviesii		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Goodenia elderi		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Goodenia havilandii		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Goodenia jaurdiensis		native	P2
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Goodenia rosea		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Scaevola bursariifolia		native	
Magnoliopsid	Asterales	Goodeniaceae R.Br.	Scaevola spinescens	Currant Bush	native	
Magnoliopsid	Asterales	Stylidiaceae R.Br.	Stylidium induratum	Desert Triggerplant	native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Harmsiodoxa brevipes var. brevipes		native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Lepidium oxytrichum		native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Menkea australis		native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Menkea sphaerocarpa		native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Stenopetalum lineare var. lineare		native	
Magnoliopsid	Brassicales	Brassicaceae Burnett	Stenopetalum pedicellare		native	
Magnoliopsid	Caryophyllales	Aizoaceae Martinov	Disphyma crassifolium subsp. clavellatum		native	
Magnoliopsid	Caryophyllales	Aizoaceae Martinov	Gunniopsis intermedia		native	
Magnoliopsid	Caryophyllales	Aizoaceae Martinov	Gunniopsis quadrifida		native	
Magnoliopsid	Caryophyllales	Aizoaceae Martinov	Tetragonia eremaea		native	
Magnoliopsid	Caryophyllales	Amaranthaceae Juss.	Ptilotus chamaecladus		native	
Magnoliopsid	Caryophyllales	Amaranthaceae Juss.	Ptilotus drummondii	Narrowleaf Mulla Mulla	native	
Magnoliopsid	Caryophyllales	Amaranthaceae Juss.	Ptilotus exaltatus	Tall Mulla Mulla	native	
Magnoliopsid	Caryophyllales	Amaranthaceae Juss.	Ptilotus gaudichaudii		native	
Magnoliopsid	Caryophyllales	Amaranthaceae Juss.	Ptilotus obovatus	Cotton Bush	native	
Magnoliopsid	Caryophyllales	Caryophyllaceae Juss.	Silene gallica var. gallica		alien	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Atriplex bunburyana		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Atriplex codonocarpa	Flat-topped Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Atriplex nummularia subsp. spathulata	Old Man Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Atriplex vesicaria		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Chenopodium desertorum		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Chenopodium gaudichaudianum	Cottony Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Dysphania kalpari		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Einadia nutans		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Einadia nutans subsp. eremaea		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Enchylaena lanata		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Enchylaena tomentosa		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Enchylaena tomentosa var. tomentosa		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Eriochiton sclerolaenoides		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana carnosa	Cottony Bluebush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana eriosphaera		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana georgei	Satiny Bluebush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana integra		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana pentatropis		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana pyramidata	Sago Bush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana sedifolia	Pearl Bluebush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana tomentosa	Felty Bluebush	native	

Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana trichoptera	Downy Bluebush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Maireana triptera	Threewinged Bluebush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Rhagodia drummondii		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Rhagodia eremaea	Thorny Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Rhagodia preissii		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Rhagodia ulicina		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Salsola australis		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena cuneata	Yellow Bindii	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena decurrens		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena densiflora		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena diacantha	Grey Copperburr	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena fusiformis		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena parviflora	Small-flower Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Sclerolaena patenticuspis	Spear-fruit Saltbush	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Tecticornia chartacea		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Tecticornia indica subsp. bidens		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Tecticornia pergranulata subsp. pergranula	Blackseed Samphire	native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Tecticornia pruinosa		native	
Magnoliopsid	Caryophyllales	Chenopodiaceae Vent.	Tecticornia pterygosperma subsp. pterygosperma		native	
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia cinerea		native	
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia fecunda		native	
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia georgei		native	P1
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia laxiflora		native	
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia pauciflora		native	
Magnoliopsid	Caryophyllales	Frankeniaceae Desv.	Frankenia setosa		native	
Magnoliopsid	Caryophyllales	Montiaceae Raf.	Calandrinia polyandra		native	
Magnoliopsid	Caryophyllales	Montiaceae Raf.	Calandrinia ptychosperma		native	
Magnoliopsid	Caryophyllales	Polygonaceae Juss.	Persicaria prostrata		native	
Magnoliopsid	Ericales	Primulaceae Borkh.	Lysimachia arvensis	Pimpernel	alien	
Magnoliopsid	Euasterids I	Boraginaceae Juss.	Halgania cyanea var. Allambi Stn (B.W. Strong 676)		native	
Magnoliopsid	Euasterids I	Boraginaceae Juss.	Halgania integerrima		native	
Magnoliopsid	Euasterids I	Boraginaceae Juss.	Omphalolappula concava		native	
Magnoliopsid	Fabales	Fabaceae	Senna Mill.			
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia aptaneura		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia burkittii	Sandhill Wattle	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia caesaneura		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia calcarata		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia colletioides	Wait-a-while	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia craspedocarpa	Hop Mulga	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia donaldsonii		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia duriuscula		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia eremophila var. eremophila		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia eremophila var. Numerous-nerved variant (A.S.George 11924)		native	P3
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia erinacea		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia hemiteles		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia heteroneura var. jutsonii		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia incurvaneura		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia jennerae		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia kalgoorliensis		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia kempeana	Witchetty Bush	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia ligulata	Umbrella Bush	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia merrallii		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia murrayana	Sandplain Wattle	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia oswaldii	Miljee	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia ramulosa	Horse Mulga	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia ramulosa var. ramulosa		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia rigens	Nealie	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia tetragonophylla	Kurara	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Acacia xerophila var. brevior		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Daviesia aphylla		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Dillwynia acerosa		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Indigofera georgei		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Indigofera occidentalis		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Indigofera psammophila		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Jacksonia arida		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Leptosema chambersii		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Medicago laciniata	Cutleaf Medic	alien	
Magnoliopsid	Fabales	Fabaceae Lindl.	Mirbelia ramulosa		native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Mirbelia spinosa		native	

Magnoliopsid	Fabales	Fabaceae Lindl.	Senna artemisioides	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Senna artemisioides subsp. filifolia	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Senna artemisioides subsp. helmsii	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Senna artemisioides subsp. x artemisioides	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Senna pleurocarpa var. angustifolia	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona affinis	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona campestris	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona canescens	Grey Swainsona	native
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona colutoides	Bladder Vetch	native
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona oroboides	Variable Swainsona	native
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona purpurea	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Swainsona tenuis	native	
Magnoliopsid	Fabales	Fabaceae Lindl.	Templetonia incrassata	native	
Magnoliopsid	Fagales	Casuarinaceae R.Br.	Allocasuarina campestris	native	
Magnoliopsid	Fagales	Casuarinaceae R.Br.	Allocasuarina eriochlamys subsp. eriochlamys	native	
Magnoliopsid	Fagales	Casuarinaceae R.Br.	Allocasuarina helmsii	native	
Magnoliopsid	Fagales	Casuarinaceae R.Br.	Casuarina pauper	native	
Magnoliopsid	Gentianales	Apocynaceae Juss.	Alyxia buxifolia	native	
Magnoliopsid	Gentianales	Apocynaceae Juss.	Leichhardtia australis	Cogola Bush	native
Magnoliopsid	Gentianales	Apocynaceae Juss.	Vincetoxicum lineare	native	
Magnoliopsid	Gentianales	Gentianaceae Juss.	Schenkia australis	native	
Magnoliopsid	Gentianales	Rubiaceae Juss.	Pomax ammophila	native	
Magnoliopsid	Gentianales	Rubiaceae Juss.	Psydrax suaveolens	native	
Magnoliopsid	Geraniales	Geraniaceae Juss.	Erodium aureum	alien	
Magnoliopsid	Geraniales	Geraniaceae Juss.	Erodium crinitum	native	
Magnoliopsid	Geraniales	Geraniaceae Juss.	Erodium cygnorum	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Apatelantha viscida	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Dicrastylis cundeeleensis	native	P4
Magnoliopsid	Lamiales	Lamiaceae Martinov	Dicrastylis flexuosa	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Prostanthera althoferi subsp. althoferi	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Prostanthera campbellii	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Prostanthera laricoides	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Westringia cephalantha	native	
Magnoliopsid	Lamiales	Lamiaceae Martinov	Westringia rigida	Stiff Westringia	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila alternifolia	Poverty Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila arachnoides subsp. tenera	Slender-leaved Eremophila	native P3
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila caperata	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila clarkei	Turpentine Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila decipiens subsp. decipiens	Slender Fuschia Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila dempsteri	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila eriocalyx	Desert Pride	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila forrestii subsp. forrestii	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila georgei	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila glabra subsp. glabra	Common Emu Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila glabra subsp. tomentosa	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila granitica	Granite Poverty Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila latrobei	Warty Fuchsia Bush	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila latrobei subsp. latrobei	Native Fuschia	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila latrobei subsp. glabra	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila maculata subsp. brevifolia	Native Fuchsia	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila oldfieldii subsp. angustifolia	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila oppositifolia subsp. angustifolia	Western Weeooka	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila paisleyi subsp. paisleyi	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila parvifolia subsp. auricampi	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila platythamnos subsp. platythamnos	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila pustulata	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila scoparia	Broom Bush (	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila serrulata	Serrate-leaved Eremophila	native
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila sp. Plumridge Lakes (S.G.M. Carr 534)	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila subfloccosa subsp. lanata	native	
Magnoliopsid	Lamiales	Scrophulariaceae Juss.	Eremophila youngii subsp. youngii	native	
Magnoliopsid	Laurales	Lauraceae Juss.	Cassytha melantha	Large Dodder-laurel	native
Magnoliopsid	Malpighiales	Euphorbiaceae Juss.	Bertya dimerostigma	native	
Magnoliopsid	Malpighiales	Euphorbiaceae Juss.	Beyeria sulcata var. sulcata	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Abutilon cryptopetalum	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Abutilon otocarpum	Desert Chinese Lantern	native
Magnoliopsid	Malvales	Malvaceae Juss.	Brachychiton gregorii	Desert Kurrajong	native
Magnoliopsid	Malvales	Malvaceae Juss.	Commersonia craurophylla	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Commersonia magniflora subsp. oblongifolia	native	

Magnoliopsid	Malvales	Malvaceae Juss.	Hannafordia bissillii subsp. bissillii		native	
Magnoliopsid	Malvales	Malvaceae Juss.	Lawrencia squamata		native	
Magnoliopsid	Malvales	Malvaceae Juss.	Radyera farragei	Knobby Hibiscus	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Seringia velutina	Velvet firebush	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Sida calyxhymenia	Tall Sida	native	
Magnoliopsid	Malvales	Malvaceae Juss.	Sida ectogama		native	
Magnoliopsid	Malvales	Malvaceae Juss.	Sida sp. Golden calyces glabrous (H.N. Foote 32)		native	
Magnoliopsid	Malvales	Thymelaeaceae Juss.	Pimelea microcephala	Shrubby Riceflower	native	
Magnoliopsid	Malvales	Thymelaeaceae Juss.	Pimelea microcephala subsp. microcephala		native	
Magnoliopsid	Malvales	Thymelaeaceae Juss.	Pimelea spiculigera var. thesioides		native	
Magnoliopsid	Malvales	Thymelaeaceae Juss.	Pimelea trichostachya	Spiked Riceflower	native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Aluta aspera subsp. aspera		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Callistemon phoeniceus		mixed	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Calothamnus gilesii		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Enekbatus cryptandroides		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Enekbatus eremaeus		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus articulata		native	EN
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus celastroides		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus ceratocorys		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus cometae-vallis		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus concinna		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus cylindrocarpa		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus ecdysiastes		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus eremicola		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus eremophila	Tall Sand Mallee	native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus ewartiana	Ewart's Mallee	native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus flavida		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus gracilis		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus griffithsii		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus horistes		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus hypolaena		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus incrassata		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus kruseana		native	P4
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus longissima		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus loxophleba subsp. lissophloia		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus oleosa		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus oleosa subsp. oleosa		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus pimpiniana		native	P3
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus platycorys		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus plumula		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus ravida		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus rigidula subsp. interior		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus rosacea		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus salmonophloia		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus salubris		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus sheathiana		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus transcontinentalis		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus virella		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus websteriana		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus websteriana subsp. websteriana		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus woodwardii		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Eucalyptus yilgarnensis		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Euryomyrtus maidenii		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Homalocalyx thryptomenoides		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca coccinea	Goldfields Bottlebrush	native	P3
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca eleuterostachya		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca fulgens subsp. fulgens		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca halmaturorum		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca hamata		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca lateriflora		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Melaleuca macronychia subsp. trygonoides		native	P3
Magnoliopsid	Myrtales	Myrtaceae Juss.	Micromyrtus hymenonema		native	
Magnoliopsid	Myrtales	Myrtaceae Juss.	Micromyrtus serrulata		native	P3
Magnoliopsid	Myrtales	Myrtaceae Juss.	Thryptomene eremaea		native	P2
Magnoliopsid	Myrtales	Myrtaceae Juss.	Thryptomene urceolaris		native	
Magnoliopsid	Proteales	Proteaceae Juss.	Conospermum toddii		native	P4
Magnoliopsid	Proteales	Proteaceae Juss.	Grevillea acacioides		native	
Magnoliopsid	Proteales	Proteaceae Juss.	Grevillea acuaria		native	
Magnoliopsid	Proteales	Proteaceae Juss.	Grevillea juncifolia subsp. temulenta		native	

Magnoliopsid	Proteales	Proteaceae Juss.	Grevillea nematophylla subsp. planicosta		native	
Magnoliopsid	Proteales	Proteaceae Juss.	Grevillea sarissa subsp. sarissa		native	
Magnoliopsid	Proteales	Proteaceae Juss.	Hakea francisiana	Emu Tree	native	
Magnoliopsid	Proteales	Proteaceae Juss.	Hakea preissii	Needle Tree	native	
Magnoliopsid	Proteales	Proteaceae Juss.	Hakea recurva subsp. recurva		mixed	
Magnoliopsid	Rosales	Rhamnaceae Juss.	Cryptandra distigma		native	
Magnoliopsid	Rosales	Urticaceae Juss.	Parietaria cardiostegia		native	
Magnoliopsid	Santalales	Loranthaceae Juss.	Amyema benthamii		native	
Magnoliopsid	Santalales	Loranthaceae Juss.	Amyema fitzgeraldii	Pincushion Mistletoe	native	
Magnoliopsid	Santalales	Loranthaceae Juss.	Amyema miquelii	Stalked Mistletoe	native	
Magnoliopsid	Santalales	Loranthaceae Juss.	Lysiana murrayi	Mistletoe	native	
Magnoliopsid	Santalales	Santalaceae R.Br.	Exocarpos aphyllus	Leafless Ballart	native	
Magnoliopsid	Santalales	Santalaceae R.Br.	Leptomeria preissiana		native	
Magnoliopsid	Santalales	Santalaceae R.Br.	Santalum spicatum	Sandalwood	native	
Magnoliopsid	Sapindales	Rutaceae Juss.	Cyanothamnus coerulescens subsp. spinescens		native	
Magnoliopsid	Sapindales	Rutaceae Juss.	Phebalium canaliculatum		native	
Magnoliopsid	Sapindales	Sapindaceae Juss.	Alectryon oleifolius subsp. canescens		native	
Magnoliopsid	Sapindales	Sapindaceae Juss.	Dodonaea lobulata	Bead Hopbush	native	
Magnoliopsid	Sapindales	Sapindaceae Juss.	Dodonaea rigida		native	
Magnoliopsid	Sapindales	Sapindaceae Juss.	Dodonaea stenozyga		native	
Magnoliopsid	Sapindales	Sapindaceae Juss.	Dodonaea viscosa subsp. angustissima		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Duboisia hopwoodii		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Nicotiana pila		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Nicotiana rotundifolia		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Nicotiana salina		native	P1
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum ferocissimum		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum hoplopetalum	Thorny Solanum	mixed	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum lasiophyllum	Flannel Bush	mixed	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum nummularium	Money-leaved Solanum	native	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum orbiculatum subsp. orbiculatum	Round-leaved Solanum	native	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum plicatile		native	
Magnoliopsid	Solanales	Solanaceae Juss.	Solanum terraneum		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera apiculata		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera eichleri		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera eremaea		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera glauca	Pale Twinleaf	native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera halophila		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera ovata	Dwarf Twinleaf	native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera reticulata		native	
Magnoliopsid	Zygophyllales	Zygophyllaceae R.Br.	Roepera similis		native	
Pinopsida	Pinales	Cupressaceae Gray	Callitris columellaris		mixed	
Pteridopsida	Polypodiales	Aspleniaceae Newman	Asplenium subglandulosum		native	
Pteridopsida	Polypodiales	Pteridaceae E.D.M.Kirc	Cheilanthes lasiophylla	Woolly Cloak Fern	native	
Pteridopsida	Polypodiales	Pteridaceae E.D.M.Kirc	Cheilanthes sieberi subsp. sieberi		native	

Summary by Class	
Class	**Taxa**
Liliopsida	22
Magnoliopsida	354
Pinopsida	1
Pteridopsida	3
TOTAL	**380**

Top 5 Families by Species Count	
Family	**Taxa**
Myrtaceae Juss.	54
Asteraceae Bercht.	53
Fabaceae Lindl.	49
Chenopodiaceae Ve	40
Scrophulariaceae Ju	27

Summary by Conservation Code	
Code	**Taxa**
P1	3
P2	2
P3	7
P4	3
EN	1

APPENDIX I:
EPBC PMST SEARCH RESULTS

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: 24-Sep-2025

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:	11
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 https://www.dcceew.gov.au/parks-heritage/heritage

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	11
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:	3
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	2
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		[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.		
Scientific Name	Threatened Category	Presence Text
BIRD		
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area
MAMMAL		

Scientific Name	Threatened Category	Presence Text
[Sminthopsis psammophila](#)		
Sandhill Dunnart [291]	Endangered	Species or species habitat likely to occur within area
PLANT		
[Hibbertia crispula](#)		
Ooldea Guinea-flower [15222]	Vulnerable	Species or species habitat may occur within area
REPTILE		
[Liopholis kintorei](#)		
Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
[Apus pacificus](#)		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Motacilla cinerea](#)		
Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#)		
Common Sandpiper [59309]		Species or species habitat may occur within area
[Calidris acuminata](#)		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
[Calidris ferruginea](#)		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#)		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Tringa nebularia](#)		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Thinornis cucullatus as Thinornis rubricollis		
Hooded Plover, Hooded Dotterel [87735]		Species or species habitat may occur within area overfly marine area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Coonana Timber Reserve	5(1)(g) Reserve	WA
Queen Victoria Spring	Nature Reserve	WA
Wallaby Rocks Timber Reserve	5(1)(g) Reserve	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Tropicana Gold Project-Develop open cut gold mine, and associated infrastructure	2008/4270	Controlled Action	Post-Approval
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed

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 is 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 on the contents of this report.

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 point locations and environmental data layers.

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 when time permits.

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 breeding sites; and
- 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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