Level 1
Flora and Vegetation Survey
Dacian Gold Ltd
Mt Morgans Gold Project

Prepared for

FINAL
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1 INTRODUCTION

Dacian Gold Limited (Dacian) is planning to develop the Mt Morgans Gold Project (the Project) located approximately 30 km south west of Laverton, in the northern goldfields of Western Australia. The Project is within the Eastern Murchison (MUR1) Subregion as delineated under the Biogeographic Regionalisation for Australia (IBRA) system.

The Project is a brownfields site that encompasses three historic operational areas, comprising:

- Westralia: Containing the Westralia and Transvaal pits, other satellite pits and historical processing areas;
- Jupiter: Containing the Jupiter pit and heap leach area, located approximately 15 km to the east of Westralia; and
- The Mt Morgans and Jupiter Borefields (hereafter referred to as the borefield), containing 14 bores constructed in a calcrete aquifer, of which 6 were pumped during the period 1985 - 1997 to supply raw water to the historic Westralia processing plant and Jupiter heap leach facility.

Dacian proposes to develop an open pit mining complex at Jupiter and three underground mines at Westralia. Associated infrastructure development will include a processing plant, tailings storage facility (TSF), Run of Mine (ROM) Pads, waste rock dumps, power plant, workshops, administration offices, borefield, camp, pipelines and roads.

Infrastructure at Westralia will be primarily located in existing disturbed areas with disturbance to native vegetation predominantly within the Jupiter area where the TSF and processing plant will be constructed.

Dacian commissioned NVS to complete a Level 1 Flora and Vegetation survey of the Project area from the 11th to 15th March 2016. A conceptual disturbance footprint and associated survey area was provided covering an area of approximately 4,641 hectares.

For the purpose of this report the survey is broken down into three areas:

- The proposed Jupiter mining and infrastructure area (2,902 ha);
- The proposed borefield area (1,699 ha); and
- The proposed camp (12.72 ha) and irrigation area (27.11 ha).

Maps of these areas are included in Figure 1, Figure 2 and Appendix 4.

Figure 1: Regional map of Project Area

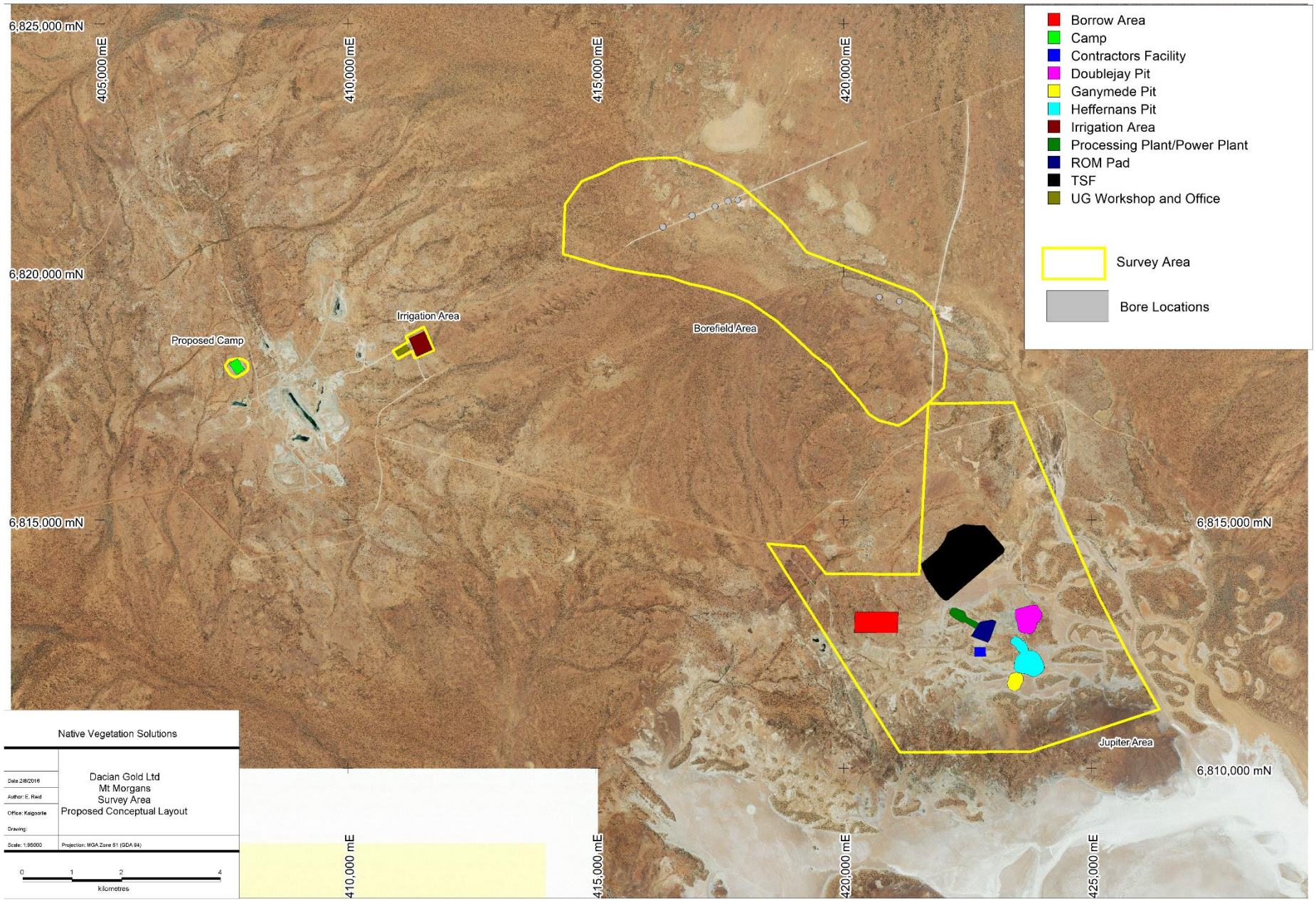

Figure 2: Survey Area and Conceptual Site Layout

1.1 Objectives

The objective of this report is to document the results of the flora and vegetation component of a Level 1 assessment conducted in accordance with the Environmental Protection Authority (EPA) "*Terrestrial Biological Surveys as an Element of Biodiversity Protection; Position Statement No 3*" (EPA, 2002) and *Guidance Statement No. 51 "Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004)", for the purpose of mining.

A Level 1 study has two components:
1). Desktop study which includes a literature review and a search of the relevant databases;

and

2). Reconnaissance survey of the survey area to verify the desktop survey, to define vegetation units present in the area, search for species of conservation significance and to determine potential sensitivity to impact.

EPA's *Position Statement No. 3* (EPA, 2002) provides indicative levels of biological survey in relation to the scale and nature of the impact and the sensitivity of the receiving environment. The EPA uses the Interim Biogeographic Regionalisation of Australia (IBRA) as the largest unit for Environmental Impact Assessment decision making in relation to the conservation of biodiversity. Given the scale and nature of the proposed disturbance, a Level 1 flora and vegetation assessment is considered suitable for the survey area.

Therefore, the scope of work for the Flora and Vegetation Survey was to:
- conduct a desktop study that includes a literature review and search of the relevant databases;
- generally describe the vegetation associations in the survey area;
- prepare an inventory of species occurring in the survey area;
- identify any vegetation or flora of particular conservation significance; and
- provide recommendations, including the management of perceived impacts to flora and vegetation within the survey area.

1.2 Vegetation

The survey area lies in the Murchison (MUR) IBRA bioregion within the Eastern Murchison (MUR1) subregion which totals over 21 million hectares (CALM, 2002). The MUR1 subregion comprises vegetation dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and *Halosarcia* shrublands (CALM, 2002).

1.3 Climate

The arid climate of the MUR1 subregion generally relies on winter rainfall (200 mm/pa) (CALM, 2002). The rainfall that occurs during the autumn and early winter months of May to July tends to be more reliable, though generally of a lesser total amount than the less dependable, but more intense summer cyclonic rainfall from December to March (Groundwater Resource Management, 2015).

The nearest official meteorological station to the survey area is located at Laverton, approximately 27 km northeast of the survey area. Recordings of the local climatic conditions commenced at Laverton in 1899 (BOM, 2016) and data collected at this station 012045 was used for this report.

1.3.1 Temperature

Mean annual minimum temperature is 13.2°C and mean annual maximum temperature is 27.3°C. The coldest month is July (mean minimum temperature 5.2°C), the hottest is January

(mean maximum temperature 35.8°C) and diurnal temperature variations are relatively consistent throughout the year (Figure 3).

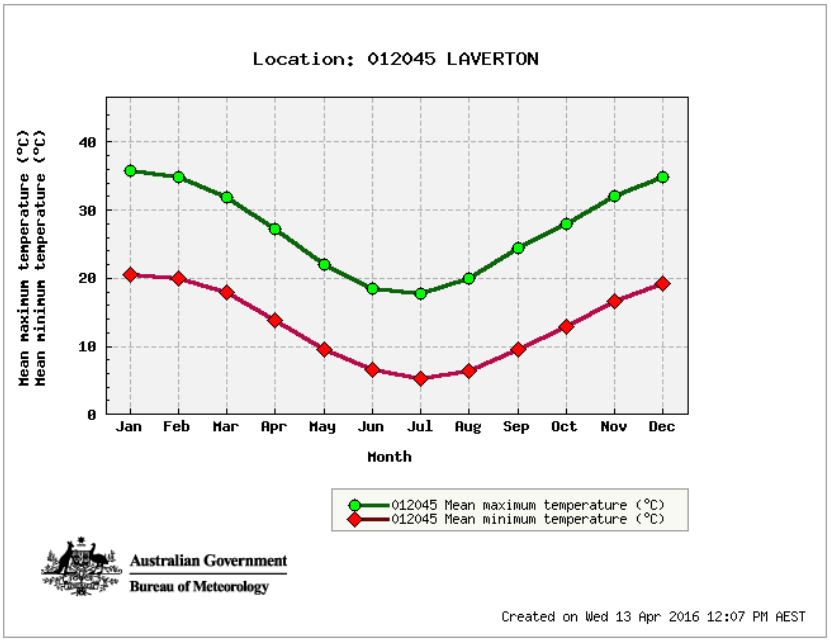

Figure 3: Mean Temperature ranges for the Laverton weather stations

1.3.2 Rainfall

The area is arid and the annual average rainfall at Laverton is 233.5 mm, which falls (>1 mm) on an average of 29.8 rain-days. Most of the rain usually falls between January and July and this amount varies greatly both seasonally and annually (Figure 4). Rainfall for January and February 2016 exceeded monthly averages, prior to the survey period. Rainfall data for March 2016 was not published by BoM at the time of writing this report, however Laverton Aero Weather Station (012305) recorded more than double the average rainfall for March 2016.

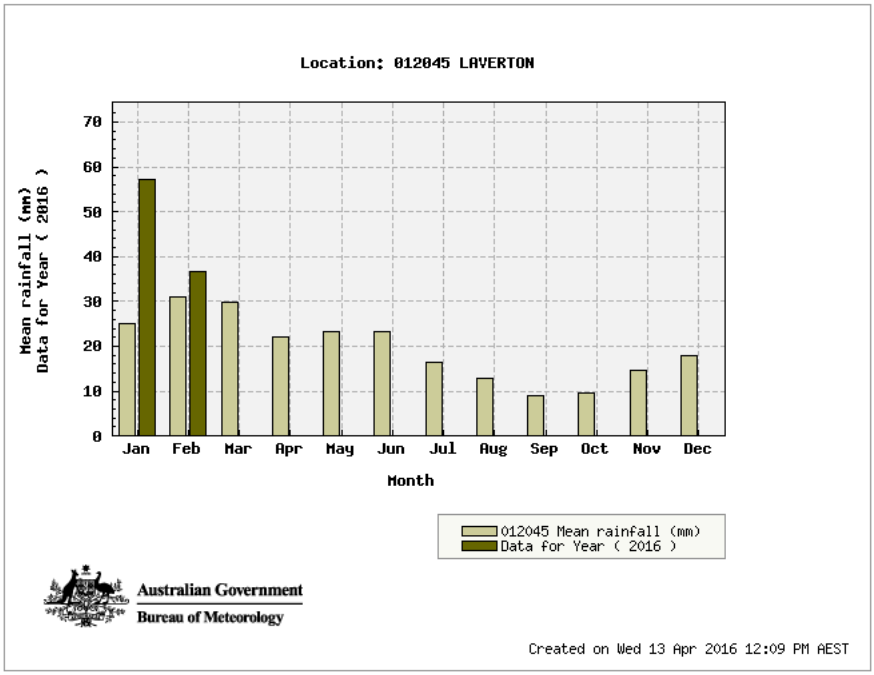

Figure 4: Monthly and mean rainfall for the Laverton weather station

2. ASSESSMENT METHODOLOGY

2.1 Preliminary Desktop Study

A preliminary assessment of the survey area and its potential constraints was undertaken by reviewing a number of government agency managed databases (see Appendix 1). The following sections provide a summary of the methodology used for each potential environmental aspect associated with the Project.

2.1.1 Environment Protection and Biodiversity Conservation Act Protected Matters

The *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* Protected Matters Search tool was utilised to provide results for matters of National Environmental Significance within a 1 km buffer encompassing the survey area. (Search coordinates provided in Appendix 1) (http://www.environment.gov.au/arcgis-framework/apps/pmst/pmst-coordinate.jsf)

2.1.2 Threatened Flora and Communities

The Species and Communities Branch of the Department of Parks and Wildlife (DPaW) was contacted for a search of their databases containing known populations of threatened flora within a 40km buffer of GPS coordinates GDA94 51J 424230mE 6813029mN (Reference: 19-0316FL). Threatened flora include Declared Rare Flora (DRF- extant, now redefined as 'Threatened') and Priority Flora.

The presence of Threatened and Priority Ecological Communities (TECs & PECs) was determined by examining Geographic Information System (GIS) data supplied by the DPaW upon request within a 40km buffer of GPS coordinates GDA94 51J 424230mE 6813029mN (Reference: 18-0316EC).

2.1.3 Environmentally Sensitive Areas (ESAs) and Conservation Reserves

The Department of Environment Regulation (DER) Clearing Permit System Native Map Viewer was used to determine the location of any ESAs and Conservation Reserves (https://cps.der.wa.gov.au/main.html).

2.1.4 Vegetation Type, Extent and Status

Vegetation extent and status data was sourced from the Department of Agriculture and Food (DAFWA) report "Land-Use and Vegetation in Western Australia- National Land and Water Resources Audit Report" and its associated GIS file. This data comprises Beard's Pre-European vegetation groups.

Note: This data was provided to Native Vegetation Solutions via a license agreement with the DAFWA.

DPaW's Statewide Vegetation Statistics (DPaW, 2014) was also referenced for the current extent of Beard's Vegetation Groups.

2.1.5 Wetlands

The location of wetlands within the project area was determined by examining DER's Clearing Permit System Native Map Viewer (https://cps.der.wa.gov.au/main.html).

2.1.6 Dieback

Dieback is only considered a potential issue for the project if both the mean annual rainfall of the area is >400mm, and if the project area resides south of the 26th parallel.

2.2 Site Investigation

A site visit was carried out by Botanist Eren Reid from NVS from the 11th to 15th March 2016 to examine the broad flora and vegetation groups contained within the survey area. A total of

60 hours was spent on site traversing the survey area. While a vehicle was used to reach the site, all traverses were made on foot or via Kawasaki Mule.

The survey was conducted in accordance with relevant EPA Statements and Guidelines (Section 1.1).

EPA's *Position Statement No. 3* (EPA, 2002) provides indicative levels of biological survey in relation to the scale and nature of the impact and the sensitivity of the receiving environment. The EPA uses the IBRA as the largest unit for Environmental Impact Assessment decision making in relation to the conservation of biodiversity. Given the scale and nature of the proposed disturbance and the project's location within the Murchison IBRA region, a Level 1 flora and vegetation survey was deemed appropriate.

2.2.1 Licenses

Flora was collected for identification under the Scientific Collection License SL011497 held by Mr E. R. Reid with expiry 09/07/2016.

2.3 Personnel and Reporting

The following personnel were involved in the preparation of this report:

- Eren Reid *BSc (Biological Science),* Principal Botanist, Native Vegetation Solutions, undertook the survey and prepared the report; and
- Frank Obbens *BSc* Consultant Botanist/Plant Taxonomist, undertook identification of unknown specimens collected during fieldwork.

2.4 Limitations

Table 1 lists potential limitations that may have affected the survey. These are based on the listing given by the EPA (2004).

Table 1: List of potential survey limitations

Potential Limitations	Constraint (Y/N)	Comment
Competency and experience of the consultants undertaking the survey	N	Mr Eren Reid is an experienced Botanist who has conducted many Flora and Vegetation surveys in the Goldfields, Pilbara and South-west regions of WA.
Proportion of flora identified during survey	N	The survey was planned to target species of conservation significance as well as document species present. Sufficient identifications were made to allow vegetation descriptions to be made.
Sources of information	N	Threatened and Priority Flora GIS information was available from DPaW.
Proportion of the task achieved	N	All tasks completed
Timing/Season	N	The targeted survey was conducted in Autumn 2016. Above Average rainfall in January, February and March 2016 allowed the emergence of many ephemeral species, with many other species in flower.
Disturbance in survey area	N	Disturbance was present with some minor access tracks present, as well as clearing associated with extensive exploration, in certain areas.
Intensity of survey effort	N	Transects were walked through the survey area with all parts visited
Resources	N	Adequate resources were available
Access problems	N	No problems with access
Availability of contextual information on the region	N	Information on the Murchison Bioregion area is readily available.

3. RESULTS

3.1 Preliminary Desktop Assessment

3.1.1 EPBC Act Protected Matters

The EPBC Protected Matters search tool revealed that the survey area could possibly be suitable habitat for weed species *Carrichtera annua* (Wards Weed) and *Cenchrus ciliaris* (Buffel Grass) (DOTE, 2016).

Carrichtera annua was introduced into Australia from the eastern Mediterranean, and is now widespread throughout South Australia, the Interior, and Western Australia (Lamp & Collet, 1999). This species is not listed as a declared plant by DAFWA (2015), however according to the EPBC search tool this invasive weed species is considered a threat to the rangeland biodiversity within the Southern Australian Sheep and Cattle Grazing Land Management Zone (DOTE, 2016).

Cenchrus ciliaris is native to Africa and India, was widely planted in Western Australian pastoral regions as a pasture grass, and has become a widespread weed of roadsides, creeklines, river edges and most vegetation types from Geraldton to the Pilbara, Kimberley and adjacent desert (Hussey *etc*. 2007). In the Murchison region it often colonises roadside table drains, excluding native everlastings. It seriously alters the fire characteristics of invaded plant cover by generating highly flammable fuel that is prone to more frequent fires.

The EPBC Protected Matters report indicated no TECs or Commonwealth Reserves within a 1km buffer region of survey area.

The results of the EPBC Protected Matters search are included in Appendix 1.

3.1.2 Threatened Flora and Communities

The DPaW database searches revealed a potential for one Threatened and 41 Priority Flora species to occur within a 40km radius of the survey area (DPaW, 2016a). Two known locations of Priority Flora occur within the survey area. These species are *Tecticornia cymbiformis* (P3) and *Olearia mucronata* (P3).

The physical location of the DPAW location of *Tecticornia cymbiformis (P3)* was traversed within a 200m radius and no *Tecticornia* species were identified. This DPAW location was recorded in 1996, and the location may not be exact.

The physical location of the DPAW location of *Olearia mucronata (P3)* was traversed within a 200m radius and this species was not identified. *Olearia decurrens,* which is a non-threatened flora was located within the vicinity of this GPS location. This DPAW location was recorded in 1931, and perhaps the GPS location is inaccurate.

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

The PEC/TEC search (DPaW, 2016) revealed that the survey area does not contain any TECs or lie within any nearby TEC buffer regions.

However, the search did reveal the survey area falls within the buffer region of the Priority 1 PEC named "Mount Morgan calcrete groundwater assemblage type on Carey palaeodrainage on Mt Weld Station"

This PEC is designed to protect the subterranean fauna community identified within the buffer zone. Given this, proposed clearing within the survey area is not likely to have an impact on this community.

3.1.3 Environmentally Sensitive Areas and Conservation Reserves

No ESAs are located within the survey area (DER, 2016).

No Conservation Reserves were identified within the survey area (DOTE, 2016).

3.1.4 Vegetation Type, Extent and Status

Three vegetation units defined by Beard (1990) were identified as part of the desktop assessment. These vegetation units identify the Pre-European extent of vegetation, as mapped by Beard (1990).

Information relating to known Beard (1990) vegetation units within the survey area has been summarised in Tables 2, 3 and 4 below. This information has been compiled through both desktop assessments and the site visit.

Table 2: Summary of information regarding Pre-European and current vegetation extent of vegetation association 18 within the survey area

Factor	**Value**				
Beard Vegetation Association*	18				
Vegetation Association Description*	Low woodland; mulga (Acacia aneura)				
Pre-European Extent (ha)	**Scale**				
	By Association *(WA)*	***By Association*** *(WA)*	***By IBRA Region*** *(Murchison)*	***By IBRA Sub-region*** *(Eastern Murchison)*	***By Shire*** *(Shire of Laverton)*
	22,029,557*	19,892,304**	12,403,172**	10,269,896**	2,878,673**
% Pre-European Extent Remaining	*100.00%**	*99.76%***	*99.68%***	*99.66%***	*99.61%***
Surrounding Land Use***	Mining, Exploration, Pastoral Lease				
Weed prevalence***	Low				

* Source: Shepherd *et al.* (2002) Appendix 2
**Source: DPaW, (2014)
*** Source: Field Assessment

Table 3: Summary of information regarding Pre-European and current vegetation extent of vegetation association 389 within the survey area

Factor	**Value**				
Beard Vegetation Association*	389				
Vegetation Association Description*	Succulent steppe with open low woodland; mulga over saltbush				
Pre-European Extent (ha)	**Scale**				
	By Association *(WA)*	***By Association*** *(WA)*	***By IBRA Region*** *(Murchison)*	***By IBRA Sub-region*** *(Eastern Murchison)*	***By Shire*** *(Shire of Laverton)*
	539,081*	642,356**	493,977**	493,977**	48,520**
% Pre-European Extent Remaining	*100.00%**	*99.71%***	*99.62%***	*99.62%***	*97.61%***
Surrounding Land Use***	Mining, Exploration, Pastoral Lease				
Weed prevalence***	Low				

* Source: Shepherd *et al.* (2002) Appendix 2
**Source: DPaW, (2014)
*** Source: Field Assessment

Table 4: Summary of information regarding Pre-European and current vegetation extent of vegetation association 39 within the survey area

Factor	Value				
Beard Vegetation Association*	39				
Vegetation Association Description*	Shrublands; mulga scrub				
Pre-European Extent (ha)	**Scale**				
	By Association *(WA)*	***By Association*** *(WA)*	***By IBRA Region*** *(Murchison)*	***By IBRA Sub-region*** *(Eastern Murchison)*	***By Shire*** *(Shire of Laverton)*
	4,856,768*	6,613,569**	1,148,400**	711,328**	826,833**
% Pre-European Extent Remaining	*100.00%**	*99.83%***	*99.10%***	*98.68%***	*99.95%***
Surrounding Land Use***	Mining, Exploration, Pastoral Lease				
Weed prevalence***	Low				

* Source: Shepherd *et al.* (2002) Appendix 2
**Source: DPaW, (2014)
*** Source: Field Assessment

3.1.5 Wetlands

Part of the Lake Carey water body occurs within the survey area (DER, 2016). This water body is not listed on the Directory of Important Wetlands of Australia.

One vegetation group within the survey area, *Tecticornia* shrublands, is classified as riparian vegetation and is considered water dependent. This is discussed further in Section 3.2.2.3.

3.1.6 Dieback

The survey area lies south of the 26th parallel however receives an average annual rainfall of 233.5mm, below the 400mm threshold mark. There is no record of *Phytophthora cinnamomi* establishing in natural ecosystems in regions receiving <400mm rainfall per annum (CALM, 2003). Therefore, Dieback is not considered an issue for this survey area, however all measures should be taken to prevent any possible soil contamination (seeds of non-native species *etc*.) which poses a risk in the survey area during seasonally favourable conditions.

3.2 Field Assessment

3.2.1 Threatened Flora

No plant taxa gazetted as DRF pursuant to subsection 2 of Section 23F of the *Wildlife Conservation Act 1950* were located in the survey area.

No plant taxa listed as Threatened pursuant to Schedule 1 of the *EPBC Act 1999* were located in the survey area.

No Priority flora species were recorded in the survey area.

3.2.2 Vegetation Type, Extent and Status

A total of 32 Families, 77 Genera and 195 Species were recorded within the entire survey area. Sixteen major vegetation groups were recorded in the survey area, excluding disturbed areas, and bare salt lakes. A summary of the vegetation groups (listed via their vegetation group code) can be seen in Table 5 below.

Table 5: Summary of taxa within vegetation groups and their spatial areas

Vegetation Group Code	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	Total
Family	15	14	7	6	17	11	16	13	13	16	14	15	4	12	11	9	0	0	**32**
Genus	25	29	10	6	29	16	26	15	22	21	18	28	4	23	17	12	0	0	**77**
Species	53	65	22	9	47	43	32	22	37	34	34	58	5	30	34	13	0	0	**195**
Area (ha)	12.73	1080.16	611.74	2.21	93.94	892.18	110.26	6.89	388.73	11.52	332.49	383.21	5.17	5.05	51.94	35.02	154.98	463.32	**4641.51**
Percentage of survey Area (%)	0.27	23.27	13.18	0.05	2.02	19.22	2.38	0.15	8.38	0.25	7.16	8.26	0.11	0.11	1.12	0.75	3.34	9.98	**100.00**

Most vegetation groups are considered to be in “Very Good” condition; with some areas “Good” (using the scale of Keighery 1994, see Appendix 3). Maps of the survey area can be seen in Appendix 4.

The vegetation groups are described in more detail in the sections below.

3.2.2.1 Rehabilitation Vegetation (a)

This vegetation group (Figure 5) consisted of 15 Families, 25 Genera and 53 Species. The vegetation group was approximately 12.73ha which makes up 0.27% of the survey area.

This area was previously a camp, which had been decommissioned and rehabilitated to a certain extent.

Some weed species are present here, including *Schinus molle var. areira* (Pepper Tree)*, Nerium oleander* (Oleander)*, Opuntia ?stricta* (Common Prickly Pear)*, Salvia verbenaca* (Wild Sage) and *Cenchrus ciliaris* (Buffel Grass)*.* These species (disregarding Buffel Grass) were most probably planted within the camp area, whilst it was previously operating.

Common Prickly Pear is listed as a Declared Pest (C3) according to the DAFWA's Western Australian Organism List (WAOL) (DAFWA, 2016).

Dominant species were *Acacia aneura, Acacia mulganeura, Eucalyptus clelandii, E. campaspe, E. torquata, Maireana pyramidata, Atriplex vesicaria* and *Senna artemisioides* subsp. *filifolia.*

Figure 5: Rehabilitation Vegetation within the survey area

3.2.2.2 *Acacia aneura* shrubland (b)

This vegetation group (Figure 6) consisted of 14 Families, 29 Genera and 65 Species. The vegetation group was approximately 1080.16 ha which makes up 23.27% of the survey area.

Dominant species were *Acacia aneura, A. mulganeura, A. pteraneura, A. craspedocarpa, Senna cardiosperma, Senna glutinosa* subsp. *chatelainiana, Eremophila platycalyx* subsp. *platycalyx* and *Eremophila compacta.*

Figure 6: *Acacia aneura* shrubland within the survey area

3.2.2.3 *Tecticornia* shrubland (c)

This vegetation group (Figure 7) consisted of 7 Families, 10 Genera and 22 Species. The vegetation group was approximately 611.74 ha which makes up 13.18% of the survey area.

Dominant species were numerous *Tecticornia* species, with occasional *Maireana glomerifolia, Sclerolaena cuneata, Atriplex vesicaria, Melaleuca interioris* and *Casuarina obesa.*

Figure 7: *Tecticornia* shrubland within the survey area

3.2.2.4 Kopai dunes with *Tecticornia* and *Casuarina* (d)

This vegetation (Figure 8) group consisted of 6 Families, 6 Genera and 9 Species. The vegetation group was approximately 2.21 ha which makes up 0.05% of the survey area.

Dominant species were *Casuarina obesa, Casuarina pauper, Acacia burkittii, Grevillea berryana, Exocarpos aphyllus, Tecticornia indica* subsp. *bidens, T. halocnemoides* subsp. *tenuis* and *T. disarticulata.*

Figure 8: Kopai dunes with *Tecticornia* and *Casuarina* within the survey area

3.2.2.5 *Acacia* shrubland on emergent hills (e)

This vegetation group (Figure 9) consisted of 17 Families, 29 Genera and 47 Species. The vegetation group was approximately 93.94 ha which makes up 2.02% of the survey area.

Dominant species were *Acacia aneura, A. pteraneura, A. grasbyi, A. tetragonophylla, Cratystylis subspinescens, Scaevola spinescens, Senna cardiosperma, Maireana sedifolia,* and *Eremophila oppositifolia* subsp. *angustifolia.*

Figure 9: *Acacia* shrubland on emergent hills within the survey area

3.2.2.6 *Acacia* over Chenopod shrubland (f)

This vegetation group (Figure 10) consisted of 11 Families, 16 Genera and 43 Species. The vegetation group was approximately 892.18 ha which makes up 19.22% of the survey area.

Dominant species were *Acacia aneura, A. mulganeura, A. pteraneura, Maireana pyramidata, Sclerolaena diacantha, Tecticornia indica* subsp*. bidens, T. peltata, T. undulata, Cratystylis subspinescens, Atriplex vesicaria* and *Atriplex bunburyana.*

Figure 10: *Acacia* over Chenopod shrubland within the survey area

3.2.2.7 *Acacia* over *Eremophila* and sclerophyll shrubland on BIF Ridges (g)

This vegetation group (Figure 11) consisted of 16 Families, 26 Genera and 32 Species. The vegetation group was approximately 110.26 ha which makes up 2.38% of the survey area.

Dominant species were *Acacia aneura, Eremophila georgei, Eremophila latrobei* subsp. *latrobei, Eremophila margarethae, Eremophila platycalyx* subsp. *platycalyx, Scaevola spinescens, Senna artemisioides* subsp. *helmsii, Solanum lasiophyllum* and *Dodonaea rigida.*

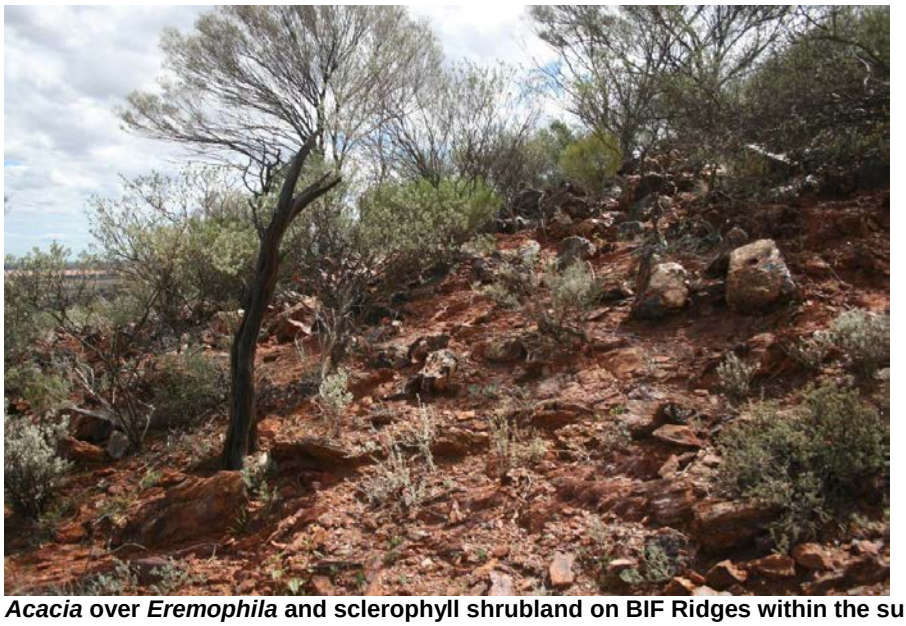

Figure 11: *Acacia* over *Eremophila* and sclerophyll shrubland on BIF Ridges within the survey area

3.2.2.8 *Tecticornia* shrubland within Laterite breakaways (h)

This vegetation group (Figure 12) consisted of 13 Families, 15 Genera and 22 Species. The vegetation group was approximately 6.89 ha which makes up 0.15% of the survey area.

Dominant species were *Tecticornia disarticulata, T. indica subsp. bidens, T. peltata, Frankenia setosa, Dodonaea lobulata, Pittosporum angustifolium and Eremophila pantonii.*

Figure 12: *Tecticornia* shrubland within Laterite breakaways within the survey area

3.2.2.9 *Acacia mulganeura* over *Eremophila forrestii* and grasslands (i)

This vegetation group (Figure 13) consisted of 13 Families, 22 Genera and 37 Species. The vegetation group was approximately 388.73 ha which makes up 8.38% of the survey area.

Dominant species were *Acacia mulganeura A. caesaneura, A. aneura, A. craspedocarpa, Eremophila forrestii* subsp. *forrestii, Scaevola spinescens, Eragrostis eriopoda, Eremophila platythamnos* subsp. *exotrachys, Crenidium spinescens* and *Triodia basedowii.*

Figure 13: *Acacia mulganeura* over *Eremophila forrestii* and grasslands within the survey area

3.2.2.10 *Acacia aneura* creekline vegetation (j)

This vegetation group (Figure 14) consisted of 16 Families, 21 Genera and 34 Species. The vegetation group was approximately 11.52 ha which makes up 0.25% of the survey area.

Dominant species were *Acacia aneura, Acacia caesaneura, Acacia mulganeura, Acacia tetragonophylla, Eremophila oppositifolia* subsp. *angustifolia, Scaevola spinescens, Ptilotus obovatus, Senna artemisioides* subsp. *sturtii, Lepidium platypetalum,* and *Spartothamnella teucriiflora.*

Figure 14: *Acacia aneura* creekline vegetation within the survey area

3.2.2.11 *Acacia* shrublands on undulating hills (k)

This vegetation group (Figure 15) consisted of 14 Families, 18 Genera and 34 Species. The vegetation group was approximately 332.49 ha which makes up 7.16% of the survey area.

Dominant species were *Acacia resinimarginea, Acacia aneura, Calytrix erosipetala, Eremophila georgei, Eremophila forrestii* subsp. *forrestii, Dodonaea rigida, Chrysocephalum puteale, Eremophila latrobei* subsp. *filiformis* and *Senna artemisioides* subsp. *helmsii.*

Figure 15**: *Acacia* shrublands on undulating hills within the survey area**

3.2.2.12 *Acacia aneura* woodland over *Maireana sedifolia* and *Acacia victoriae* mixed shrubland (l)

This vegetation group (Figure 16) consisted of 15 Families, 28 Genera and 58 Species. The vegetation group was approximately 383.21 ha which makes up 8.26% of the survey area.

This vegetation group is considered to occur on top of the Priority 1 PEC "Mount Morgan calcrete groundwater assemblage type on Carey palaeodrainage on Mt Weld Station". The soils here were raised and calcrete, and the PEC boundary buffer provided by DPAW is cantered on this vegetation group outline.

Dominant species were *Acacia aneura, A. pteraneura, Maireana sedifolia, Atriplex bunburyana, Maireana tomentosa, Acacia victoriae* subsp. *victoriae, Cratystylis subspinescens Eremophila miniata, Solanum plicatile, Solanum austropiceum, Acacia kempeana* and *Eremophila longifolia.*

Figure 16: *Acacia aneura* woodland over *Maireana sedifolia* and *Acacia victoriae* mixed shrubland within the survey area

3.2.2.13 *Acacia* shrubland on lower breakaways (m)

This vegetation group (Figure 17) consisted of 4 Families, 4 Genera and 5 Species. The vegetation group was approximately 5.17ha which makes up 0.11% of the survey area.

Dominant species were *Acacia kalgoorliensis, Tecticornia, peltata, T. pergranulata* subsp. *elongata, Frankenia georgei* and *Sida calyxhymenia.*

Figure 17: *Acacia* shrubland on lower breakaways within the survey area

3.2.2.14 *Acacia oswaldii* shrubland (n)

This vegetation group (Figure 18) consisted of 12 Families, 23 Genera and 30 Species. The vegetation group was approximately 5.05 ha which makes up 0.11% of the survey area.

Dominant species were *Acacia oswaldii, Brachychiton gregorii, Acacia ligulata, Acacia caesaneura, Jacksonia arida, Eragrostis eriopoda, Enneapogon caerulescens, Gunniopsis quadrifida* and *Pimelea microcephala,* subsp. *microcephala.*

Figure 18: *Acacia oswaldii* shrubland within the survey area

3.2.2.15 *Acacia burkittii* shrubland (o)

This vegetation group (Figure 19) consisted of 11 Families, 17 Genera and 34 Species. The vegetation group was approximately 51.94 ha which makes up 1.12% of the survey area.

Dominant species were *Acacia burkittii, Grevillea berryana, Acacia victoriae* subsp. *victoriae, Acacia tetragonophylla, Senna artemisioides* subsp. *filifolia, Acacia ayersiana, Acacia caesaneura, Melaleuca interioris* and *Enneapogon caerulescens.*

Figure 19: *Acacia burkittii* shrubland within the survey area

3.2.2.16 Open *Melaleuca* shrubland (p)

This vegetation group (Figure 20) consisted of 9 Families, 12 Genera and 13 Species. The vegetation group was approximately 35.02 ha which makes up 0.75% of the survey area.

Dominant species were *Melaleuca hamata, Duma florulenta, Spartothamnella teucriiflora* and *Rhagodia eremaea.*

Figure 20: Open *Melaleuca* shrubland within the survey area

3.2.2.17 Existing Disturbance (q)

These areas had been previously heavily disturbed, including pits waste dumps and haul roads. The total area of existing disturbance was approximately 154.98 ha which makes up 3.34% of the survey area.

3.2.2.18 Bare Salt Lakes (r)

This vegetation group (Figure 21) consisted of no species. The vegetation group was approximately 463.32 ha which makes up 9.98% of the survey area.

Figure 21: Bare Salt Lakes within the survey area

3.2.3 Weeds

Eight weed species were recorded within the survey area, *Schinus molle var. areira* (pepper tree), *Nerium oleander* (Oleander), *Opuntia ?stricta* (Common Prickly Pear), *Salvia verbenaca* (Wild Sage), *Cenchrus ciliaris* (Buffel Grass), *Acetosa vesicaria* (Ruby Dock), *Lysimachia arvensis* (Pimpernel) and Nicotiana glauca (Tobacco Tree) (Hussey *et al,* 2007).

Only one of these species, Common Prickly Pear, is considered a Declared Pest by DAFWA (DAFWA, 2016). This species was restricted to the rehabilitation vegetation group at the proposed new camp area.

This species should have some form of management applied that will alleviate the harmful impact of the species, reduce the numbers or distribution of the species or prevent or contain the spread of the species.

3.2.4 Vegetation Condition

Evidence of cattle and rabbits was observed during the field assessment.

Overall, the condition of the vegetation was determined to be “Very Good” with some areas in “Good” condition. Most disturbances were in the form of tracks and grazing, whilst more heavily disturbed areas were from exploration activities.

4. DISCUSSION

The field assessment established that the condition of the vegetation in the proposed disturbance area is overall “Very Good”, with few areas of “Good” vegetation condition, where exploration disturbance was more common.

No Threatened Flora or TECs were recorded in the area. No Priority Species were recorded in the survey area.

The survey area falls within the buffer region of the Priority 1 PEC named "Mount Morgan calcrete groundwater assemblage type on Carey palaeodrainage on Mt Weld Station". This PEC is in place to protect the subterranean fauna community identified within the buffer zone. Given this, proposed clearing within the survey area is not likely to have an impact on this community.

Any proposed disturbance/clearing of vegetation will result in a loss of species. However, given the size of the area and the extent of the Beard (1990) vegetation association elsewhere, the impact on the vegetation and its component flora will not affect the conservation values of either, or create fragmentation or patches of remnant vegetation.

Riparian (creekline) vegetation was identified near the shoreline of Lake Carey.

The following recommendations arise from the Level 1 flora and vegetation survey:

- Where possible, clearing be aligned to existing roads, tracks and other barriers or follow the boundaries of broad-scale intact native vegetation;
- Weed control measures to be implemented during and following clearing; and
- Disturbance to Riparian vegetation be kept to a minimum near the Lake Carey shoreline.

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6. GLOSSARY

Acronyms:

BoM	Bureau of Meteorology, Australian Government
BSc	Bachelor of Science
CALM	Department of Conservation and Land Management (now DPaW and DER)
DAFWA	Department of Agriculture and Food, Western Australia
DER	Department of Environment Regulation, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DRF	Declared Rare Flora
DotE	Department of the Environment, Australian Government
DPaW	Department of Parks and Wildlife, Western Australia
EPA	Environmental Protection Authority, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Federal Act)
ESA	Environmentally Sensitive Area
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
km	Kilometres
m	Metres
NVS	Native Vegetation Solutions
PEC	Priority Ecological Community, Western Australia
TEC	Threatened Ecological Community
WA	Western Australia

Definitions:

{DPaW (2015) Conservation Codes for Western Australian Flora and Fauna. Department of Parks and Wildlife, Western Australia}:-

T Threatened species:
Published as Specially Protected under the *Wildlife Conservation Act 1950,* listed under Schedules 1 to 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora (which may also be referred to as Declared Rare Flora).

Threatened fauna is that subset of 'Specially Protected Fauna' declared to be 'likely to become extinct' pursuant to section 14(4) of the Wildlife Conservation Act.

Threatened flora is flora that has been declared to be 'likely to become extinct or is rare, or otherwise in need of special protection', pursuant to section 23F(2) of the Wildlife Conservation Act. The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species
Threatened species considered to be facing an extremely high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EN Endangered species
Threatened species considered to be facing a very high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

VU Vulnerable species
Threatened species considered to be facing a high risk of extinction in the wild. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice for Threatened Fauna and Wildlife Conservation (Rare Flora) Notice for Threatened Flora.

EX Presumed extinct species
Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice for Presumed Extinct Fauna and Wildlife Conservation (Rare Flora) Notice for Presumed Extinct Flora.

IA Migratory birds protected under an international agreement
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 the Bonn Convention, relating to the protection of migratory birds. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice.

CD Conservation dependent fauna
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice.

OS Other specially protected fauna
Fauna otherwise in need of special protection to ensure their conservation. Published as Specially Protected under the *Wildlife Conservation Act 1950,* in Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice.

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

Appendix 1

Relevant Government Database Search Results

Australian Government
Department of the Environment

EPBC Act Protected Matters Report

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

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

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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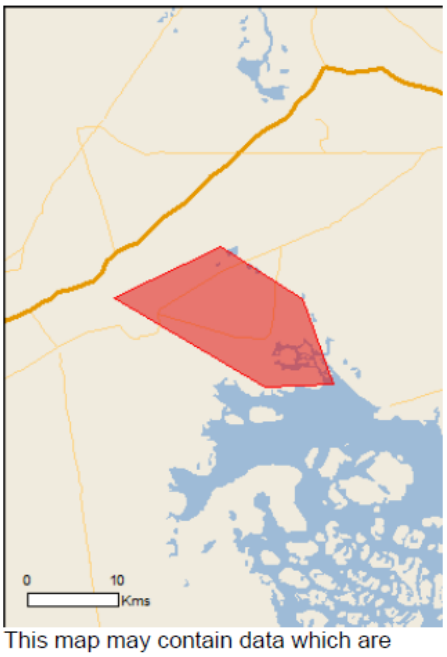

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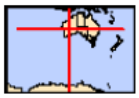

Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	2
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 http://www.environment.gov.au/heritage

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	7
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	9
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Leipoa ocellata		
Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Polytelis alexandrae		
Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Extra Information

Invasive Species	[Resource Information]

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

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Mammals		
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area

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

Caveat

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

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

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

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

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-28.759 122.04,-28.715 122.147,-28.761 122.228,-28.835 122.259,-28.837 122.191,-28.759 122.04

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
-Parks and Wildlife Commission NT, Northern Territory Government
-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, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-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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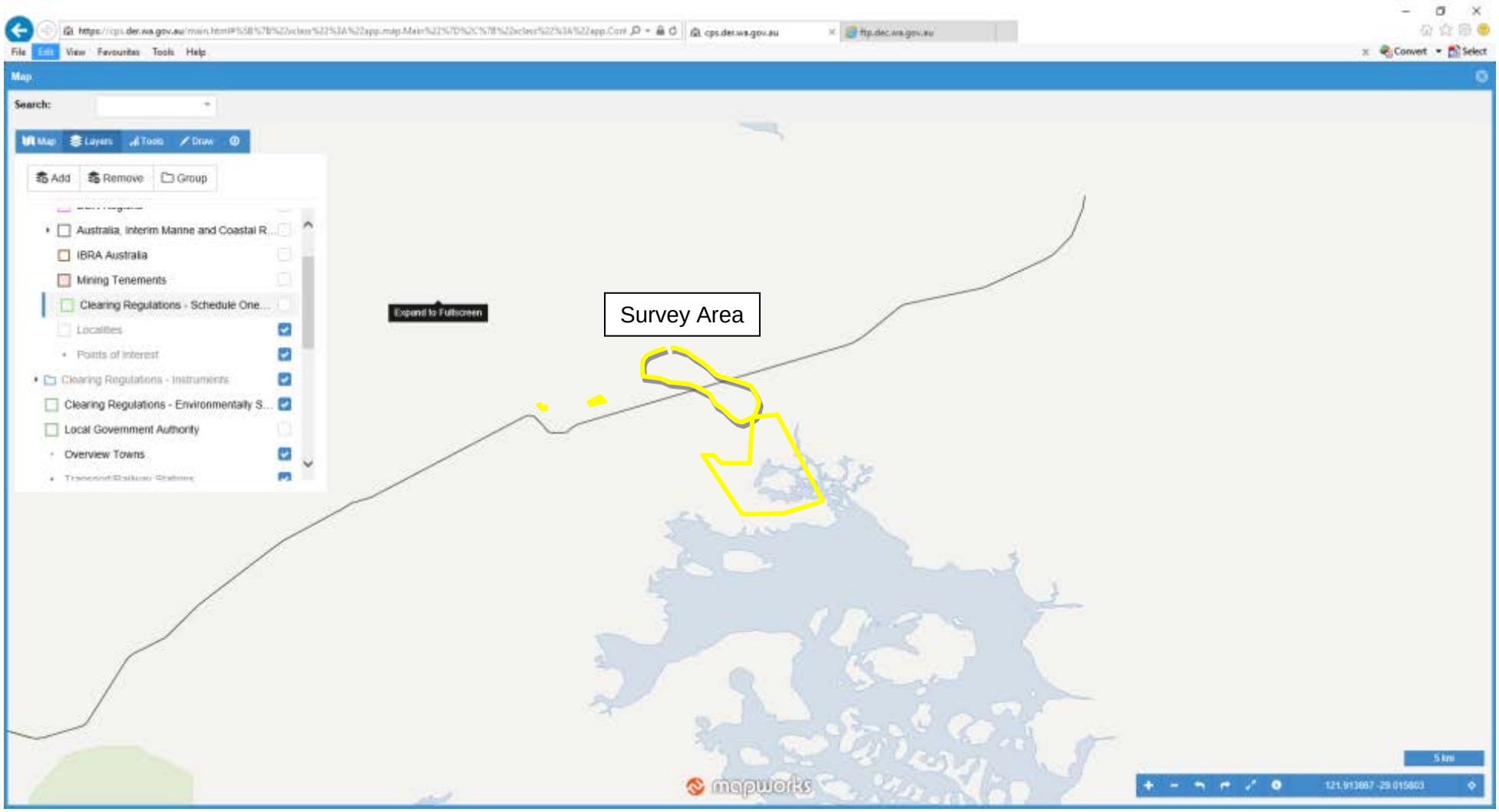
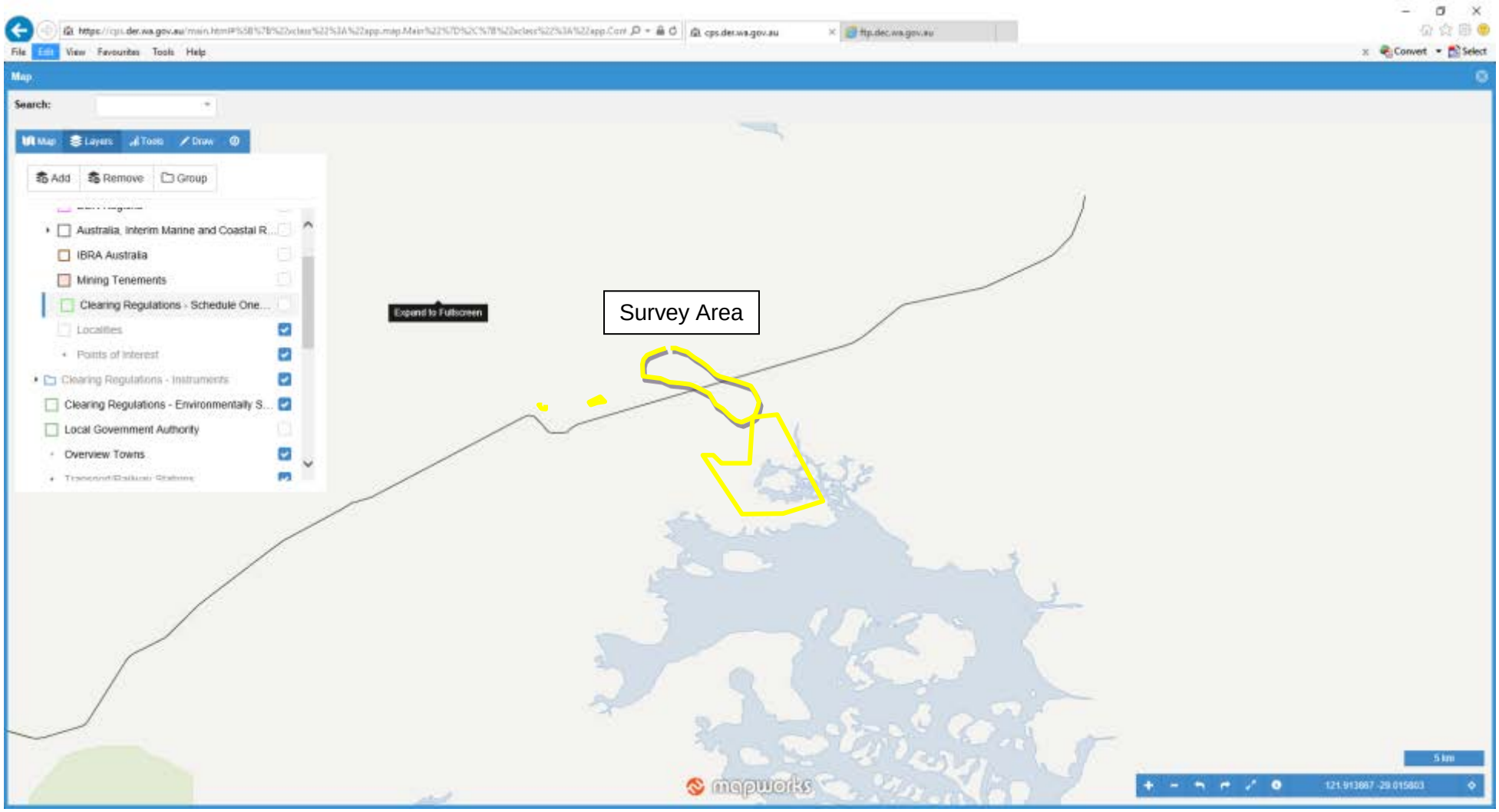


DER Clearing Permit System Map Viewer showing no ESA's (dark green shaded areas) within the survey area (DER, 2016)



DER Clearing Permit System Map Viewer showing part of the Lake Carey water body within the survey area (DER, 2016)

Appendix 2

Threatened Flora Databases Search Results

Taxon	Status	Distribution	Flowering Period
Acacia eremophila numerous-nerved variant (A.S. George 11924)	3	Norseman, Neale Junction, Great Victoria Desert, Balladonia, Plumridge Lakes	Sep,Jul
Acacia websteri	1		
Angianthus prostratus	3	Glenorn Stn, Baladjie Lake NR, Quairading, Lake Barlee, Bulga Downs Stn, Kalgoorlie	Jul-Sept
Beyeria lapidicola	1	Bulga Downs, Weld Range, Lake Way Stn.	Jul
Bossiaea eremaea	3	Merolia Stn, Sandstone, White Cliffs Stn	Jul-Sep
Caesia talingka	2	Plumridge Lakes N.R.	
Calytrix hislopii	3	Black Range Stn., Lake Mason Stn., White Cliffs Stn.	Sep
Calytrix praecipua	3	Melita Station, Laverton, Youno Downs, Wanjarri, Marymia, Erong Hmstd, Niagara Dam	Jun-Nov
Cratystylis centralis	3	Barwidgee Stn, Leonora	Aug-Nov
Dicrastylis cundeeleensis	4	Cundeelee, Plumridge Lakes, Rawlinna	Apr, Oct-Dec
Eremophila annosocaulis	3	Mt Morgans Mine (South of Leonora-Laverton Rd), Von Treuer Tableland	
Eremophila arachnoides subsp. tenera	1	Kambalda, Laverton	Sep,Dec
Eremophila dendritica	2	Rawlinna, Plumridge Lakes	Sep-Oct
Eremophila eversa	1	Yerilla	Oct
Eremophila mirabilis	2	Niagara, Morapoi, Kookynie, Woolgorong, Menzies	Aug-Sep
Eremophila simulans subsp. megacalyx	3	Mt Narryer, Boolardy Stn, Leonora	Aug-Sep
Goodenia lyrata	3	Laverton, Newman	
Gunniopsis propinqua	3	Laverton, Mt Margaret, Lake Carnegie, Windidda, Mt Eureka, Mt James, Menzies	Aug-Sep
Hemigenia exilis	4	Lake Darlot, Yakabindie, Leinster, Leonora, Mt Keith	Apr,May,Aug
Homalocalyx echinulatus	3	Carnegie Stn, Wiluna, Doolgunna Stn, Weld Range, Mount Hale, Windidda, Wongawal Stn	Dec
Hybanthus floribundus subsp. chloroxanthus	3	Leonora, Laverton	Aug-Oct
Lechenaultia aphylla	1	Cosmo Newbey - Laverton, SA	
Lechenaultia divaricata	1	Plumridge Lakes	Oct
Micromyrtus placoides	3	Cue, Weld Range, Mt Narryer, Tallering Peak	Aug,Sep
Micromyrtus serrulata	3	Karonie, Coonana, Melita, Jeedamya, Niagara Dam NR, Cardunia Rocks, Queen Victoria Spring NR	Mar,Jun,Nov
Mirbelia stipitata	3	Nth Sandstone, Nth Laverton	-
Olearia arida	4	Neale Junction, Plumridge Lakes, Great Victoria Desert	Jul
Olearia mucronata	3		
Persoonia leucopogon	1	Between Coolgardie & Laverton, Comet Vale (Menzies)	-
Philotheca linearis	1	White Cliffs Stn, Central Australia	Jul
Philotheca tubiflora	1	E of Laverton	Jun,Aug,Oct
Phyllanthus baeckeoides	3	Laverton, Merolia Stn, White Cliffs Stn, Windimurra Station, Cashmere Downs Stn, Leinster, Banjawarn Stn	Jul-Sep
Prostanthera petrophila	3	Cue, Mt Barloweerie, Woolgorong, Weld Range,	Jul-Aug
Ptilotus blackii	3	Plumridge Lakes N.R., Zanthus, Queen Victoria Springs N.R., S.A. N.T.	May-Sep
Ptilotus tetrandrus	1	Glenorn Station, Little Sandy Desert	Oct
Tecticornia cymbiformis	3		
Tecticornia mellaria	1		
Tecticornia sp. Lake Way (P. Armstrong 05/961)	1		
Thryptomene nealensis	3	Leinster, White Cliffs Stn, Neale Junction, Gt Victoria Desert	Oct
Thryptomene wittweri	T	Hamersley Range, Mt Augustus, Carnarvon Range, White Cliffs Stn, NT	Aug-Oct
Vittadinia cervicularis var. oldfieldii	1	Merredin, Laverton	
Vittadinia pustulata	3	Plumridge Lakes N.R., Morgan Range	

Appendix 3

Vegetation Condition Scale (Keighery, 1994)

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

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

Very Good (3). Vegetation structure altered, obvious signs of disturbance.
For example, disturbance to vegetation structure caused by repeating fires, the presence of some more aggressive weeds, dieback, logging and grazing.

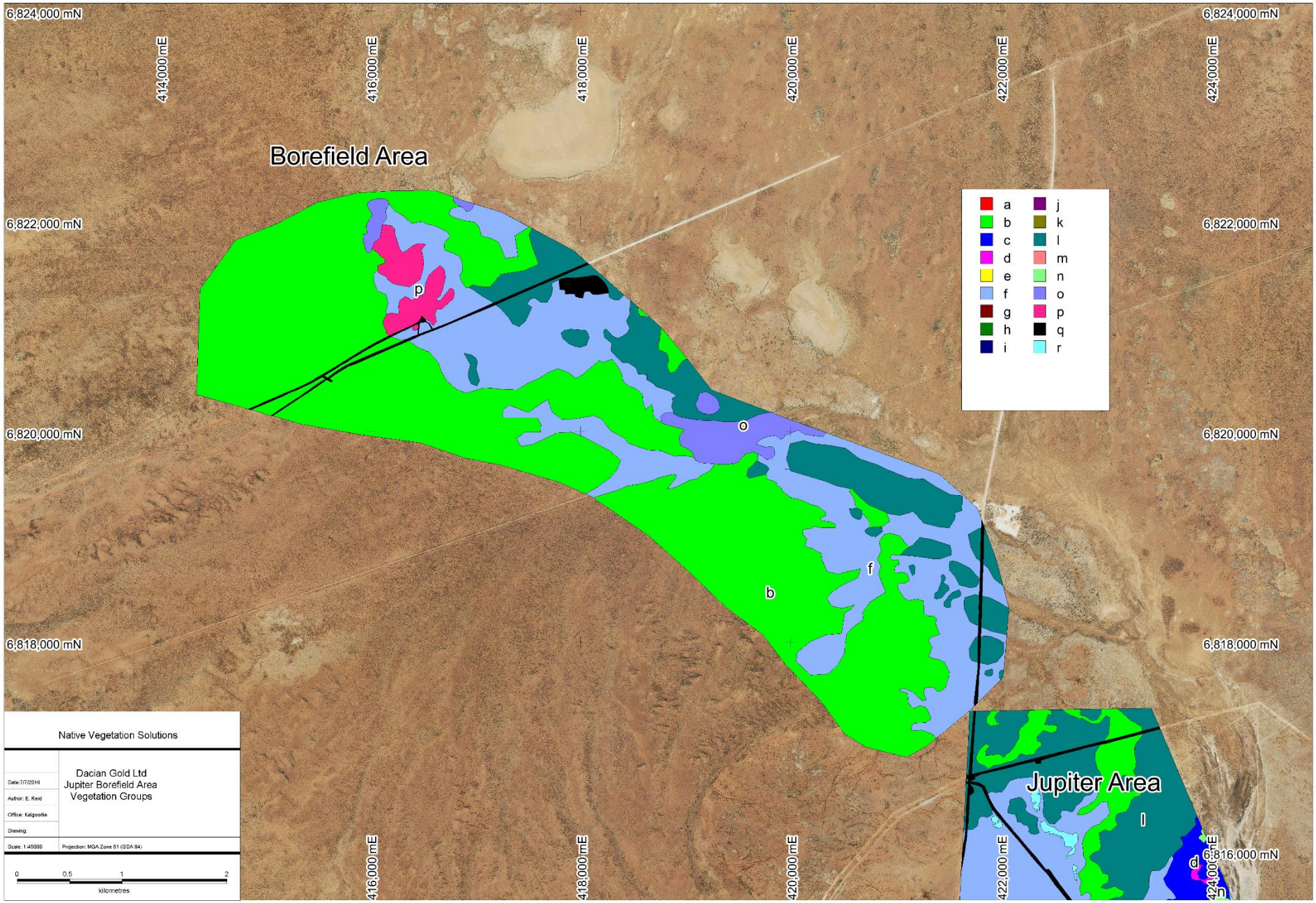
Good (4). Vegetation structure significantly altered by very obvious signs of multiple disturbance.
Retains basic vegetation structure or ability to regenerate it.
For example, disturbance to vegetation structure caused by frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.

Degraded (5). Basic vegetation structure severely impacted by disturbance.
Scope for regeneration but not to a state approaching good condition without intensive management.
For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.

Completely Degraded (6). The structure of the vegetation is no longer intact and the area is completely or almost completely without native species.
These areas are often described as 'parkland cleared' with the flora compromising weed or crop species with isolated trees or shrubs.

Appendix 4

Vegetation Mapping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Jupiter Area
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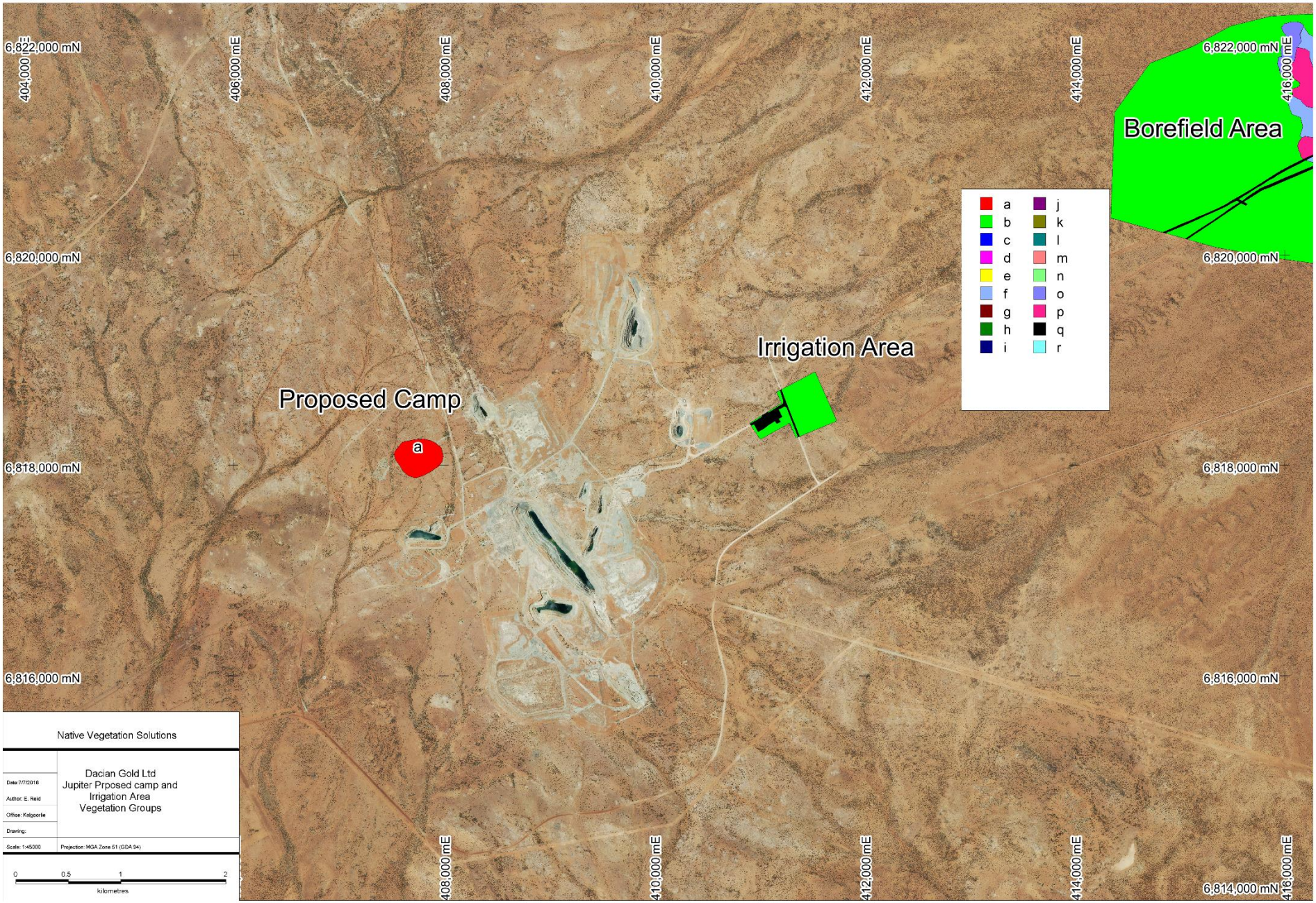
6,822,000 mN
6,820,000 mN
6,818,000 mN
414,000 mE
416,000 mE
418,000 mE
420,000 mE
422,000 mE
424,000 mE
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
p
o
f
b
l
d
Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Borefield Area
Vegetation Groups
Date: 7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
0
0.5
1
2
kilometres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6,820,000 mN
6,818,000 mN
6,816,000 mN
6,814,000 mN
404,000 mE
406,000 mE
408,000 mE
410,000 mE
412,000 mE
414,000 mE
416,000 mE
Borefield Area
Irrigation Area
Proposed Camp
a
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Prposed camp and
Irrigation Area
Vegetation Groups
Data:7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
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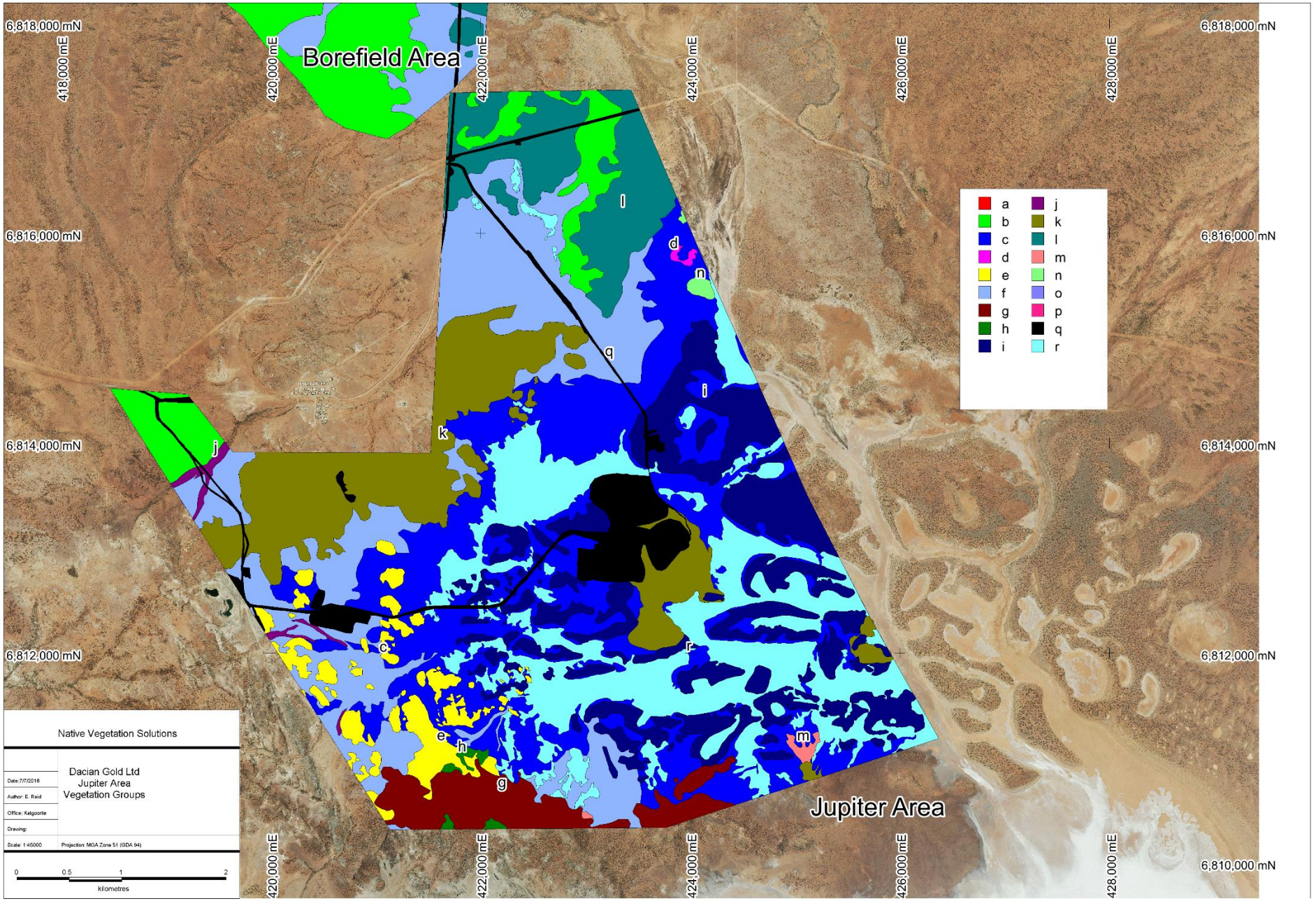
2
kilometres


Borefield Area
Jupiter Area
6,818,000 mN
6,816,000 mN
6,814,000 mN
6,812,000 mN
6,810,000 mN
418,000 mE
420,000 mE
422,000 mE
424,000 mE
426,000 mE
428,000 mE
a
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Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Area
Vegetation Groups
Date: 7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
0
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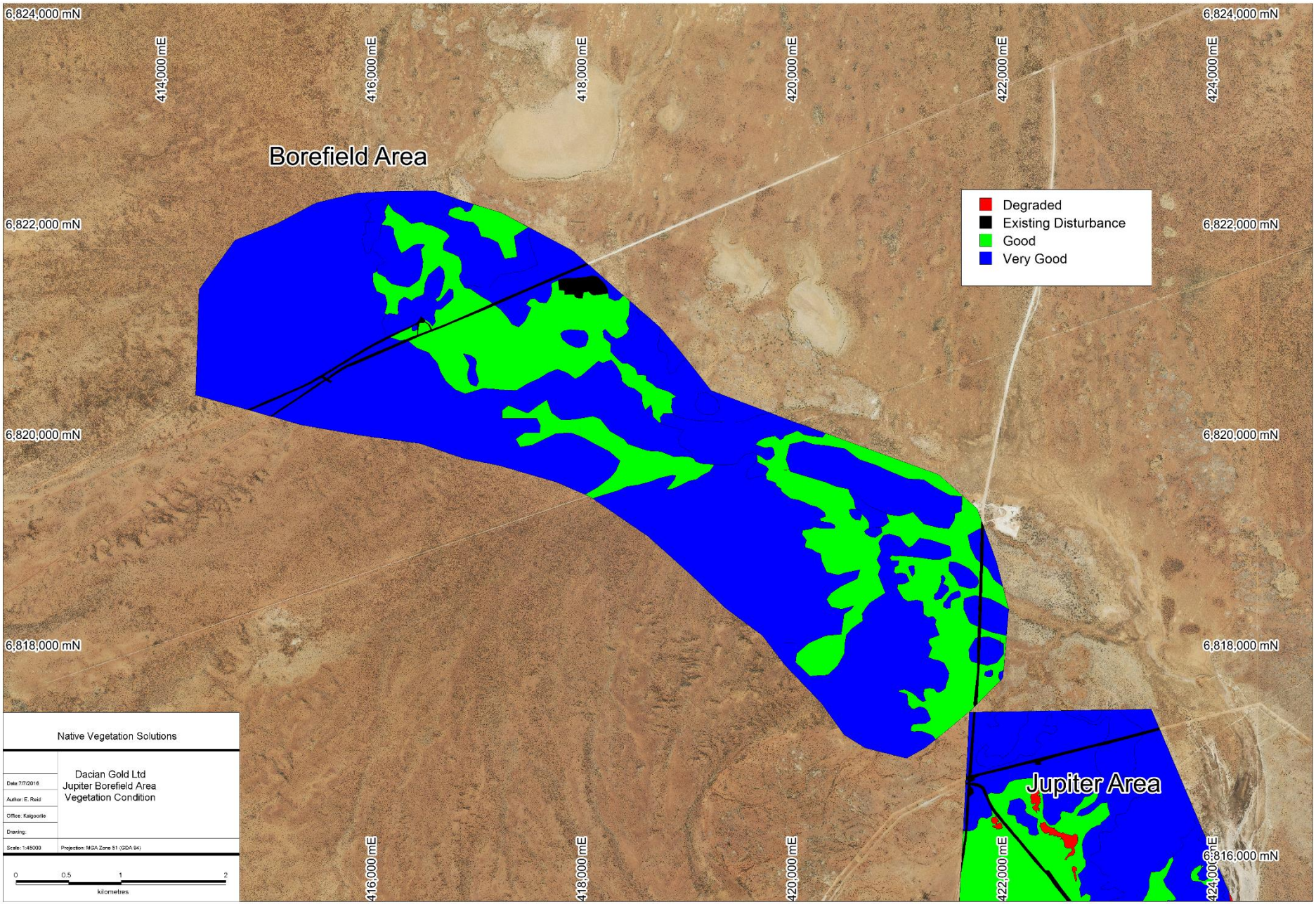
kilometres


Borefield Area
Jupiter Area
Degraded
Existing Disturbance
Good
Very Good
6,824,000 mN
6,822,000 mN
6,820,000 mN
6,818,000 mN
6,816,000 mN
414,000 mE
416,000 mE
418,000 mE
420,000 mE
422,000 mE
424,000 mE
Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Borefield Area
Vegetation Condition
Date: 7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
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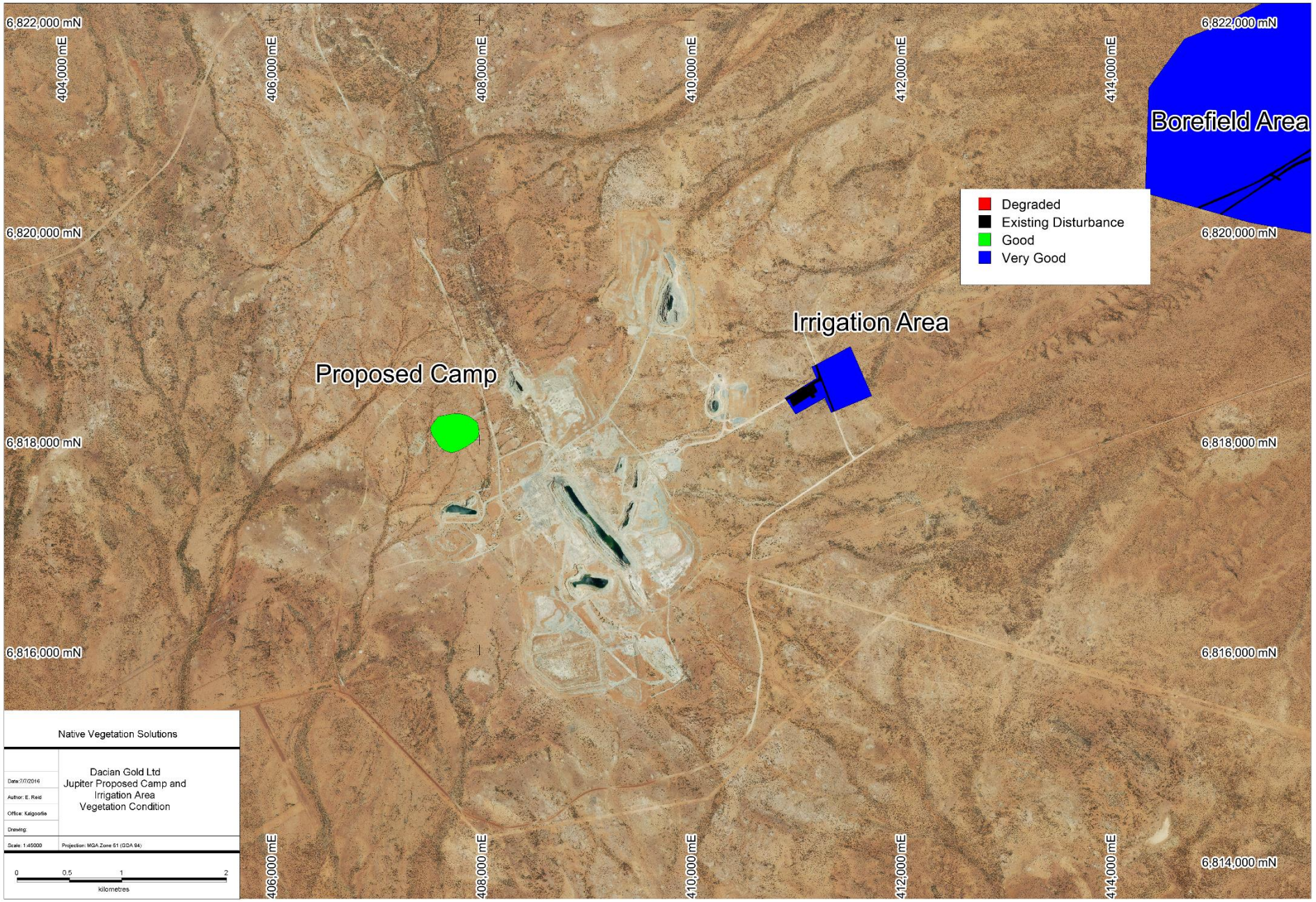
2
kilometres


6,822,000 mN
404,000 mE
406,000 mE
408,000 mE
410,000 mE
412,000 mE
414,000 mE
Borefield Area
Degraded
Existing Disturbance
Good
Very Good
6,820,000 mN
Irrigation Area
Proposed Camp
6,818,000 mN
6,816,000 mN
6,814,000 mN
Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Proposed Camp and
Irrigation Area
Vegetation Condition
Date: 7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
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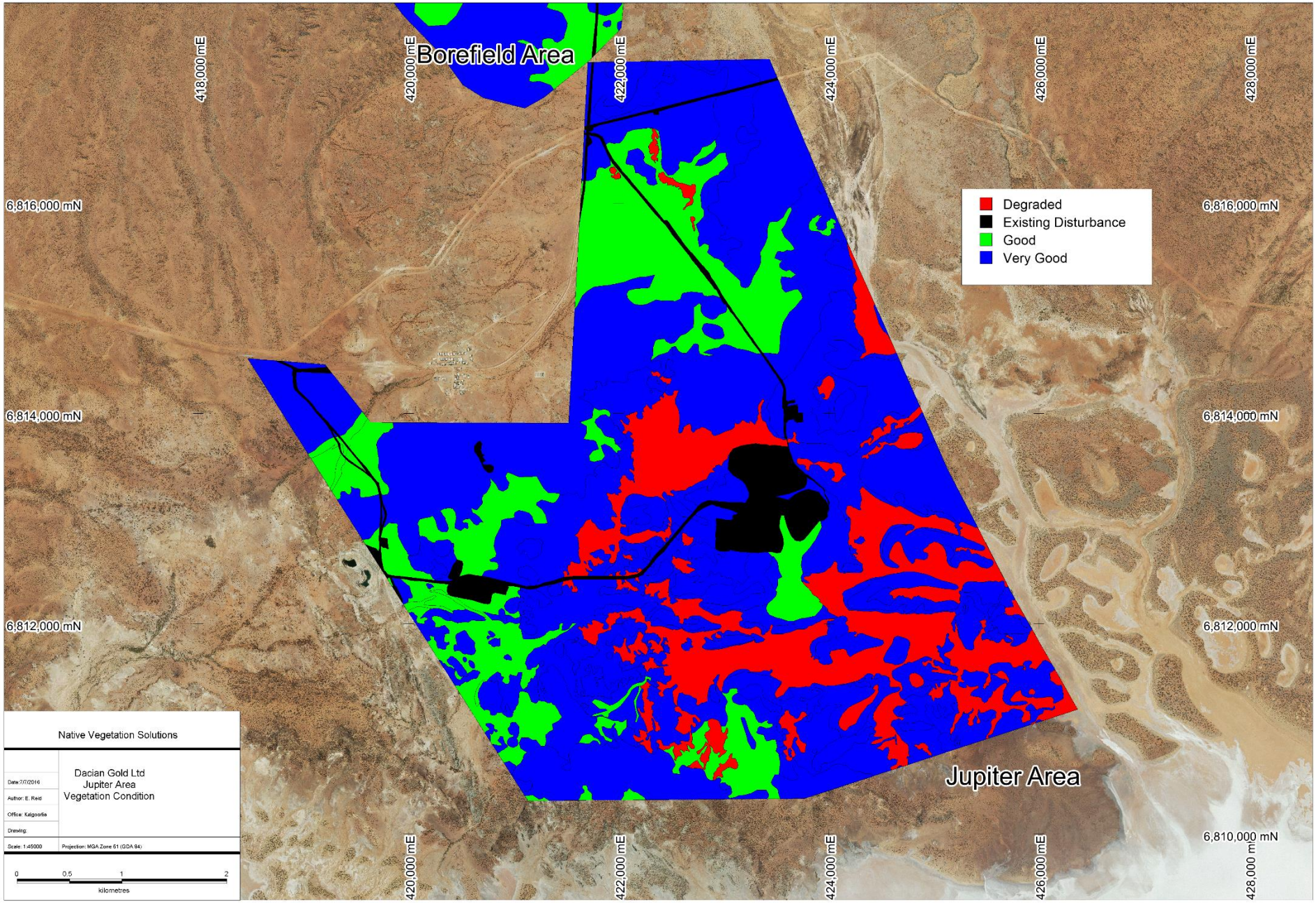
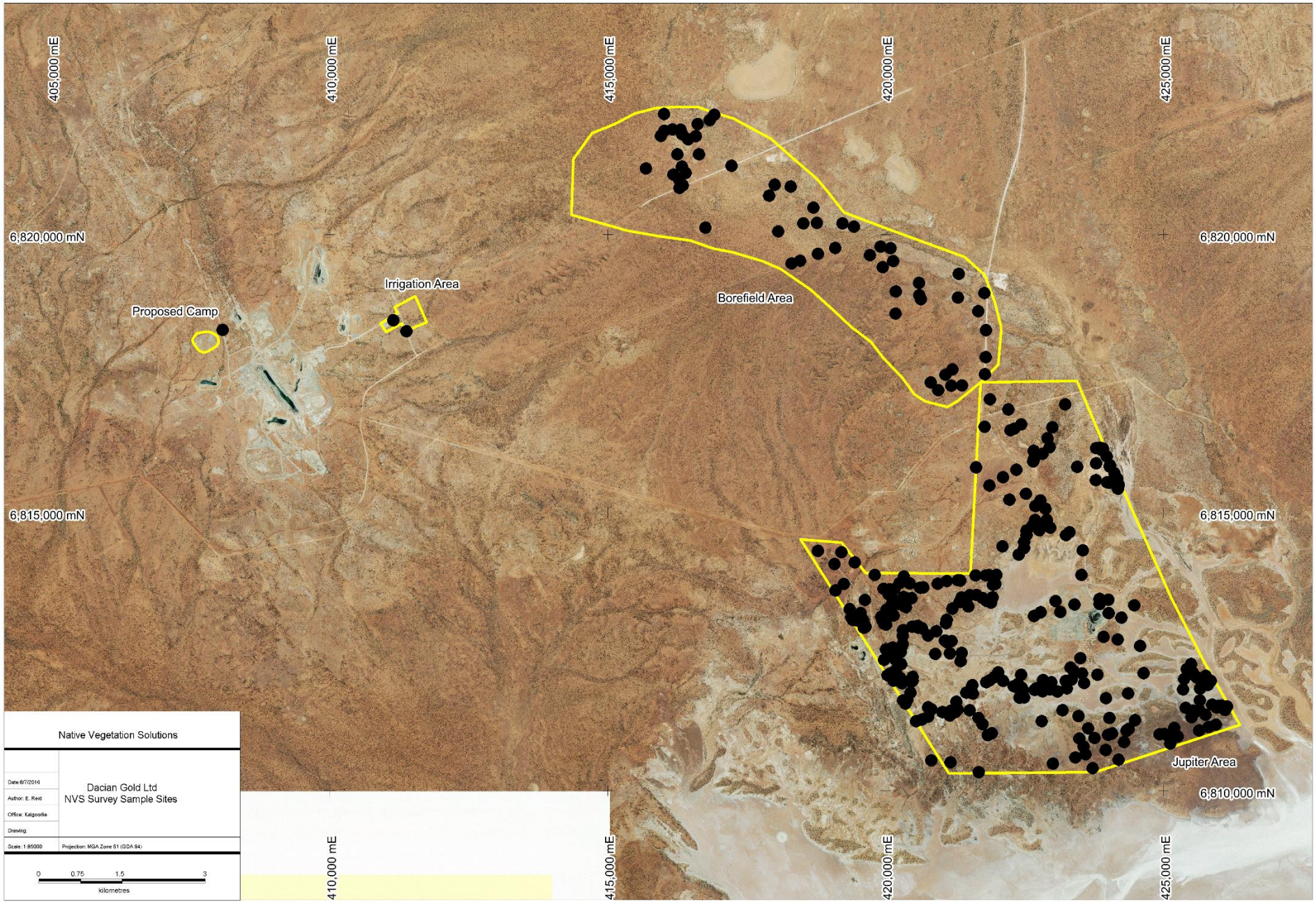
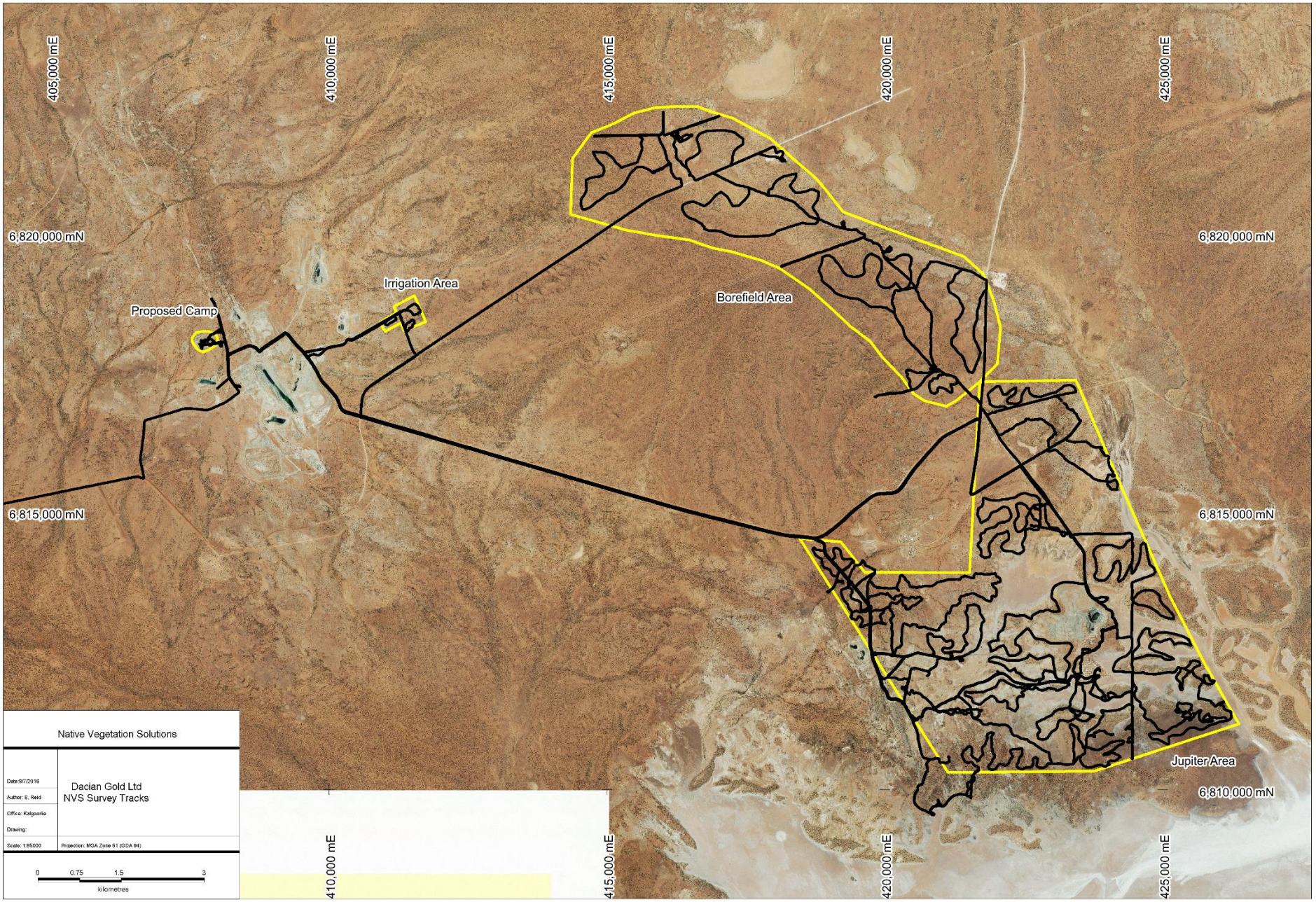
1
2
kilometres


Borefield Area
Jupiter Area
Degraded
Existing Disturbance
Good
Very Good
418,000 mE
420,000 mE
422,000 mE
424,000 mE
426,000 mE
428,000 mE
6,816,000 mN
6,814,000 mN
6,812,000 mN
6,810,000 mN
Native Vegetation Solutions
Dacian Gold Ltd
Jupiter Area
Vegetation Condition
Date: 7/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:45000
Projection: MGA Zone 51 (GDA 94)
0
0.5
1
2
kilometres


405,000 mE
410,000 mE
415,000 mE
420,000 mE
425,000 mE
6,820,000 mN
6,815,000 mN
6,810,000 mN
Irrigation Area
Proposed Camp
Borefield Area
Jupiter Area
Native Vegetation Solutions
Dacian Gold Ltd
NVS Survey Sample Sites
Date:6/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:85000
Projection: MGA Zone 51 (GDA 94)
0
0.75
1.5
3
kilometres


405,000 mE
410,000 mE
415,000 mE
420,000 mE
425,000 mE
6,820,000 mN
6,815,000 mN
6,810,000 mN
Irrigation Area
Proposed Camp
Borefield Area
Jupiter Area
Native Vegetation Solutions
Dacian Gold Ltd
NVS Survey Tracks
Date: 8/7/2016
Author: E. Reid
Office: Kalgoorlie
Drawing:
Scale: 1:85000
Projection: MGA Zone 51 (GDA 94)
0 0.75 1.5 3
kilometres

Appendix 5

Species List

Family	Genus	Species	A, P or NN	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Amaranthaceae	*Ptilotus*	*aervoides*	A	*	*			*											
Amaranthaceae	*Ptilotus*	*divaricatus*	P												*		*	*	
Amaranthaceae	*Ptilotus*	*obovatus*	P	*	*			*		*	*		*	*	*		*	*	
Amaranthaceae	*Ptilotus*	*schwartzii*	P		*														
Anacardiaceae	*Schinus*	*molle* var. *areira*	NN, P	*															
Apocynaceae	*Marsdenia*	*australis*	P		*			*		*			*	*	*			*	
Apocynaceae	*Nerium*	*oleander*	NN, P	*															
Asteraceae	*Chrysocephalum*	*puteale*	P					*						*					
Asteraceae	*Cratystylis*	*subspinescens*	P					*				*			*				
Asteraceae	*Olearia*	*decurrens*	P									*							
Asteraceae	*Olearia*	*muelleri*	P								*								
Asteraceae	*Pterocaulon*	*sphacelatum*	P						*						*				
Asteraceae	*Rhodanthe*	*charsleyae*	A							*									
Asteraceae	*Rhodanthe*	*chlorocephala* subsp. *rosea*	A												*				
Asteraceae	*Rhodanthe*	*floribunda*	A												*				
Asteraceae	*Rhodanthe*	*laevis*	A		*														
Asteraceae	*Rhodanthe*	*maryonii*	A		*														
Asteraceae	*Streptoglossa*	*liatroides*	P		*					*			*						
Asteraceae	*Vittadinia*	*sulcata*	A	*	*					*			*						
Boraginaceae	*Halgania*	*cyanea* var. Allambi Stn	P												*				
Brassicaceae	*Lepidium*	*platypetalum*	P					*					*						
Cactaceae	*Opuntia*	*? stricta*	NN, P	*															
Casuarinaceae	*Casuarina*	*obesa*	P		*	*	*		*		*								
Casuarinaceae	*Casuarina*	*pauper*	P	*			*				*		*						
Chenopodiaceae	*Atriplex*	*amnicola*	P		*														
Chenopodiaceae	*Atriplex*	*bunburyana*	P	*	*				*				*		*		*	*	
Chenopodiaceae	*Atriplex*	*codonocarpa*	A		*	*			*										
Chenopodiaceae	*Atriplex*	*holocarpa*	A	*	*														
Chenopodiaceae	*Atriplex*	*stipitata*	P		*							*							
Chenopodiaceae	*Atriplex*	*vesicaria*	P	*	*	*		*	*									*	
Chenopodiaceae	*Dysphania*	*kalpari*	A																*
Chenopodiaceae	*Enchylaena*	*tomentosa* var. *tomentosa*	P	*	*			*		*	*				*		*	*	
Chenopodiaceae	*Eriochiton*	*sclerolaenoides*	P		*														
Chenopodiaceae	*Gunniopsis*	*quadrifidus*	P						*			*					*		
Chenopodiaceae	*Maireana*	*amoena*	P					*	*			*							
Chenopodiaceae	*Maireana*	*atkinsiana*	P						*										
Chenopodiaceae	*Maireana*	*brevifolia*	P						*										
Chenopodiaceae	*Maireana*	*carnosa*	P						*										
Chenopodiaceae	*Maireana*	*convexa*	P						*										
Chenopodiaceae	*Maireana*	*georgei*	P	*		*		*	*		*		*		*		*	*	
Chenopodiaceae	*Maireana*	*glomerifolia*	P			*		*	*		*								
Chenopodiaceae	*Maireana*	*pyramidata*	P	*	*				*				*		*		*	*	
Chenopodiaceae	*Maireana*	*sedifolia*	P		*			*	*					*	*				
Chenopodiaceae	*Maireana*	*thesioides*	P		*				*								*		
Chenopodiaceae	*Maireana*	*tomentosa*	P	*	*	*		*	*						*				
Chenopodiaceae	*Maireana*	*trichoptera*	P						*										

Family	Genus	Species	A, P or NN	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Chenopodiaceae	*Maireana*	*triptera*	P	*	*	*			*				*	*	*				
Chenopodiaceae	*Rhagodia*	*drummondii*	P							*			*						
Chenopodiaceae	*Rhagodia*	*eremaeum*	P		*							*					*	*	*
Chenopodiaceae	*Salsola*	*australis*	A	*											*				
Chenopodiaceae	*Sclerolaena*	*cuneata*	P	*	*	*			*										*
Chenopodiaceae	*Sclerolaena*	*densiflora*	P	*	*								*		*				
Chenopodiaceae	*Sclerolaena*	*diacantha*	P	*	*	*		*	*	*				*	*				
Chenopodiaceae	*Sclerolaena*	*eurotioides*	P												*				
Chenopodiaceae	*Tecticornia*	*disarticulata*	P			*	*		*		*								
Chenopodiaceae	*Tecticornia*	*halocnemoides* subsp. *tenuis*	P			*	*		*										
Chenopodiaceae	*Tecticornia*	*indica* subsp. *bidens*	P			*	*		*		*								*
Chenopodiaceae	*Tecticornia*	*peltata*	P			*			*		*					*			
Chenopodiaceae	*Tecticornia*	*pergranulata* subsp. *elongata*	P									*				*			
Chenopodiaceae	*Tecticornia*	*pruinosa*	P			*			*										
Chenopodiaceae	*Tecticornia*	*pterygosperma* subsp. *pterygosperma*	P			*			*										
Chenopodiaceae	*Tecticornia*	*undulata*	P			*			*										
Euphorbiaceae	*Beyeria*	*sulcata* subsp. *sulcata*	P							*									
Euphorbiaceae	*Euphorbia*	*drummondii*	A																*
Fabaceae	*Acacia*	*aneura*	P	*	*				*	*		*	*	*	*			*	
Fabaceae	*Acacia*	*ayersiana*	P															*	
Fabaceae	*Acacia*	*burkittii*	P	*	*		*						*		*			*	
Fabaceae	*Acacia*	*caesaneura*	P									*	*				*	*	
Fabaceae	*Acacia*	*craspedocarpa*	P		*							*							
Fabaceae	*Acacia*	*grasbyi*	P					*											
Fabaceae	*Acacia*	*jennerae*	P	*															
Fabaceae	*Acacia*	*kalgoorliensis*	P													*			
Fabaceae	*Acacia*	*kempeana*	P												*				
Fabaceae	*Acacia*	*ligulata*	P	*								*					*		
Fabaceae	*Acacia*	*mulganeura*	P	*	*				*			*	*						
Fabaceae	*Acacia*	*oswaldii*	P														*		
Fabaceae	*Acacia*	*pteraneura*	P	*	*			*	*						*			*	
Fabaceae	*Acacia*	*quadrimarginea*	P	*				*											
Fabaceae	*Acacia*	*ramulosa* var. *linophylla*	P	*	*														
Fabaceae	*Acacia*	*ramulosa* var. *ramulosa*	P	*	*														
Fabaceae	*Acacia*	*resinimarginea*	P					*						*					
Fabaceae	*Acacia*	*sibirica*	P									*	*	*					
Fabaceae	*Acacia*	*tetragonophylla*	P	*	*			*					*	*	*			*	
Fabaceae	*Acacia*	*victoriae* subsp. *victoriae*	P	*										*	*		*	*	
Fabaceae	*Jacksonia*	*arida*	P									*					*		
Fabaceae	*Senna*	*artemisioides* subsp. *artemisioides*	P	*										*	*			*	
Fabaceae	*Senna*	*artemisioides* subsp. *filifolia*	P	*	*			*						*	*		*	*	
Fabaceae	*Senna*	*artemisioides* subsp. *helmsii*	P	*				*		*				*					
Fabaceae	*Senna*	*artemisioides* subsp. *sturtii*	P					*					*	*					
Fabaceae	*Senna*	*cardiosperma*	P	*	*			*					*		*				
Fabaceae	*Senna*	*glutinosa* subsp. *chatelainiana*	P	*	*			*			*		*	*					
Fabaceae	*Senna*	*pleurocarpa* subsp. *angustifolia*	P	*															

Family	Genus	Species	A, P or NN	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Fabaceae	*Swainsona*	*oroboides*	P		*														
Fabaceae	*Swainsona*	*tenuis*	P		*														
Frankeniaceae	*Frankenia*	*georgei*	P													*			
Frankeniaceae	*Frankenia*	*interioris*	P						*										
Frankeniaceae	*Frankenia*	*pauciflora*	P						*		*								
Frankeniaceae	*Frankenia*	*setosa*	P					*	*		*	*					*		
Goodeniaceae	*Goodenia*	*havilandii*	A							*									
Goodeniaceae	*Scaevola*	*spinescens*	P	*				*		*	*	*	*	*	*				
Haloragaceae	*Haloragis*	*trigonocarpa*	A										*						*
Lamiaceae	*Prostanthera*	*albiflora*	P					*						*					
Lamiaceae	*Salvia*	*verbenaca*	NN, P	*															
Lamiaceae	*Spartothamnella*	*teucriiflora*	P		*					*			*					*	*
Loranthaceae	*Amyema*	*nestor*	P		*														
Malvaceae	*Abutilon*	*cryptopetalum*	P		*					*					*				
Malvaceae	*Abutilon*	*leucopetalum*	P					*											
Malvaceae	*Brachychiton*	*gregorii*	P					*									*		
Malvaceae	*Hannafordia*	*bissillii* subsp. *bissillii*	P	*	*														
Malvaceae	*Lawrencia*	*helmsii*	P														*		
Malvaceae	*Lawrencia*	*squamata*	P	*					*										
Malvaceae	*Sida*	*calyxhymenia*	P	*	*						*	*		*	*	*			
Malvaceae	*Sida*	*ectogama*	P		*			*						*					
Malvaceae	*Sida*	*intricata*	P	*	*							*			*				
Malvaceae	*Sida*	sp *Excedentifolia*	P							*									
Malvaceae	*Sida*	sp golden calyces	P		*					*	*		*						
Myrtaceae	*Calytrix*	*desolata*	P					*											
Myrtaceae	*Calytrix*	*erosipetala*	P					*						*					
Myrtaceae	*Eucalyptus*	*? trivalva*	P									*							
Myrtaceae	*Eucalyptus*	*camaldulensis* subsp. *obtusa*	P	*															
Myrtaceae	*Eucalyptus*	*campaspe*	P	*															
Myrtaceae	*Eucalyptus*	*clelandii*	P	*													*		
Myrtaceae	*Eucalyptus*	*salubris*	P	*															
Myrtaceae	*Eucalyptus*	*torquata*	P	*															
Myrtaceae	*Melaleuca*	*hamata*	P															*	*
Myrtaceae	*Melaleuca*	*interioris*	P			*												*	
Myrtaceae	*Melaleuca*	*xerophila*	P												*				
Pittosporaceae	*Pittosporum*	*angustifolium*	P	*	*	*			*		*				*				
Poaceae	*Aristida*	*contorta*	A				*			*				*	*		*		
Poaceae	*Austrostipa*	*elegantissima*	P														*	*	
Poaceae	*Austrostipa*	*nitida*	P		*			*						*					
Poaceae	*Cenchrus*	*ciliaris*	NN, P	*															
Poaceae	*Cymbopogon*	*ambiguus*	P	*															
Poaceae	*Enneapogon*	*caerulescens*	P		*			*							*		*	*	
Poaceae	*Enteropogon*	*ramosus*	P										*						
Poaceae	*Eragrostis*	*dielsii*	A		*							*							*
Poaceae	*Eragrostis*	*eriopoda*	P	*	*							*			*		*		
Poaceae	*Eriachne*	*helmsii*	P									*							

Family	Genus	Species	A, P or NN	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Poaceae	*Eriachne*	*pulchella* subsp. *pulchella*	A	*	*					*					*				
Poaceae	*Monachather*	*paradoxus*	P					*		*		*							
Poaceae	*Rostraria*	*pumila*	A					*											
Poaceae	*Triodia*	*basedowii*	P									*							
Poaceae	*Triodia*	*melvillei*	P									*							
Polygonaceae	*Acetosa*	*vesicaria*	NN, A												*				
Polygonaceae	*Duma*	*florulenta*	P																*
Portulacaceae	*Calandrinia*	*eremaea*	A																*
Portulacaceae	*Calandrinia*	*polyandra*	A																*
Primulaceae	*Lysimachia*	*arvensis*	NN, A										*						
Proteaceae	*Grevillea*	*berryana*	P				*					*		*				*	
Proteaceae	*Hakea*	*lorea* subsp. *lorea*	P					*											
Proteaceae	*Hakea*	*preissii*	P						*	*							*		
Proteaceae	*Hakea*	*recurva* subsp. *recurva*	P							*				*					
Pteridaceae	*Cheilanthes*	*sieberi* subsp. *sieberi*	P							*									
Rubiaceae	*Psydrax*	*latifolia*	P		*							*							
Rubiaceae	*Psydrax*	*suaveolens*	P									*							
Santalaceae	*Exocarpos*	*aphyllus*	P				*	*			*	*			*			*	
Santalaceae	*Santalum*	*lanceolatum*	P					*		*					*			*	
Santalaceae	*Santalum*	*spicatum*	P							*									
Sapindaceae	*Dodonaea*	*lobulata*	P								*								
Sapindaceae	*Dodonaea*	*rigida*	P					*		*				*					
Scrophulariaceae	*Eremophila*	*alternifolia*	P												*				
Scrophulariaceae	*Eremophila*	*clarkei*	P												*				
Scrophulariaceae	*Eremophila*	*compacta*	P		*														
Scrophulariaceae	*Eremophila*	*falcata*	P											*					
Scrophulariaceae	*Eremophila*	*forrestii* subsp. *forrestii*	P					*				*		*	*			*	
Scrophulariaceae	*Eremophila*	*georgei*	P					*		*				*					
Scrophulariaceae	*Eremophila*	*glabra* subsp. *glabra*	P									*						*	
Scrophulariaceae	*Eremophila*	*glabra* subsp. *tomentosa*	P									*							
Scrophulariaceae	*Eremophila*	*glandulifera*	P		*														
Scrophulariaceae	*Eremophila*	*granitica*	P		*								*						
Scrophulariaceae	*Eremophila*	*latrobei* subsp. filiformis	P											*	*				
Scrophulariaceae	*Eremophila*	*latrobei* subsp. *latrobei*	P		*					*				*					
Scrophulariaceae	*Eremophila*	*longifolia*	P												*			*	
Scrophulariaceae	*Eremophila*	*maculata* subsp. *brevifolia*	P												*			*	
Scrophulariaceae	*Eremophila*	*margarethae*	P		*	*			*	*		*	*		*			*	
Scrophulariaceae	*Eremophila*	*metallicorum*	P		*														
Scrophulariaceae	*Eremophila*	*miniata*	P									*			*		*		
Scrophulariaceae	*Eremophila*	*oldfieldii* subsp. *angustifolia*	P					*	*						*				
Scrophulariaceae	*Eremophila*	*oppositifolia* subsp. *angustifolia*	P					*			*		*						
Scrophulariaceae	*Eremophila*	*pantonii*	P		*						*				*				
Scrophulariaceae	*Eremophila*	*platycalyx* subsp. *platycalyx*	P		*	*			*	*		*	*		*			*	
Scrophulariaceae	*Eremophila*	*platythamnos* subsp. *exotrachys*	P									*							
Scrophulariaceae	*Eremophila*	*youngii* subsp. *youngii*	P		*														
Solanaceae	*Crenidium*	*spinescens*	P									*							

Family	Genus	Species	A, P or NN	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
Solanaceae	*Lycium*	*australe*	P					*	*		*				*		*		
Solanaceae	*Nicotiana*	*glauca*	NN, P		*														
Solanaceae	*Solanum*	*ashbyae*	P							*									
Solanaceae	*Solanum*	*austropiceum*	P										*	*	*				
Solanaceae	*Solanum*	*lasiophyllum*	P	*	*	*		*	*	*				*	*			*	*
Solanaceae	*Solanum*	*nummularium*	P												*		*	*	
Solanaceae	*Solanum*	*orbiculatum* subsp. *orbiculatum*	P												*		*		
Solanaceae	*Solanum*	*plicatile*	P					*					*	*	*				
Thymelaeaceae	*Pimelea*	*microcephala* subsp. *microcephala*	P			*			*								*		
Zygophyllaceae	*Zygophyllum*	*eichleri*	A										*						
Zygophyllaceae	*Zygophyllum*	*eremaeum*	A														*		