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# Appendix A: FY19 Clearing Report

# **ANNUAL VEGETATION CLEARING REPORT**

**Clearing Purpose Permit No 5409/3**

**1 July 2018 – 30 June 2019 (FY19)**



Mungari Operations  
Kundana Road  
Kalgoorlie WA 6430

Registered Office  
Level 30  
175 Liverpool Street  
Sydney NSW 2022

[www.evolutionmining.com.au](http://www.evolutionmining.com.au)

## Permit Conditions

### 1 Weed Control (Condition 6)

All earth-moving machinery prior to entering and leaving the clearing area is weed free. No weed infestation areas have been identified and if any weeds are identified these are schedule to be sprayed quarterly.

### 2 Records to be kept (Condition 7)

All records in relation to this clearing permit are kept within Evolution Mining Mungari's internal filing systems. Clearing areas are recorded using ArcGIS using units set to Geocentric Datum Australia 1994 (GDA94). One area was cleared during the reporting period on M15/830 under CPS5409; the details of the cleared areas are shown in Table 1 and Figure 1.


### 3 Reporting (Condition 8)

This permit is valid until 16 March 2023.

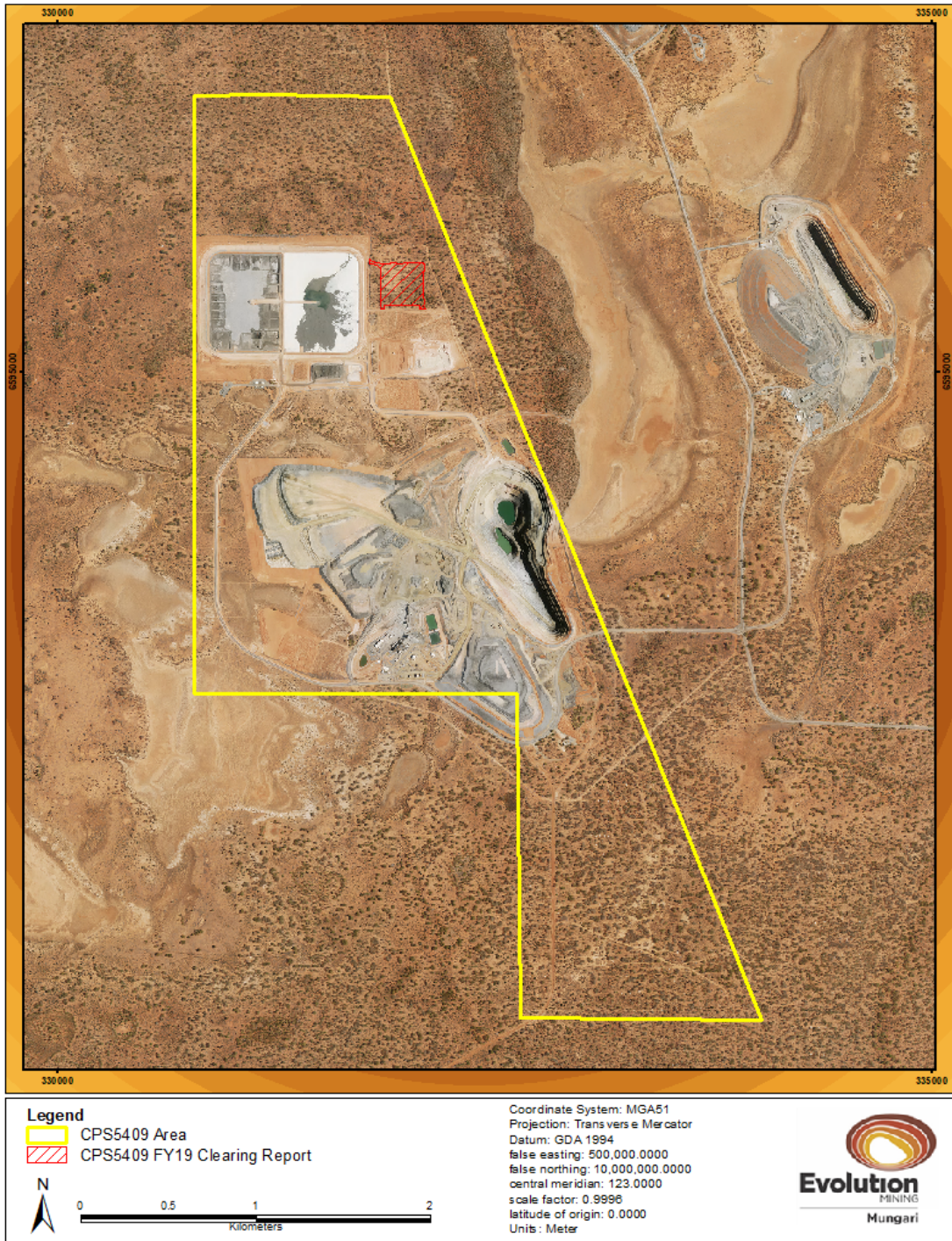
**Table 1: Vegetation Clearing FY19**

Area (IDP#)	Hectares Cleared	Date Cleared	Purpose
35	6.04	07/04/2019	Mungari TSF Borrow Pit
	<b>6.04</b>	Total for FY19	
	<b>204.42</b>	Previously Cleared	
	<b>210.46</b>	Total Cleared on CPS5409/3	
	<b>69.54</b>	Remaining Hectares on CPS 5409/3	

\*ICP# - Internal Clearing Permit Number



# CPS5409 2018/19 Annual Vegetation Clearing Permit



**Figure 1: Map of cleared areas undertaken in FY19**

## **Appendix B: FY20 Clearing Report**

13 August 2020

Executive Director  
Resource & Environmental Compliance  
(Native Vegetation Assessment)  
Department of Mines, Industry Regulation and Safety  
Mineral House  
100 Plain St  
East Perth, WA 6004

Dear Sir / Madam,

**AMENDED LETTER - FY20 Annual Clearing Report for CPS 5409/3, CPS 5675/4, CPS 5676/3, CPS 6089/3, CPS 6152/3, CPS 8549/2 and CPS 8797/1**

Evolution Mining Pty Ltd submits the following amended information in accordance with annual reporting requirements for the below Clearing Permits for the reporting period 1 July 2019 to 30 June 2020. This letter should replace the letter previously submitted on 31 July 2020.

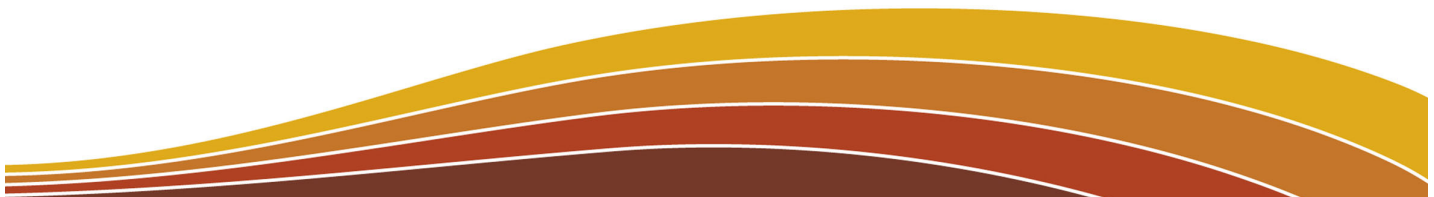
The following clearing covered under the following permits was undertaken during the reporting period (Table 1).

Table 1. Summary of Clearing Permits

Purpose Permit	Project Area	Area Approved (ha)	Approval Date	Expiry Date	Area Cleared in FY20 (ha)	Total Area Cleared (ha)
CPS 5409/3	Mungari Well	280.0	16 March 2013	16 March 2023	0	216.5
CPS 5675/4	Castle Hill	390.1	14 Sept 2013	14 Sept 2023	0	0
CPS 5676/3	Red Dam	152.5	14 Sept 2013	14 Sept 2023	0	0
CPS 6089/3	Kintore	131.7	28 June 2014	28 June 2024	0	0
CPS 6152/2	Burgundy	160	30 Aug 2014	30 Aug 2024	0	0
CPS 8549/2	Cutters Ridge	116.2	21 Dec 2019	20 Dec 2024	46.25	46.25
CPS 8797/1	TSF 3 and 4	210.3	9 May 2020	8 May 2025	0	0

A total of 69.43ha has also been cleared under numerous active Programme of Works (POW) across 39 tenements. The remaining disturbance was conducted in accordance with Schedule 1, Item 2, Subclause 2 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

Under CPS 5409/3, 19.35ha of clearing was reported in error in the previously submitted letter on 31 July 2020. After review, the clearing reported was found to be grade control drill pads located within the White Foil open pit gold mine, and hence no vegetation clearing was conducted (Figure 1).



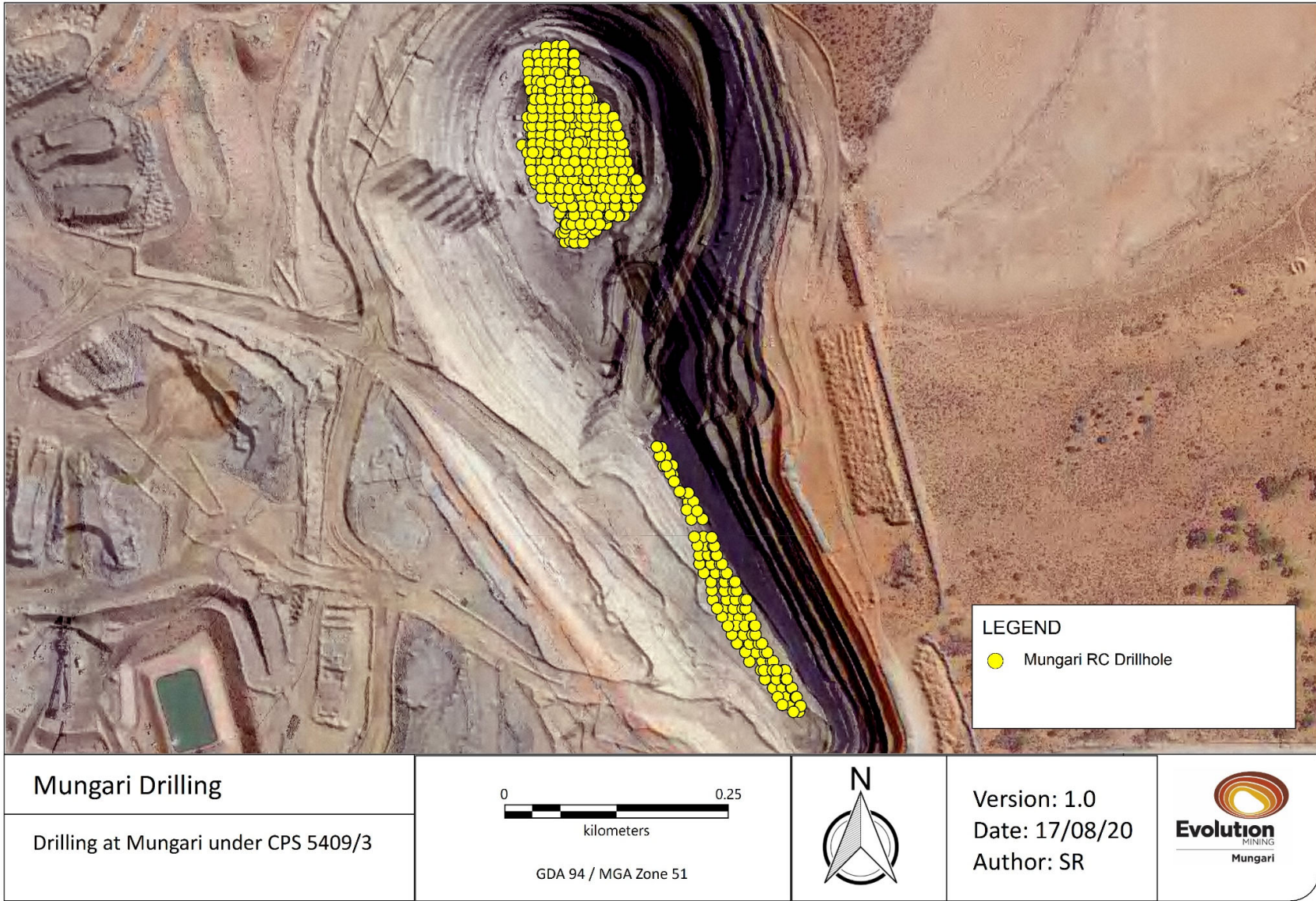


Figure 1 Drilling at Mungari under CPS 5409/3 (incorrectly reported as clearing in letter dated 31 July 2020)



## Part I – Clearing Authorised

- CPS 8549/2: A total of 46.25 hectares was cleared during the reporting period for the purposes of Cutters Ridge haul road, open pit gold mine and associated infrastructure (Figure 2).

## Part II – Management Conditions

Appropriate management of clearing applied to ensure all conditions are met is displayed below in Table 2.

Table 2 Demonstration of Adherence to CPS 8549/2 Conditions

CPS Condition	Demonstration of Adherence to CPS 8549/2
1.	Clearing conducted on these tenements.
2.	Clearing conducted for purpose of haul road and open pit gold mine.
3.	All clearing conducted within yellow cross-hatched area, and not more than 116.2ha cleared.
4.	Clearing undertaken immediately prior to requiring for purpose that Permit has been enacted, i.e. open pit mining.
5.	Clearing conducted by employees and authorised contractors under this Permit.
6.	(a) Clearing only undertaken where required; and (b) and (c) over-clearing avoided to reduce impact on environmental value of surrounding area.
7.	(i) Earth moving machinery cleaned of soil and vegetation prior to and after entry to area; (ii) no weed affected soil or mulch was brought into the area; and (iii) machinery movement was restricted to the limits of the areas to be cleared.
8.	(a) Riparian vegetation has not been identified in the area to be cleared; and (b) no watercourses or wetlands were impacted by clearing.
9.	A fauna survey conducted by Phoenix Environmental Sciences in September 2018 noted that <i>'suitable nesting habitat within the study area was sparse and patchy, often occurring in small isolated patches with no connectivity. Suitable nesting habitat was observed in areas outside the study area; nesting is more likely to occur in these areas than in the study area.'</i> (a) nonetheless, an inspection was carried out on 31 December 2019 of the pegged haul road by the Evolution Environmental team who confirmed no malleefowl mounds were found in the area to be cleared. Clearing of the haul road began on 7 January 2020. Further clearing of Cutters Ridge was carried out after January 31, however, no further mounds were identified during this clearing either.
10.	(a) (i) GIS records have been maintained of clearing conducted since 7 January 2020; (ii) (iii) and (iv) These records were confirmed via dated Survey pick-ups to ensure accuracy; and (b) records of clearing demonstrate clearing is confined only to areas required to reduce impacts in accordance with Condition 6; and (c) traffic management plans communicated at daily pre-shift meetings to minimise vehicle movement and therefore spread or introduction of weeds, in accordance with Condition 7.
11.	(a) Clearing report provided to DMIRS on 31 July 2020; and (b) N/A



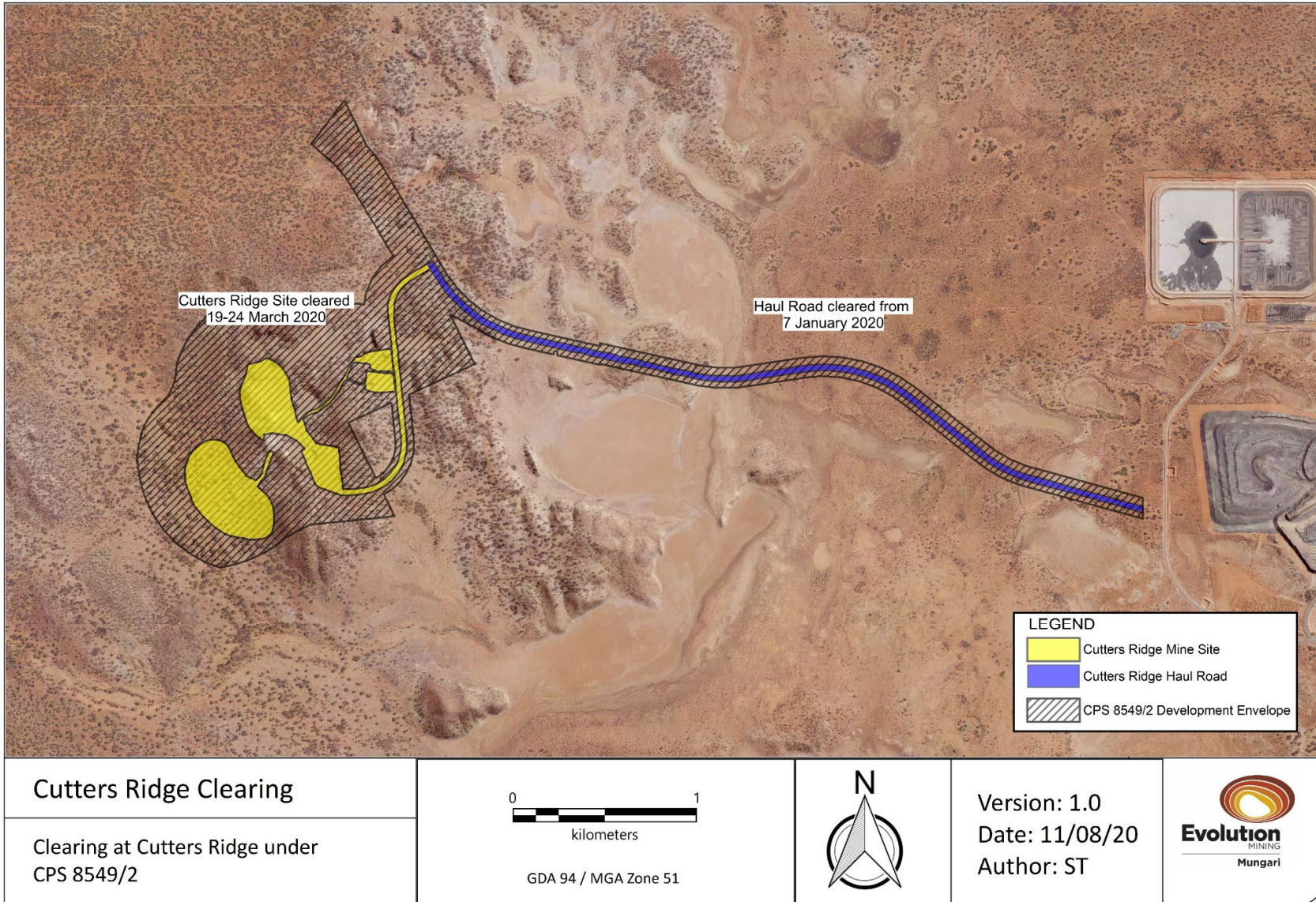


Figure 2 Clearing at Cutters Ridge under CPS 8549/2

### Part III – Record Keeping and Reporting

Detailed records are kept of all clearing and must contain evidence of; date, purpose, GPS coordinates and area cleared. Table 3 summarises the clearing activities conducted during FY20 under their respective permits.

Table 3 Description of clearing activities conducted during reporting period FY20

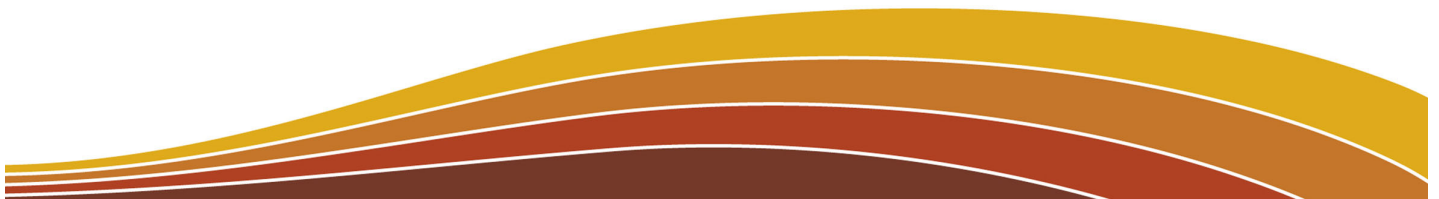
CPS No.	Date	Purpose	GPS Coordinates (GDA 94 Zone 51)	Area (ha)
CPS 8549/2	07/01/2020 to 24/03/2020	Cutters Ridge haul road, open pit gold mine and associated infrastructure.	326005 E 6594550 N	46.25

Please also find attached internal memo by Evolution environmental department as evidence that the area to be cleared was inspected by the Senior Environmental Advisor one week prior to clearing of the haul road commencing, as per Condition 9. (a).

Should you have any queries regarding this report, please contact Tari Laatz, Superintendent -Environment on (08) 9268 4072 or email [tari.laatz@evolutionmining.com.au](mailto:tari.laatz@evolutionmining.com.au).

Yours sincerely,

**Wayne Astill**  
Manager – Sustainability  
Evolution Mining Pty Ltd



## **Appendix C: FY21 Clearing Report**

6 July 2021

Executive Director  
Resource & Environmental Compliance  
(Native Vegetation Assessment)  
Department of Mines, Industry Regulation and Safety  
Mineral House  
100 Plain St  
East Perth, WA 6004

Dear Sir / Madam,

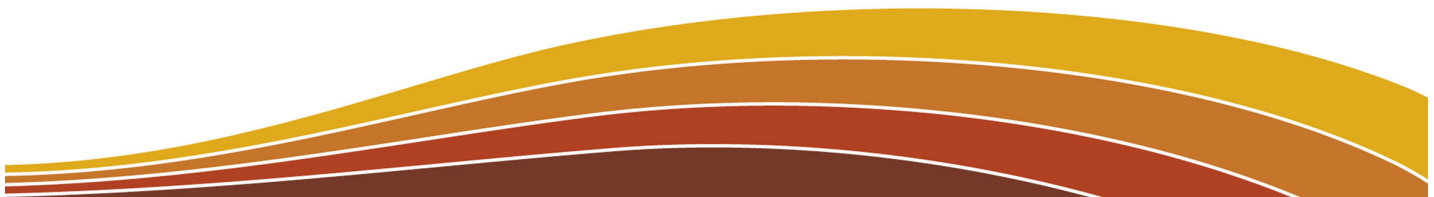
**FY21 Annual Clearing Report for CPS 5409/3, CPS 5675/4, CPS 5676/3, CPS 6089/3,  
CPS 6152/3, CPS 8549/3 and CPS 8797/1**

Evolution Mining Pty Ltd submits the following amended information in accordance with annual reporting requirements for the below Clearing Permits for the reporting period 1 July 2020 to 30 June 2021. The following clearing covered under the following permits was undertaken during the reporting period (**Table 1**).

**Table 1. Summary of Clearing Permits**

Purpose Permit	Project Area	Area Approved (ha)	Approval Date	Expiry Date	Area Cleared in FY21 (ha)	Total Area Cleared (ha)	Remaining Area (ha)
CPS 5409/3	Mungari Well	280.0	16 March 2013	16 March 2023	0	216.5	63.5
CPS 5675/4	Castle Hill	390.1	14 Sept 2013	14 Sept 2023	0	0	390.1
CPS 5676/3	Red Dam	152.5	14 Sept 2013	14 Sept 2023	0	0	152.5
CPS 6089/3	Kintore	131.7	28 June 2014	28 June 2024	0	0	131.7
CPS 6152/2	Burgundy	160.0	30 Aug 2014	30 Aug 2024	0	0	160.0
CPS 8549/3	Cutters Ridge	250.0	21 Dec 2019	20 Dec 2024	81.34	129.63	122.4
CPS 8797/1	TSF 3 and 4	210.3	9 May 2020	8 May 2025	153.22	153.22	57.08

A total of 11.2 ha has also been cleared under numerous active Programme of Works (POW) across 24 tenements. The remaining disturbance was conducted in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.



## Part I – Clearing Authorised

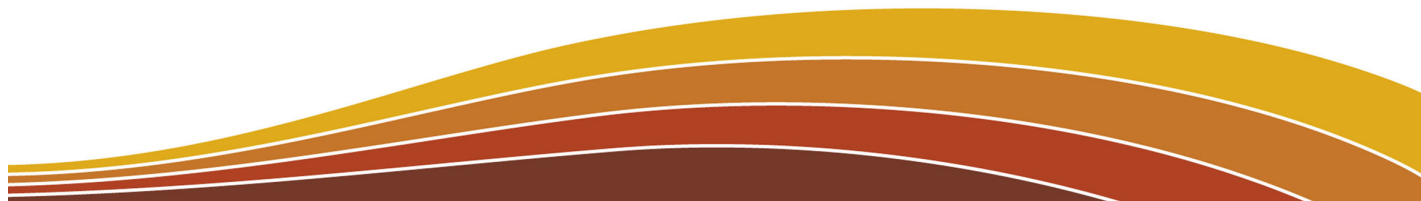
- CPS 8549/3: A total of 81.34 hectares was cleared during the reporting period for the purposes of Cutters Ridge Open Pit Expansion and associated infrastructure (**Figure 1**).
- CPS 8797/1: A total of 153.22 hectares was cleared during the reporting period for the purposes of TSF Cells 3/4 and associated infrastructure (**Figure 1**).

## Part II – Management Conditions

Appropriate management of clearing applied to ensure all conditions are met is displayed below in **Table 2** and **Table 3**.

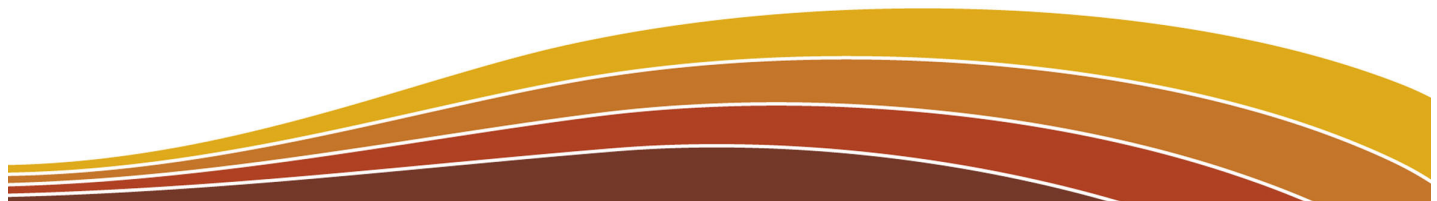
**Table 2 Demonstration of Adherence to CPS 8549/3 Conditions**

CPS Condition	Demonstration of Adherence to CPS 8549/3
1.	Clearing conducted on these tenements.
2.	Clearing conducted for purpose of mineral production and haul road.
3.	All clearing conducted within yellow cross-hatched area, and not more than 250 ha cleared.
4.	No clearing of any native vegetation has occurred within the area shaded red on Plan 8549/3.
5.	Clearing undertaken immediately prior to requiring for purpose that Permit has been enacted, i.e. mineral production and haul road.
6.	Clearing conducted by employees and authorised contractors under this Permit.
7.	(a) Clearing only undertaken where required; and (b) and (c) over-clearing avoided to reduce impact on environmental value of surrounding area.
8.	(i) Earth moving machinery cleaned of soil and vegetation prior to and after entry to area; (ii) no weed affected soil or mulch was brought into the area; and (iii) machinery movement was restricted to the limits of the areas to be cleared.
9.	(a) Riparian vegetation has not been identified in the area to be cleared; and (b) no watercourses or wetlands were impacted by clearing.
10.	A fauna survey conducted by Phoenix Environmental Sciences in September 2018 noted that <i>'suitable nesting habitat within the study area was sparse and patchy, often occurring in small isolated patches with no connectivity. Suitable nesting habitat was observed in areas outside the study area; nesting is more likely to occur in these areas than in the study area.'</i> (a) Nonetheless, inspections were carried out on 9 October 2020 and 22 October 2020 of the clearing area by the Evolution Environmental Department who confirmed no malleefowl mounds were found in the area to be cleared. Clearing at Cutters Ridge following these inspections began on 10 October 2020 and ceased 5 November 2020. (b) No malleefowl mounds, active or inactive, have been identified at Cutters Ridge.
11.	(a) (i) GIS records have been maintained of clearing conducted under this permit in GDA94; (ii) (iii) and (iv) These records were confirmed via dated Survey pick-ups to ensure accuracy and are displayed in <b>Table 4</b> ; and (b) records of clearing demonstrate clearing is confined only to areas required to reduce impacts in accordance with Condition 7; (c) traffic management plans communicated at daily pre-shift meetings to minimise vehicle movement and therefore spread or introduction of weeds, in accordance with Condition 8; and (d) there are no recorded malleefowl mounds in the area.
12.	(a) Clearing report provided to DMIRS by 31 July 2021; and (b) N/A



**Table 3 Demonstration of Adherence to CPS 8797/1 Conditions**

CPS Condition	Demonstration of Adherence to CPS 8797/1
1.	(i) Earth moving machinery cleaned of soil and vegetation prior to and after entry to area; (ii) no weed affected soil or mulch was brought into the area; and (iii) machinery movement was restricted to the limits of the areas to be cleared.
2.	(a) Clearing only undertaken where required; and (b) and (c) over-clearing avoided to reduce impact on environmental value of surrounding area.
3.	A fauna survey conducted by Spectrum Ecology in September 2019 noted that <i>'The Malleefowl was not recorded during the current survey.'</i> (a) Nonetheless, Malleefowl inspections were carried out on 15 September 2020 and 15 October 2020 of the clearing areas by the Evolution Environmental Department who confirmed no malleefowl mounds were found in the area to be cleared. Clearing at the TSF following these inspections occurred on 17 September 2020 and 28-29 October 2020. (b) No malleefowl mounds, active or inactive, have been identified at the TSF.
4.	Clearing undertaken immediately prior to requiring for purpose that Permit has been enacted, i.e. mineral production and haul road.
5.	(a) (i) GIS records have been maintained of clearing conducted under this permit in GDA94; (ii) (iii) and (iv) These records were confirmed via dated Survey pick-ups to ensure accuracy and are displayed in <b>Table 4</b> ; and (c) traffic management plans communicated at daily pre-shift meetings to minimise vehicle movement and therefore spread or introduction of weeds, in accordance with Condition 1; (b) records of clearing demonstrate clearing is confined only to areas required to reduce impacts in accordance with Condition 2; and (d) there are no recorded malleefowl mounds in the area.
6.	(a) Clearing report provided to DMIRS by 31 July 2021; and (b) N/A



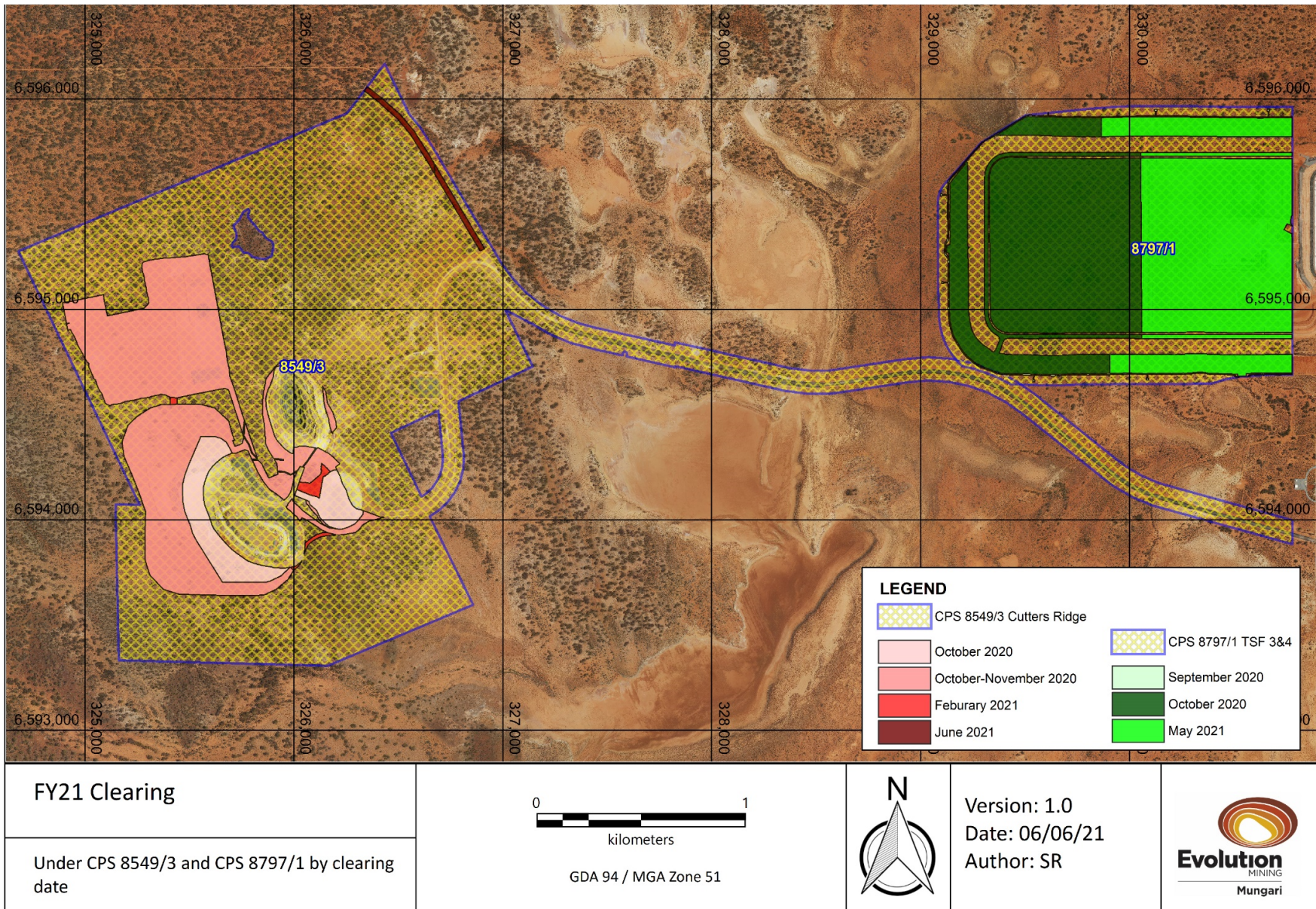


Figure 1 FY21 Clearing under CPS 8549/3 and CPS 8797/1 by clearing date.



### Part III – Record Keeping and Reporting

Detailed records are kept of all clearing and must contain evidence of; date, purpose, GPS coordinates and area cleared. **Table 4** summarises the clearing activities conducted during FY21 under their respective permits.

**Table 4 Description of clearing activities conducted during reporting period FY21 under CPS 8549/3 and CPS 8797/1**

CPS No.	Date	Purpose	GPS Coordinates (GDA 94 Zone 51)	Area (ha)	Malleefowl survey date
CPS 8797/1	17/09/20	TSF monitoring bores and access track	329114 E 6595288 N	2.31	15/09/20
CPS 8549/3	10/10/20- 16/10/20	Cutters Ridge stage 3 pit and WRD expansion	326180 E 6594100 N	4.21 <sup>1</sup>	09/10/20
CPS 8797/1	28/10/20- 29/10/20	TSF Cell 3 and topsoil stockpile	330390 E 6595300 N	68.86 <sup>2</sup>	15/10/20
CPS 8549/3	23/10/20- 05/11/20	Cutters Ridge stage 2 pit and WRD expansion	325350 E 654830 N	75.76	22/10/20
CPS 8549/3	18/02/21	Cutters Ridge HME access roads	326100 E 6594160 N	1.30	Not Required
CPS 8797/1	12/05/21- 26/05/21	TSF Cell 4 and topsoil stockpile	329690 E 6595310 N	82.05	Not Required
CPS 8549/3	28/06/21- 30/06/21	Rayjax haul road	326650 E 6595710 N	0.24 <sup>3</sup>	Not Required

1. Additional 10 ha cleared on tenement M 15/1827 in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

2. Additional 10 ha cleared on tenement M 15/829 in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

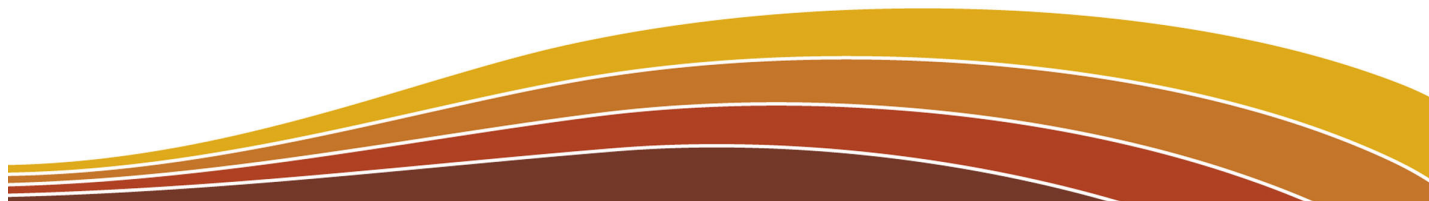
3. Additional 2.04 ha cleared on tenement L 15/387 in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

Please also find attached internal memos by Evolution's Environmental Department as evidence that the area to be cleared was inspected two weeks prior to clearing commencing, as per Condition 10. (a) of CPS 8549/3 and Condition 3. (a) of CPS 8597/1.

Should you have any queries regarding this report, please contact Tari Laatz on (08) 9268 4072 or email [tari.laatz@evolutionmining.com.au](mailto:tari.laatz@evolutionmining.com.au).

Yours sincerely,

**Tari Laatz**  
Superintendent – Environment  
Evolution Mining Pty Ltd



## **Appendix D: FY22 Clearing Report**

7 August 2022

**Mungari**

ABN 74 084 669 036

Executive Director  
Resource & Environmental Compliance  
(Native Vegetation Assessment)  
Department of Mines, Industry Regulation and Safety  
Mineral House  
100 Plain St  
East Perth, WA 6004

**Evolution Mining  
Mungari Operations**  
P +61 8 9268 4000  
Kundana Road  
Kalgoorlie WA 6430

**Registered Office**  
P +61 2 9696 2900  
F +61 2 9696 2901  
Level 30  
175 Liverpool Street  
Sydney NSW 2022

[www.evolutionmining.com.au](http://www.evolutionmining.com.au)

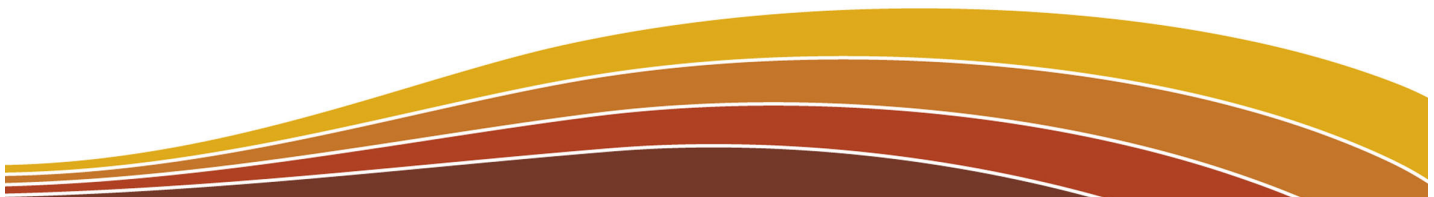
Dear Sir / Madam,

**FY22 Annual Clearing Report for CPS 5409/3, CPS 5675/4, CPS 5676/3, CPS 6089/3, CPS 6152/3, CPS 8549/3, CPS 8797/1, CPS 9242/1, CPS 9434/1 and CPS 9500/1.**

Evolution Mining Pty Ltd (Evolution) submits the following information in accordance with annual reporting requirements for the below Clearing Permits for the reporting period 1 July 2021 to 30 June 2022 (FY22). No clearing under the following permits was undertaken during the reporting period (**Table 1**). As no clearing has been conducted, Evolution have therefore been compliant with all conditions of each clearing permit.

**Table 1. Summary of Clearing Permits FY22**

Purpose Permit	Project Area	Area Approved (ha)	Approval Date	Expiry Date	Area Cleared in FY22 (ha)	Total Area Cleared (ha)	Remaining Area (ha)
CPS 5409/3	Mungari Well	280.0	16 March 2013	16 March 2023	0	216.5	63.5
CPS 5675/4	Castle Hill	390.1	14 Sept 2013	14 Sept 2023	0	0	390.1
CPS 5676/3	Red Dam	152.5	14 Sept 2013	14 Sept 2023	0	0	152.5
CPS 6089/3	Kintore	131.7	28 June 2014	28 June 2024	0	0	131.7
CPS 6152/2	Burgundy	160.0	30 Aug 2014	30 Aug 2024	0	0	160.0
CPS 8549/3	Cutters Ridge	250.0	21 Dec 2019	20 Dec 2024	0	129.63	122.4
CPS 8797/1	TSF 3 and 4	210.3	09 May 2020	08 May 2025	0	153.22	57.08
CPS 9242/1	Rayjax	200.0	16 July 2021	15 July 2026	0	0	200.0
CPS 9434/1	Paradigm	300.0	02 July 2022	01 July 2027	0	0	300.0
CPS 9500/1	Castle Hill	800.0	05 July 2022	31 January 2027	0	0	800.0



The remaining disturbance was conducted in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. This includes 16.77 ha of mining disturbance across six tenements and of 4.75 ha drilling disturbance across 13 tenements. A summary of clearing conducted in accordance with Schedule 1, Item 2, Subclause 2 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* is displayed in **Table 2**.

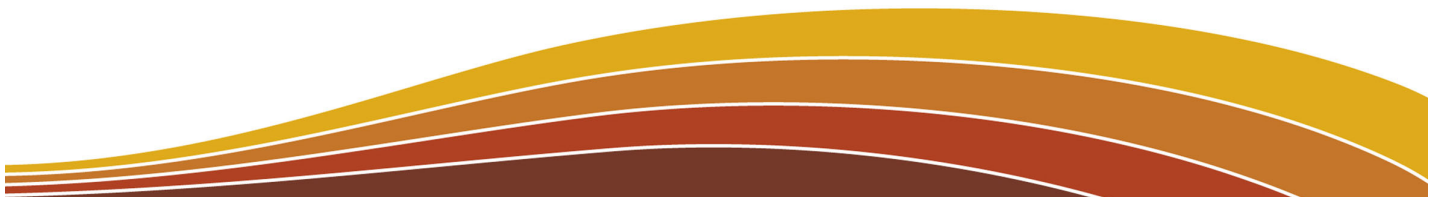
**Table 2. Summary of clearing conducted outside of Clearing Permits FY22**

Tenement	Project	Purpose	Area (ha)	FY22 Total Tenement Disturbance Area (ha)
E 15/965	New Foil	Exploration Drilling	0.30	0.30
L 15/387	Rayjax	Rayjax Haul Road	2.06	2.06
L 15/391	Rayjax	Rayjax Haul Road	4.89	4.89
M 15/1827	Cutters Ridge	Cutters Ridge Abandonment Bund	1.63	3.01
M 15/1827	Rayjax	Rayjax Haul Road	1.38	3.01
M 15/1831	Rayjax	Rayjax Waste Dump	5.56	5.87
M 15/1831	Rayjax	Resource Definition Drilling	0.25	5.87
M 15/1831	Rayjax	Rayjax Haul Road	0.06	5.87
M 15/1886	Rayjax	Resource Definition Drilling	0.40	0.40
M 15/688	Frogs Leg	Resource Definition Drilling	0.80	0.80
M 15/829	TSF	TSF Workshop	0.20	0.63
M 15/829	TSF	TSF cell4 Diversion channel	0.18	0.63
M 15/829	TSF	TSF Cell 3 Topsoil Stockpile	0.11	0.63
M 15/829	TSF	TSF Cell 4 access road	0.07	0.63
M 15/829	TSF	TSF Access Track	0.06	0.63
M 15/830	TSF	TSF Access Track	0.35	0.54
M 15/830	TSF	TSF Cell 3 Topsoil Stockpile	0.14	0.54
M 15/830	TSF	TSF Workshop	0.05	0.54
M 16/152	Kiora	Resource Definition Drilling	0.15	0.15
M 16/195	Outridge	Resource Definition Drilling	0.05	0.05
M 16/24	Castle Hill	Resource Definition Drilling	1.35	1.35
M 16/40	Kiora	Resource Definition Drilling	0.40	0.40
M 16/526	Wadi	Resource Definition Drilling	0.70	0.70
M 16/532	Wookie	Resource Definition Drilling	0.30	0.30
P 15/5990	Rayjax	Resource Definition Drilling	0.05	0.05

Should you have any queries regarding this report, please contact Tari Laatz on (08) 9268 4072 or email [tari.laatz@evolutionmining.com.au](mailto:tari.laatz@evolutionmining.com.au).

Yours sincerely,

**Tari Laatz**  
 Superintendent – Environment  
 Evolution Mining Pty Ltd



## **Appendix E: Proof of Occupier Status**



## MINING TENEMENT SUMMARY REPORT

**MINING LEASE 15/830**

Status: Live

### TENEMENT SUMMARY

Area: 808.10000 HA      Death Reason :  
Mark Out : 02/02/1995 14:45:00      Death Date :  
Received : 10/02/1995 11:00:00      Commence : 15/03/1999  
Term Granted : 21 Years (Renewed)

### CURRENT HOLDER DETAILS

**Name and Address**

EVOLUTION MINING (MUNGARI) PTY LTD  
MCMAHON MINING TITLE SERVICES PTY LTD, C/- MCMAHON MINING TITLE SERVICES PTY LTD, PO BOX  
6301, EAST PERTH, WA, 6892, xxx@mmts.net.au, xxxxxxxxxxx997

### DESCRIPTION

**Locality:** Lake Kurrawang  
**Datum:** Datum situated 2977 metres bearing 090 degrees from  
AMG 327665.326 East: 6596410.194 North (Zone 51)  
**Boundary:** THENCE: 1117.4 metres bearing 090 degrees 5700  
metres bearing 158 degrees 1400 metres bearing 270  
degrees 1875 metres bearing 360 degrees 1839 metres  
bearing 270 degrees 3416.9 metres bearing 360 degrees  
BACK TO DATUM

Area :	Type	Dealing No	Start Date	Area
	Surveyed		20/01/2000	808.10000 HA
	Granted		15/03/1999	765.56000 HA
	Applied For		02/02/1995	765.56000 HA

### SHIRE DETAILS

Shire	Shire No	Start	End	Area
COOLGARDIE SHIRE	1960	02/02/1995		808.10000 HA

## **Appendix F: Letter of Authorisation**

**Mungari**

ABN 74 084 669 036

**Mungari Operations**

P: +61 8 9268 4000

Kundana Road

Kalgoorlie WA 6430

**Registered Office**

P: +61 2 9696 2900

F: +61 2 9696 2901

Level 24

175 Liverpool Street

Sydney NSW 2000

www.evolutionmining.com.au

5 May 2022

General Manager Environmental Compliance  
 Resource and Environmental Compliance Division  
 Department of Mines, Industry Regulation and Safety  
 Mineral House, 100 Plain Street  
**EAST PERTH WA 6004**

Dear Sir/Madam,

**Letter of Authority in regard to Clearing Permit Applications and amendments.**

Please be advised that the following persons are authorised to sign Native Vegetation Clearing Permit applications and amendments on behalf of **Evolution Mining Pty Ltd** and all its subsidiary companies. All previous authorisations are superseded by this letter.

NAME	POSITION	SIGNATURE
Scott Barber	General Manager	DocuSigned by:  1A3B1C0A9C314F3
Gregory Coase	Manager – Sustainability	DocuSigned by:  3DE90A189C004A3
Brad Daddow	Manager – Geology	DocuSigned by:  34E2008686C6473
Shane Barker	Manager – Processing	DocuSigned by:  5CECC4E72F34E
Blake Callinan	Manager – Integrated Planning	DocuSigned by:  0637E0E738064A3

Sincerely,

Signature: Signature:

Name: Evan Elstein Name: Lawrie Conway

Position: Company Secretary Position: Director

Date: 5 May 2022 Date: 5 May 2022





## **Appendix G: Evolution Mining Ltd ASIC Extract**



**ASIC**

Australian Securities & Investments Commission

# Current Company Extract

**Name:** EVOLUTION MINING (MUNGARI) PTY LTD

**ACN:** 002 124 745

Date/Time: 20 September 2021 AEST 10:51:25 AM

This extract contains information derived from the Australian Securities and Investments Commission's (ASIC) database under section 1274A of the Corporations Act 2001.

Please advise ASIC of any error or omission which you may identify.

EXTRACT

Organisation Details	Document Number
<b>Current Organisation Details</b>	
Name: EVOLUTION MINING (MUNGARI) PTY LTD	029331401
ACN: 002 124 745	
ABN: 90002124745	
Registered in: New South Wales	
Registration date: 23/04/1981	
Next review date: 08/10/2021	
Name start date: 31/08/2015	
Previous state number: 26749313	
Status: Registered	
Company type: Australian Proprietary Company	
Class: Limited By Shares	
Subclass: Proprietary Company	

Address Details	Document Number
<b>Current</b>	
Registered address: Level 24, 175 Liverpool Street, SYDNEY NSW 2000	7E9992690
Start date: 21/03/2018	
Principal Place Of Business address: Level 24, 175 Liverpool Street, SYDNEY NSW 2000	7E9992690
Start date: 05/03/2018	

Contact Address
Section 146A of the Corporations Act 2001 states 'A contact address is the address to which communications and notices are sent from ASIC to the company'.
<b>Current</b>
Address: Level 24, 175 Liverpool Street, SYDNEY NSW 2000
Start date: 19/04/2018

Officeholders and Other Roles	Document Number
<b>Director</b>	
Name: JACOB KLEIN	029331403
Address: 61 Wentworth Road, VAUCLUSE NSW 2030	
Born: 15/08/1965, CAPE TOWN, SOUTH AFRICA	
Appointment date: 24/08/2015	
Name: LAWRENCE CONWAY	029331403
Address: 10 Clermiston Avenue, ROSEVILLE NSW 2069	
Born: 01/10/1969, ROCKHAMPTON, QLD	
Appointment date: 24/08/2015	
<b>Secretary</b>	
Name: EVAN MARK ELSTEIN	029331403
Address: 43 Clyde Street, NORTH BONDI NSW 2026	
Born: 26/07/1965, CAPE TOWN, SOUTH AFRICA	
Appointment date: 24/08/2015	

Appointed Auditor		
Name:	ROBERT GAMBETTA	7E6898858
Address:	'Kpmg' 235 St Georges Terrace PERTH WA 6000	
Start date:	14/02/2014	
Ultimate Holding Company		
Name:	EVOLUTION MINING LIMITED	029331403
ACN:	084 669 036	
ABN:	74084669036	

Share Information					
Share Structure					
Class	Description	Number issued	Total amount paid	Total amount unpaid	Document number
ORD	ORDINARY SHARES	200000	200000.00	0.00	001779857
Members					
<p>Note: For each class of shares issued by a proprietary company, ASIC records the details of the top twenty members of the class (based on shareholdings). The details of any other members holding the same number of shares as the twentieth ranked member will also be recorded by ASIC on the database. Where available, historical records show that a member has ceased to be ranked amongst the top twenty members. This may, but does not necessarily mean, that they have ceased to be a member of the company.</p>					
<p>Name: TOLEDO HOLDING (AUSCO) PTY LIMITED  ACN: 159 264 598  Address: Level 24, 175 Liverpool Street, SYDNEY NSW 2000</p>					
Class	Number held	Beneficially held	Paid	Document number	
ORD	200000	yes	FULLY	7E9992690	

Financial Reports						
Balance date	Report due date	AGM due date	Extended AGM due	AGM held date	Outstanding	Document number
31/12/1995					no	011259429
31/12/2004	31/05/2005				no	022870703
31/12/2005	31/05/2006				no	023170081
31/12/2006	30/04/2007				no	023952191
31/12/2008	30/04/2009				no	026242241
31/12/2009	30/04/2010				no	7E3815883
31/12/2010	30/04/2011				no	7E3816008
31/12/2011	30/04/2012				no	7E4413943

31/12/2012	30/04/2013				no	7E5222159
31/12/2013	30/04/2014				no	7E6898858
31/12/2014	30/04/2015				no	7E6898948

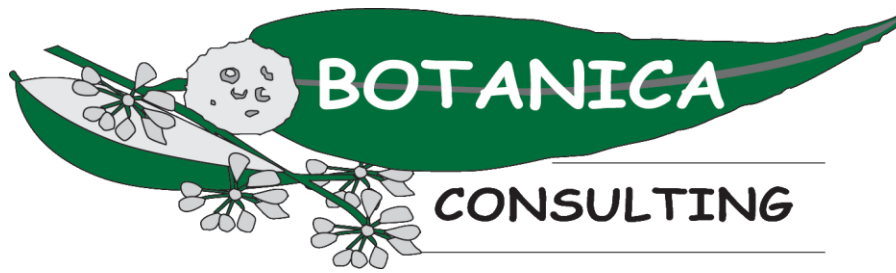
### Documents

Note: Where no Date Processed is shown, the document in question has not been processed. In these instances care should be taken in using information that may be updated by the document when it is processed. Where the Date Processed is shown but there is a zero under No Pages, the document has been processed but a copy is not yet available.

Date received	Form type	Date processed	Number of pages	Effective date	Document number
14/12/2018	488M Application To Change Review Date Of A Company Or Scheme Synchronise Review Date With Holding Company - No Fee	30/01/2019	4	14/12/2018	030516372
21/01/2019	484E Change To Company Details Appointment Or Cessation Of A Company Officeholder	21/01/2019	2	21/01/2019	7EAH88066

\*\*\*End of Extract of 3 Pages\*\*\*

**Appendix H: Supporting Biodiversity Survey  
(White Foil Project)**



# **White Foil Project Detailed Flora/ Vegetation Survey and Basic Fauna Survey**

**Prepared for Evolution Mining Ltd.**



**February 2021  
Version 1**

**Prepared by:  
Botanica Consulting Pty Ltd  
PO Box 2027  
Boulder WA 6432**

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**Document Job Number:** 2020/181

**Prepared by:** Kelby Jennings  
Senior Environmental Consultant

**Reviewed by:** Andrea Williams  
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Botanica Consulting

**Approved by:** Jim Williams  
Director  
Botanica Consulting



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## Glossary

Acronym	Description
BAM Act	<i>Biosecurity and Agriculture Management Act 2007</i> , WA Government.
BC Act	<i>Biodiversity Conservation Act 2016</i> , WA Government.
Botanica	Botanica Consulting Pty Ltd.
BoM	Bureau of Meteorology.
DAFWA	Department of Agriculture and Food (now DPIRD), WA Government.
DAWE	Department of the Agriculture, Water and Environment (formerly known as DotEE), Australian Government.
DBCA	Department of Biodiversity, Conservation and Attractions (formerly DPaW), WA Government.
DEC	Department of Environment and Conservation (now DBCA), WA Government.
DER	Department of Environment Regulation (now DWER), WA Government.
DMIRS	Department of Mines, Industry Regulation and Safety (formerly DMP), WA Government
DotEE	Department of the Environment and Energy (now known as DAWE), Australian Government.
DoW	Department of Water (now DWER), WA Government.
DPaW	Department of Parks and Wildlife (now DBCA), WA Government.
DPIRD	Department of Primary Industries and Regional Development, WA Government
DWER	Department of Water and Environmental Regulation (formerly EPA, DER and DoW), WA Government
EP Act	Environmental Protection Act 1986, WA Government.
EP Regulations	Environmental Protection (Clearing of Native Vegetation) Regulations 2004, WA Government.
EPA	Environmental Protection Authority, WA Government.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> , Australian Government.
ESA	Environmentally Sensitive Area.
Ha	Hectare (10,000 square meters).
IBRA	Interim Biogeographic Regionalization for Australia.
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union.
JAMBA	<i>Japan Australia Migratory Bird Agreement 1981</i> .
Km	Kilometer (1,000 meters).
LGA	Local Government Area
NVIS	National Vegetation Information System.
PEC	Priority Ecological Community.
TEC	Threatened Ecological Community.
WA	Western Australia.
WAHERB	Western Australian Herbarium.
WAM	Western Australian Museum, WA Government.

## **Executive Summary**

Botanica Consulting Pty Ltd (Botanica) was commissioned by Evolution Mining Ltd. (Evolution) to undertake a detailed flora/vegetation survey and basic fauna survey within the White Foil Project area (referred to as 'survey area'). The survey area is 470 ha in extent and is located approximately 20 km west of Kalgoorlie-Boulder, Western Australia. The survey was conducted to support a Native Vegetation Clearing Permit (NVCP) application and Mining Proposal with regards to the further development of the White Foil Project.

The survey area lies within the Eastern Goldfield (COO3) subregion of the Coolgardie Bioregion, as defined by the Interim Biogeographic Regionalisation of Australia (IBRA).

The Eastern Goldfield subregion (5,102,428 ha) lies on the Yilgarn Craton's Eastern Goldfield Terrain, which is described as gently undulating plains with a subdued relief, interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line (Cowan 2001).

The vegetation consists of Mallees, Acacia thickets and shrub-heaths on sandplains, with diverse *Eucalyptus* woodlands occurring around salt lakes, on ranges, and in valleys. Salt lake support dwarf shrublands of samphire. Woodlands and *Dodonaea* shrubland occur on basic granulite of the Fraser Range, and the area is rich in endemic Acacias.

The dominant land uses of the Eastern Goldfield subregion includes Unallocated Crown Land (UCL) and Crown reserves and pastoral grazing, with conservation areas and mining leases also present (Cowan, 2001). The survey area is located within the Mungari Pastoral Lease.

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

- Matiske Consulting (2002). *Flora and Vegetation Survey – Frog's Leg Project Area Supplementary Survey*. Prepared for Mines and Resources Australia, November 2002.
- Outback Ecology (2004). *Flora and Vegetation Survey – Frog's Leg Project Targeted Fauna Survey*. Prepared for Mines and Resources Australia Pty. Ltd., January 2004.
- Jim's Seeds, Weeds and Trees (2004). *Flora Survey of the Kunanalling Project*. Prepared for Cazaly Resources Australia, December 2004.
- Outback Ecology (2006). *Flora survey of potential cutback areas of the Frog's Leg (M15/688 Lease) and White Foil Open Pits (M15/830 Lease)*. Prepared for La Mancha Resources Australia, October 2006.
- Botanica (2020). *Kundana Reconnaissance Flora/ Vegetation Survey and Basic Fauna Survey*. Prepared for Northern Star Resources Ltd, October 2020.

In addition to the literature review, searches of the following databases were undertaken to aid in the compilation of a list of significant flora within the survey area:

- DBCA Threatened/ Priority Flora spatial data (DBCA, 2019);
- DBCA NatureMap database (DBCA, 2020); and
- EPBC Protected Matters search tool (DAWE, 2020a).

The NatureMap species search and EPBC Protected Matters search were conducted with a 40 km buffer from the survey area.

The desktop review identified 838 vascular flora species as occurring within 40 km of the survey area, representing 309 genera from 74 families. The most diverse families were Asteraceae (105 species), Fabaceae (105 species) and Myrtaceae (105 species). Significant genera include *Eucalyptus* (56 species), *Acacia* (53 species) and *Eremophila* (38 species). This total includes 83 introduced (weed) species (9.9%).

The desktop review identified 83 introduced flora (weed) species as potentially occurring in the vicinity of the survey area. These species are comprised of 25 families, with the most commonly represented being Asteraceae (14 species), Poaceae (14 species) and Fabaceae (seven species). Of these, nine are listed as a Declared Pest on the Western Australian Organism List (WAOL) under the *Biosecurity and Agriculture Management (BAM) Act 2007*, with six of these also listed as a Weed of National Significance.

The assessment of the DBCA Priority/ Threatened flora data (DBCA, 2019), NatureMap search (DBCA, 2020), Protected Matters searches (DAWE, 2020a) and previous relevant literature identified 50 significant flora species recorded within a 40 km radius of the survey area. These are comprised of three Endangered, 17 Priority 1, eight Priority 2, 18 Priority 3 and four Priority 4 taxa.

These taxa were assessed for distribution and known habitat to determine their likelihood of occurrence within the survey area. The assessment did not identify any significant flora species as likely to occur in the survey area. Seven taxa were assessed as possibly occurring in the survey area, consisting of four Priority 1, one Priority 2 and two Priority 3 taxa.

The Protected Matters search (DAWE, 2020a) did not identify any Threatened Ecological Communities recorded within 40 km of the survey area. Analysis of the Priority Ecological Communities within the Goldfields region (DBCA, 2017) did not identify any significant vegetation assemblages as likely or possibly occurring within the survey area.

A total of 264 terrestrial vertebrate fauna taxa have been recorded within a 40 km radius of the survey area, consisting of 149 bird, 32 mammal, 76 reptile and six amphibian taxa. This total includes nine introduced (feral) species (3.4%).

The desktop review identified ten terrestrial vertebrate fauna species of conservation significance as previously being recorded in the regional area, consisting of seven Threatened, three migratory or otherwise protected species. In addition, nine migratory wading/shorebird species were assessed collectively due to their similar habitat requirements.

Habitat and distribution data was used to determine the likelihood of occurrence within the survey area. The assessment identified three significant fauna species as potentially occurring in the survey area.

There are no vested Conservation Reserves located within the survey area.

There are no DBCA managed lands located within the survey area.

There are no Environmentally Sensitive Areas located within the survey area.

There are no Nationally Important or RAMSAR wetlands located within the survey area.

The closest significant environmental feature is the Kurrawang Nature Reserve, which is DBCA-managed land located approximately 7 km south-east of the survey area. Disturbances within the survey area are unlikely to impact these areas.

Botanica conducted a detailed flora/vegetation and basic fauna survey from the 3<sup>rd</sup> to 4<sup>th</sup> November 2020, with the area traversed on foot and 4WD by two Botanica staff members; Jennifer Jackson (Senior Botanist, BSc (Honours) Environmental Management) and Matthew Newlands (Environmental Technician).

The field survey identified 62 flora taxa within the survey area. These taxa represented 34 genera across 24 families, with the most diverse genera being *Maireana* (eight species), *Eremophila* (seven species) and *Eucalyptus* and *Acacia* (five species each). Dominant families include Chenopodiaceae (17 species) Fabaceae (eight species) and Myrtaceae (six species). No introduced (weed) species were recorded.

No Threatened or Priority flora species were recorded within the survey area.

A total of three broad-scale vegetation communities were identified within the survey area. Vegetation community descriptions and extents were determined from field survey results, aerial imagery interpretation, PATN data analysis and extrapolation of the communities.

The survey found SLP-EW1 was the most widespread community in the survey area, occupying 341 ha (72.8%), while HS-AS1 was the most restricted with 8 ha (1.7%). SLP-EW1 was the most diverse community, with 41 flora species recorded, and HS-AS1 was the least diverse with 12 flora species.

No Threatened or Priority ecological communities or otherwise significant vegetation were identified within the survey area.

Based on vegetation and associated landforms identified during the flora and vegetation assessment, three broad scale terrestrial fauna habitats were identified as occurring within the survey area. No evidence of significant fauna species were observed during the survey, including no evidence of Malleefowl nesting mounds or other activity.

Based on the vegetation condition rating scale adapted from Keighery (1994) and Trudgen, (1988), native vegetation within the survey area was rated as 'good'. 'Good' condition depicts more obvious signs of damage caused by human activity since European settlement, including impacts to vegetation structure and composition from low levels of grazing, changed fire regimes and/or slightly aggressive weeds. Areas associated with road infrastructure were categorized as completely degraded.

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. The assessment found that the proposed vegetation clearing activities may be at variance with clearing principles (f) and (i).

## 1 INTRODUCTION

### 1.1 Project Description

Botanica Consulting Pty Ltd (Botanica) was commissioned by Evolution Mining Ltd. (Evolution) to undertake a detailed flora/ vegetation survey and basic fauna survey within the White Foil Project area (referred to as 'survey area') (Figure 1-1). The survey area is 470 ha in extent and is located approximately 20 km west of Kalgoorlie-Boulder, Western Australia. The survey was conducted to support a Native Vegetation Clearing Permit (NVCP) application and Mining Proposal with regards to the further development of the White Foil Project.

### 1.2 Objectives

The flora assessment was conducted in accordance with *Technical Guide - Flora and Vegetation Surveys for Environmental Impact Assessment – December 2016* (EPA, 2016a). The objectives of the assessment were to:

- Conduct a desktop review of available technical reports, relevant databases and spatial data to identify the potential flora and vegetation that may be present;
- Identify significant flora, vegetation/ecological communities potentially occurring in the area;
- Conduct a detailed flora and vegetation survey and targeted searches for populations of significant flora;
- Undertake floristic community mapping to a scale appropriate for the bioregion and described according to the National Vegetation Information System (NVIS) structure and floristics;
- Undertake vegetation condition mapping;
- Review the local and regional significance of flora and vegetation within the survey area;
- Assess the survey area's plant species diversity, density, composition, structure and weed cover, using NVIS classification system for vegetation description; and
- Assess Matters of National Environmental Significance (MNES) and indicate whether potential impacts on MNES as protected under the EPBC Act are likely to require referral to the Commonwealth Department of Agriculture, Water and the Environment (DAWE).

The fauna assessment was conducted in accordance with the requirements for a basic terrestrial fauna survey as defined in *Technical Guidance - Terrestrial Fauna Surveys for Environmental Impact Assessment – June 2020* (EPA, 2020). The objectives of the assessment were to:

- Gather background information on fauna in the survey area (literature review, database and map-based searches);
- Delineate and characterise the faunal assemblages and fauna habitats present in the survey area; and
- Assess the likelihood of significant fauna occurring within the survey area.

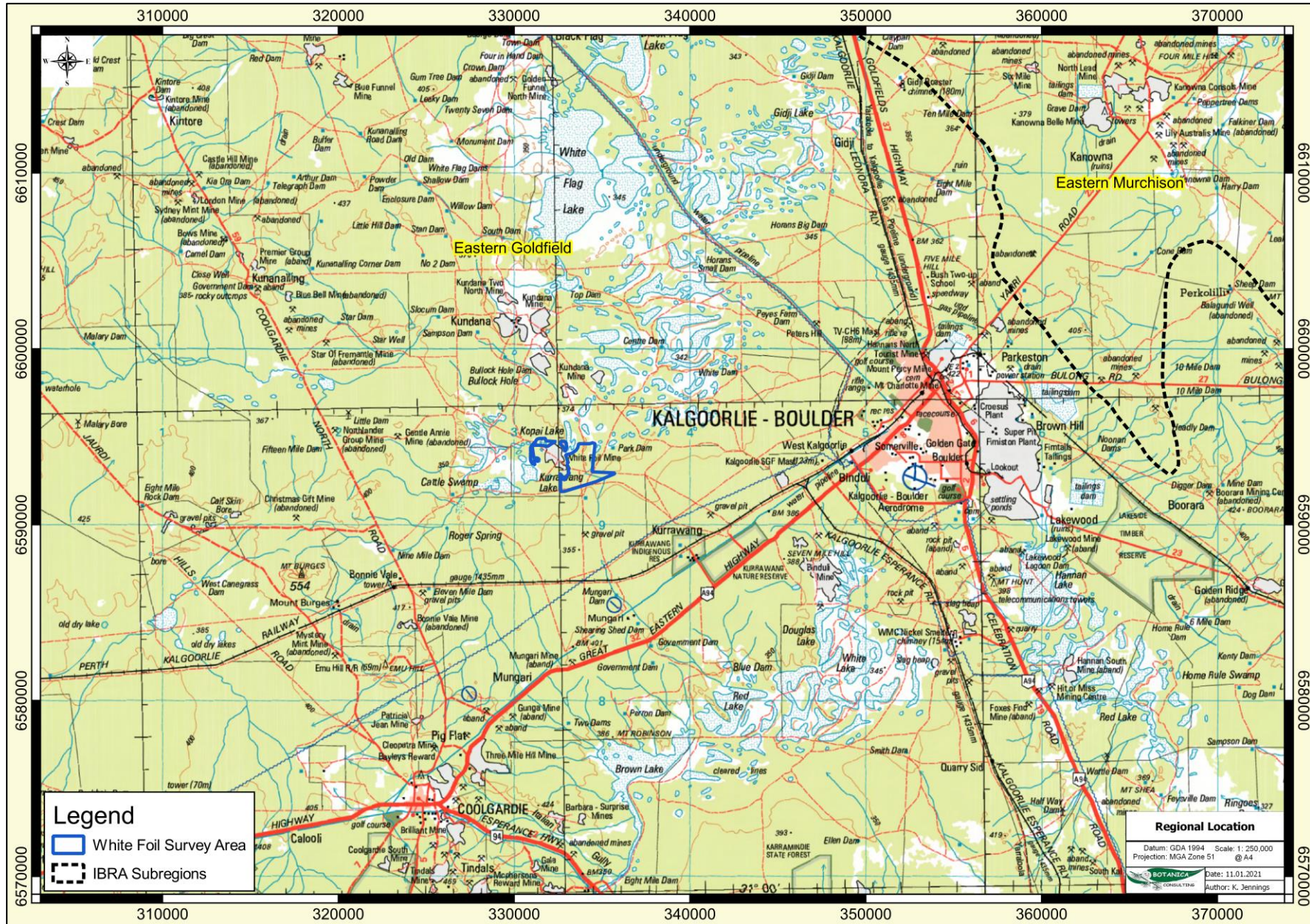


Figure 1-1: Regional map of the survey area



## **2 BIOPHYSICAL ENVIRONMENT**

### **2.1 Regional Environment**

The survey area lies within the Eastern Goldfield (COO3) subregion of the Coolgardie Bioregion, as defined by the Interim Biogeographic Regionalisation of Australia (IBRA).

The Eastern Goldfield subregion (5,102,428 ha) lies on the Yilgarn Craton's Eastern Goldfield Terrain, which is described as gently undulating plains with a subdued relief, interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite. The underlying geology is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line (Cowan 2001).

The vegetation consists of Mallees, Acacia thickets and shrub-heaths on sandplains, with diverse *Eucalyptus* woodlands occurring around salt lakes, on ranges, and in valleys. Salt lake support dwarf shrublands of samphire. Woodlands and *Dodonaea* shrubland occur on basic granulite of the Fraser Range, and the area is rich in endemic Acacias.

In accordance with Beard (1990) the survey area is located in the Coolgardie Botanical District of the Southwestern Interzone Province. The landscape is described as gently undulating with occasional ranges of low hills, with sandplains in the western part and some large playa lakes. Soils are principally brown calcareous earths, which overlays the Proterozoic granite and gneiss of the Fraser Range block and Archaean granite, with infolded volcanics and meta-sediments, of the Yilgarn block. Vegetation is predominately *Eucalyptus* woodlands, with slopes and flats containing *E. longicornis* alongside *E. salubris* and *E. salmonophloia*. Woodland understories range from tall sclerophyll shrubland dominated by *Melaleuca pauperiflora* to soft-leaved saltbush shrubland of *Atriplex vesicaria* and *A. nummularia*. Some hill slopes contain mallees of *E. livida* or *E. loxophleba*, while ironstone ridges are covered in thickets of *Acacia quadrimarginea*, *Allocasuarina acutivalvis* and *A. campestris*. Other vegetation assemblages include species-rich scrub-heaths and *Allocasuarina* thickets on sandplains, merging into *Acacia* thickets and Kwongan vegetation to the north.

### **2.2 Land Use**

The dominant land uses of the Eastern Goldfield subregion includes Unallocated Crown Land (UCL) and Crown reserves and pastoral grazing, with conservation areas and mining leases also present (Cowan, 2001). The survey area is located within the Mungari Pastoral Lease.

### **2.3 Soils and 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.

The Kalgoorlie Province is further divided into six soil-landscape zones, with the survey area located on the boundary of the Kambalda Zone (265), and Norseman Zone (266). The survey area lies predominately within the Kambalda Zone, which is located in the south-Eastern Goldfield between Menzies, Norseman and the Fraser Range. It 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 redbrown 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). The Norseman Province consists of undulating plains and uplands (with some sandplains and salt lakes) on granitic rocks of the Yilgarn Craton. Soils include calcareous loamy earths, yellow sandy and loamy earths, red loamy earths, red deep sands and salt lake soils. Vegetation consists of salmon gum-redwood-merrit-red mallee-gimlet woodland with acacia/casuarina thickets (and some mulga shrublands and spinifex grasslands).

In accordance with soil landscape system mapping data (Government of Western Australia, 2019), the Kambalda Zone is further divided into soil landscape systems, with the survey area located within three soil landscape systems, as described in Table 2-1 and shown spatially in Figure 2-1.

**Table 2-1: Soil Landscape Systems within the survey area**

Soil Landscape System	Description	Extent within Survey Area ha (%)
BB5	Rocky ranges and hills of greenstones-basic igneous rocks	83 ha (18%)
Mx43	Gently undulating valley plains and pediments; some outcrop of basic rock	242 ha (51%)
SV15	Salt lakes and their associated areas	145 ha (31%)

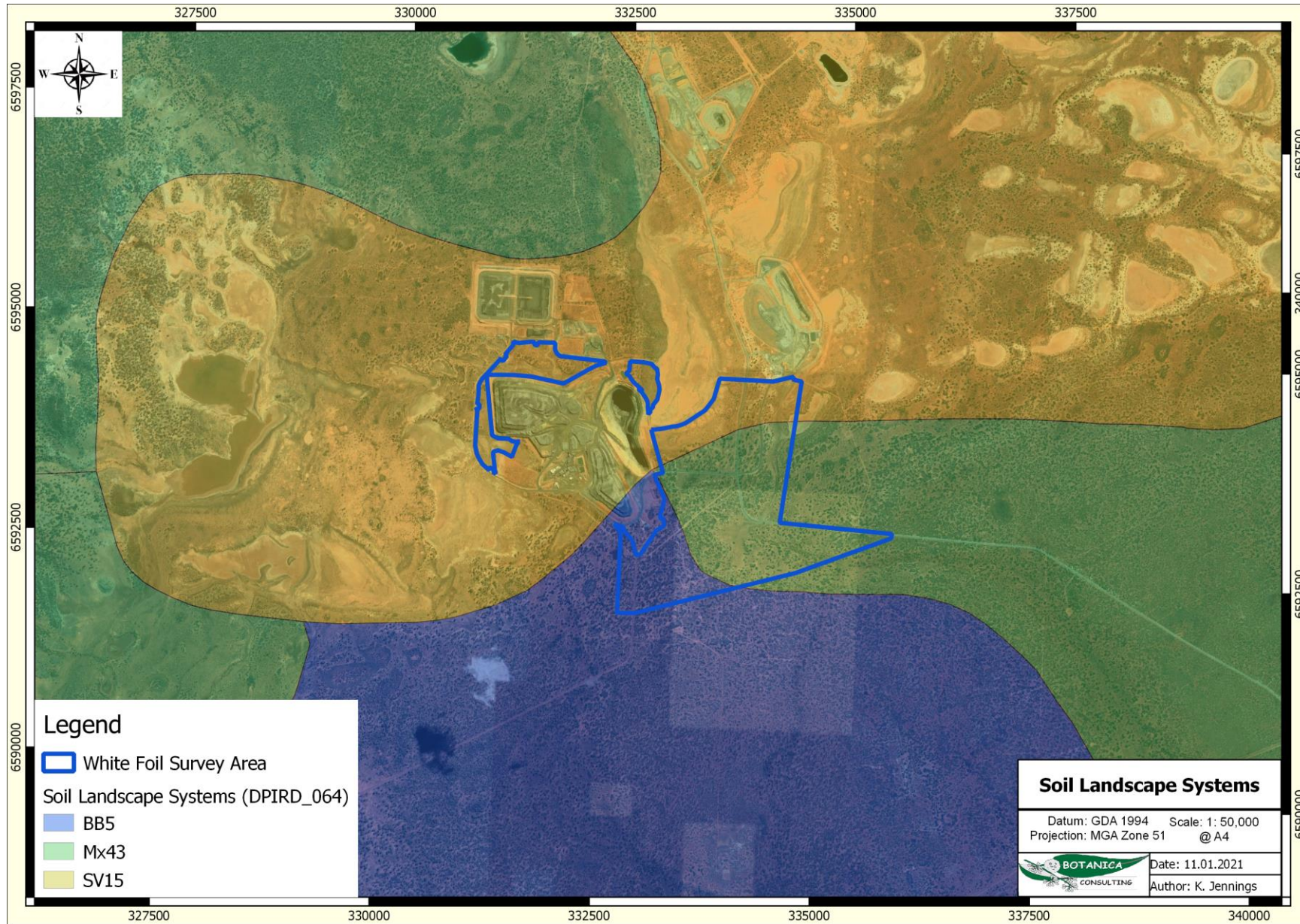


Figure 2-1: Soil Landscape Systems within the survey area

## 2.4 Regional Vegetation

In accordance with Tille (2006), the vegetation of the Norseman zone is differentiated from the Kambalda zone by the presence of sandplains and occasional dunes with spinifex grasslands. The Kambalda Zone is typified by the preponderance of stony plains with acacia shrublands and halophytic shrublands, low hills with eucalypt or acacia woodlands with halophytic undershrubs, stony plains with acacia shrublands and alluvial plains with eucalypt woodlands and halophytic undershrubs rangeland.

More broadly, the vegetation of the Kalgoorlie Province is described by Tille (2006) as woodlands of redwood (*Eucalyptus transcontinentalis*), red mallee (*E. oleosa*), Dundas blackbutt (*E. dundasii*), merri (*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. 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, merri, 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 glaucophylla*, *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*).

## 2.5 Conservation Values

The Eastern Goldfield subregion contains 16 vegetation associations, predominately open *Eucalyptus* woodlands, that have at least 85 per cent of their total extent in the bioregion (Cowan 2001) The subregion is considered a centre of endemism for Eucalypts in the Goldfields Woodlands region and is also noted for the diversity of *Acacia* spp. and ephemeral flora communities of the tertiary sandplain shrublands – and the valley floors of woodland areas.

The subregion contains one wetland of national importance: Rowles Lagoon System, located approximately 55 km north-west of the survey area. In addition, there are seven wetlands of subregional importance (Cowan, 2001). Other significant assemblages in the region include plant assemblages of the Fraser Range and the Woodline Hills.

No ecosystems are listed as threatened under WA State legislation occur within the subregion, but 18 communities and vegetation associations are thought to be at risk for a variety of reasons. Grazing from livestock, goats and rabbits and impacts from mining are the main threatening processes in the region, with changed fire regimes, erosion and sedimentation also causing significant impacts.

### 2.5.1 Great Western Woodlands

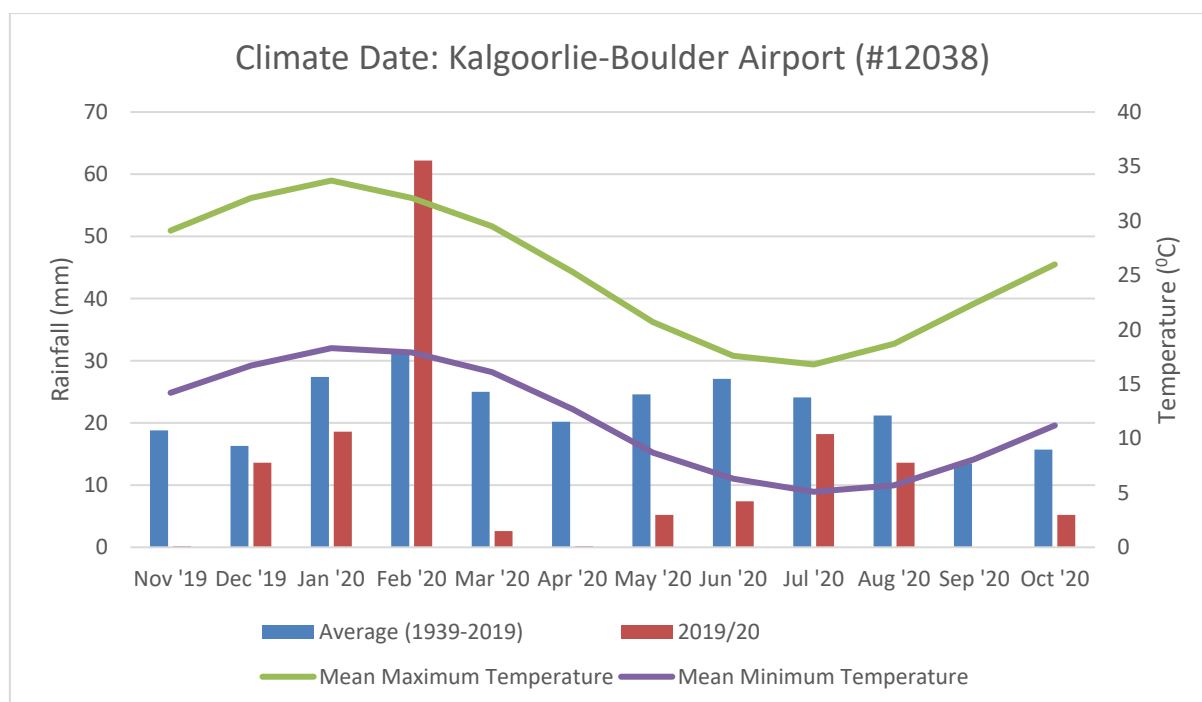
The survey area lies within the Great Western Woodlands, considered by The Wilderness Society of WA to be of global biological and conservation importance as one of the largest and healthiest temperate woodlands on Earth, containing many endemic taxa. The region covers almost 16 million hectares (160,000 square kilometres), from the southern edge of the Western Australian Wheatbelt to the pastoral lands of the Mulga country in the north, the inland deserts to the northeast, and the treeless Nullarbor Plain to the east.

The Great Western Woodlands provides a connection between southwest forests and inland deserts (Gondwana Link) as well as linking the north-west passage to Shark Bay. The majority of the Great Western Woodlands is unallocated crown land (61.1%) with other interests including pastoral leases (20.4%), conservation reserves (15.4%) unallocated crown land, ex pastoral (2%) managed by the Department of Biodiversity, Conservation and Attractions (DBCA) and private land (approximately 1%) (Watson *et. al.*, 2008).

No specific management strategy or formal conservation status applies to the Great Western Woodlands. The Great Western Woodlands currently includes towns, highways, roads, railways, private property, Crown Reserves, agricultural activities and mining tenements.

## 2.6 Climate

The climate of the Eastern Goldfield subregion is characterised as arid to semi-arid with 200-300 mm of rainfall, sometimes in summer but usually in winter (Cowan 2001). Rainfall data for the Kalgoorlie-Boulder Airport (#12038) weather station, located approximately 20 km east of the survey area, is shown in Graph 2-1 (BoM, 2020). Mean monthly rainfall ranges from 31.6 mm in February to 13.5 mm in September, with a mean annual rainfall of 264.9 mm. The survey was conducted in November 2020, with the preceding months (September and October) being characterised by significantly reduced rainfall. Although climate conditions are not considered optimal for the presence of flowering material and ephemeral species, this is unlikely to be a major survey constraint.



**Graph 2-1: Average and recent rainfall and average temperature data (Kalgoorlie-Boulder Airport (#12038)) (BoM, 2020)**

## 2.7 Hydrology

According to the Geoscience Australia database (2015), there are multiple ephemeral inland waters in the northern and western portions of the survey area, associated with the network of ephemeral salt lakes in the region. There is also one ephemeral drainage line running north-south in the eastern region of the survey area (Figure 2-2).

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. In accordance with the BoM *Atlas of Groundwater Dependent Ecosystems* (BoM, 2020b) database, there are no potential terrestrial or aquatic GDE's within the survey area.

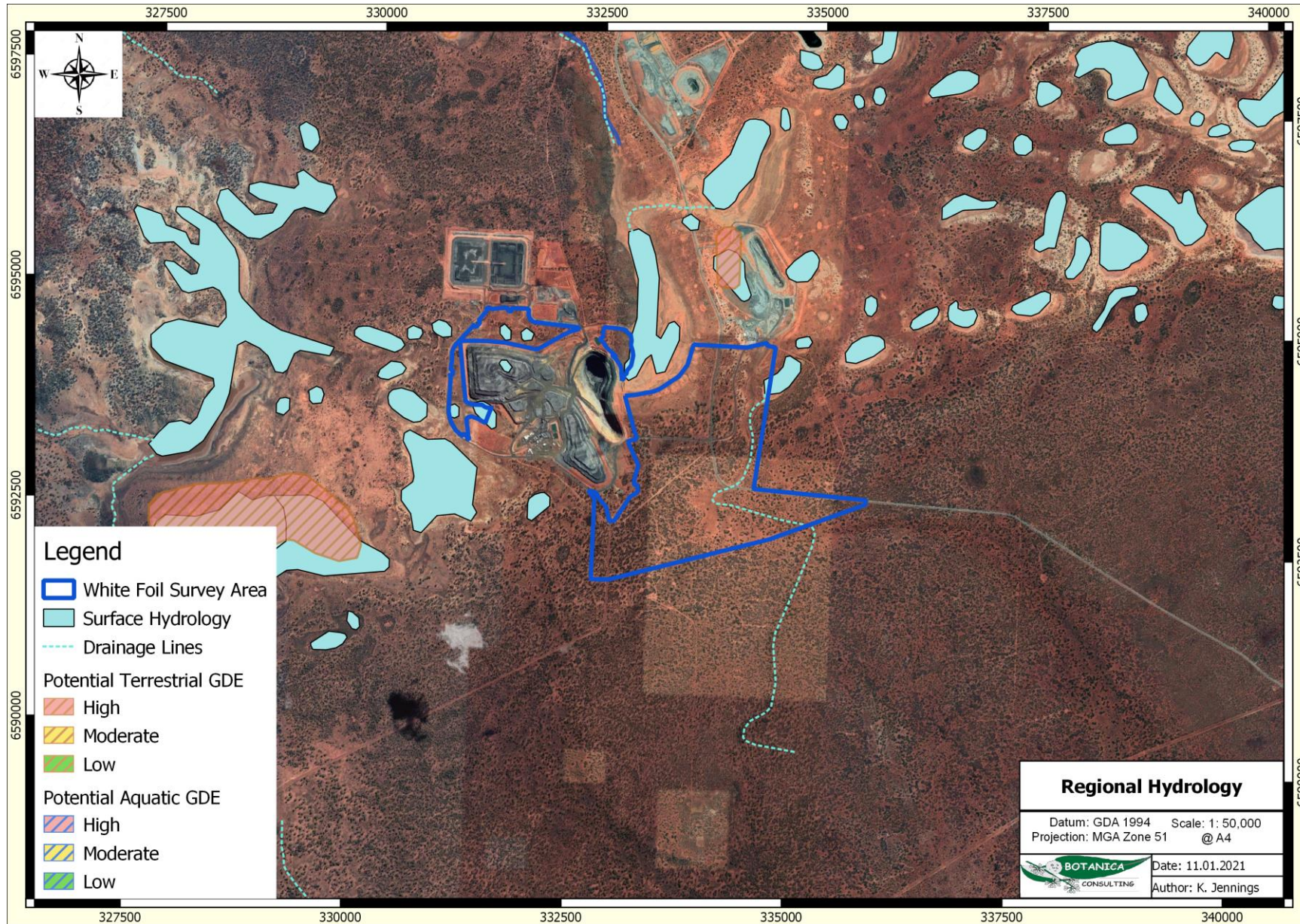


Figure 2-2: Regional hydrology of the survey area

### **3 SURVEY METHODOLOGY**

#### **3.1 Desktop Assessment**

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

- Mattiske Consulting (2002). *Flora and Vegetation Survey – Frog’s Leg Project Area Supplementary Survey*. Prepared for Mines and Resources Australia, November 2002.
- Outback Ecology (2004). *Flora and Vegetation Survey – Frog’s Leg Project Targeted Fauna Survey*. Prepared for Mines and Resources Australia Pty. Ltd., January 2004.
- Jim’s Seeds, Weeds and Trees (2004). *Flora Survey of the Kunanalling Project*. Prepared for Cazaly Resources Australia, December 2004.
- Outback Ecology (2006). *Flora survey of potential cutback areas of the Frog’s Leg (M15/688 Lease) and White Foil Open Pits (M15/830 Lease)*. Prepared for La Mancha Resources Australia, October 2006.
- Botanica (2020). *Kundana Reconnaissance Flora/ Vegetation Survey and Basic Fauna Survey*. Prepared for Northern Star Resources Ltd, October 2020

In addition to the literature review, searches of the following databases were undertaken to aid in the compilation of a list of significant flora within the survey area:

- DBCA Threatened/ Priority Flora spatial data (DBCA, 2019);
- DBCA NatureMap database (DBCA, 2020); and
- EPBC Protected Matters search tool (DAWE, 2020a).

The NatureMap species search and EPBC Protected Matters search were conducted with a 40 km buffer from the survey area.

Significant flora and fauna 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.
- Likely- Suitable habitat is expected to occur and there are records within 10 km of the survey area.
- Previously Recorded- A record for this species is located within the survey area. Field survey will ground-truth currently occurring individuals and populations.

Fauna species were categorised as follows:

- Would Not Occur: There is no suitable habitat for the species in the survey area and/or there is no documented record of the species in the general area since records have been kept and/or the species is generally accepted as being locally/regionally extinct (supported by a lack of recent records).



- Locally Extinct: Populations no longer occur within a small part of the species natural range, in this case within 10 or 20km of the survey area. Populations do however persist outside of this area.
- Regionally Extinct: Populations no longer occur in a large part of the species natural range, in this case within the Goldfields region. Populations do however persist outside of this area.
- Unlikely to Occur: The survey area is outside of the currently documented distribution for the species in question, or no suitable habitat (type, quality and extent) was identified as being present during the field assessment. Individuals of some species may occur occasionally as vagrants/transients especially if suitable habitat is located nearby but the site itself would not support a population or part population of the species.
- Possibly Occurs: Survey area is within the known distribution of the species in question and habitat of at least marginal quality was identified as likely to be present during the field survey and literature review, supported in some cases by recent records being documented in literature from within or near the survey area. In some cases, while a species may be classified as possibly being present at times, habitat may be marginal (e.g. poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.
- Known to Occur: The species in question has been positively identified as being present (for sedentary species) or as using the survey area as habitat for some other purpose (for non-sedentary/mobile species) during field surveys within or near the survey area. This information may have been obtained by direct observation of individuals or by way of secondary evidence (e.g. tracks, foraging debris, scats). In some cases, while a species may be classified as known to occur, habitat may be marginal (e.g. poor quality, fragmented, limited in extent) and therefore the frequency of occurrence and/or population levels may be low.

It should be noted that these lists are 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 needs to be taken into consideration when determining what actual species may be present within the specific area being investigated.

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

- *Environment Protection and Biodiversity and Conservation (EPBC) Act 1999*. Administered by the Australian Government (DAWE);
- *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/ Fauna list. A non-legislative list maintained by DBCA for management purposes (fauna list released April 2019; flora list released December 2018).

The EPBC Act also requires the compilation of a list of migratory species that are recognized under international treaties including the:

- Japan Australia Migratory Bird Agreement 1981 (JAMBA)<sup>1</sup>;
- China Australia Migratory Bird Agreement 1998 (CAMBA);
- Republic of Korea-Australia Migratory Bird Agreement 2007 (ROKAMBA); and
- Bonn Convention 1979 (The Convention on the Conservation of Migratory Species of Wild Animals).

Most but not all migratory bird species listed in the annexes to these bilateral agreements are protected in Australia as Matters of National Environmental Significance (MNES) under the EPBC Act. Descriptions of conservation significant species and communities are provided in Appendix 1.

### 3.2 Field Assessment

Botanica conducted a detailed flora/ vegetation and basic fauna survey on the 3<sup>rd</sup> -5<sup>th</sup> November 2020, with the area traversed on foot and 4WD by Jennifer Jackson (Senior Botanist, BSc (Honours) Environmental Management) and Matthew Newlands (Environmental Technician).

#### 3.2.1 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 communities 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 communities. 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
- GPS location, photograph and collection of flora of significance if encountered.

Vegetation was mapped in accordance with existing vegetation mapping conducted by Alexander Hold & Associates (2020a), with vegetation types classified by floristic group in accordance with NVIS classifications.

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<sup>1</sup> Most but not all species listed under JAMBA are also specially protected under Specially Protected Species of the BC Act.

### 3.2.2 Flora Identification

Unknown specimens collected during the survey were identified by Jim Williams with the aid of samples housed at the Botanica Herbarium and WA Herbarium.

### 3.2.3 Sampling Quadrats

A total of nine quadrats (20m X 20m) were established within the survey area. A map of all quadrats included in the statistical analysis is provided in Figure 3-1.

The quadrats were established by inserting metal pickets in each corner and measuring the length of the resultant boundaries to verify the quadrats were 20 m x 20 m (square quadrats). Following their establishment and boundary verification, the location of each quadrat was recorded by GPS (Appendix 9) and photographed from the north-west corner of the quadrat (Appendix 10). All vascular plants within the quadrat were recorded (Appendix 10).

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 taxonomical keys. 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 10). Methods of recording data from these quadrats largely follow those outlined in CSIRO's *Australian Soil and Land Survey Field Handbook* (McDonald *et al.* 1998) and in accordance with current EPA Guidelines (2016).

### 3.2.4 Targeted Searches

Suitable habitats for significant flora were systematically searched by Botanica staff members to identify and record the locations of Threatened and Priority Flora. Any locations of Threatened and Priority Flora were recorded using a hand-held GPS and a simple plant count (not differentiated between juvenile/mature plants, flowering or non-flowering plants) was conducted.

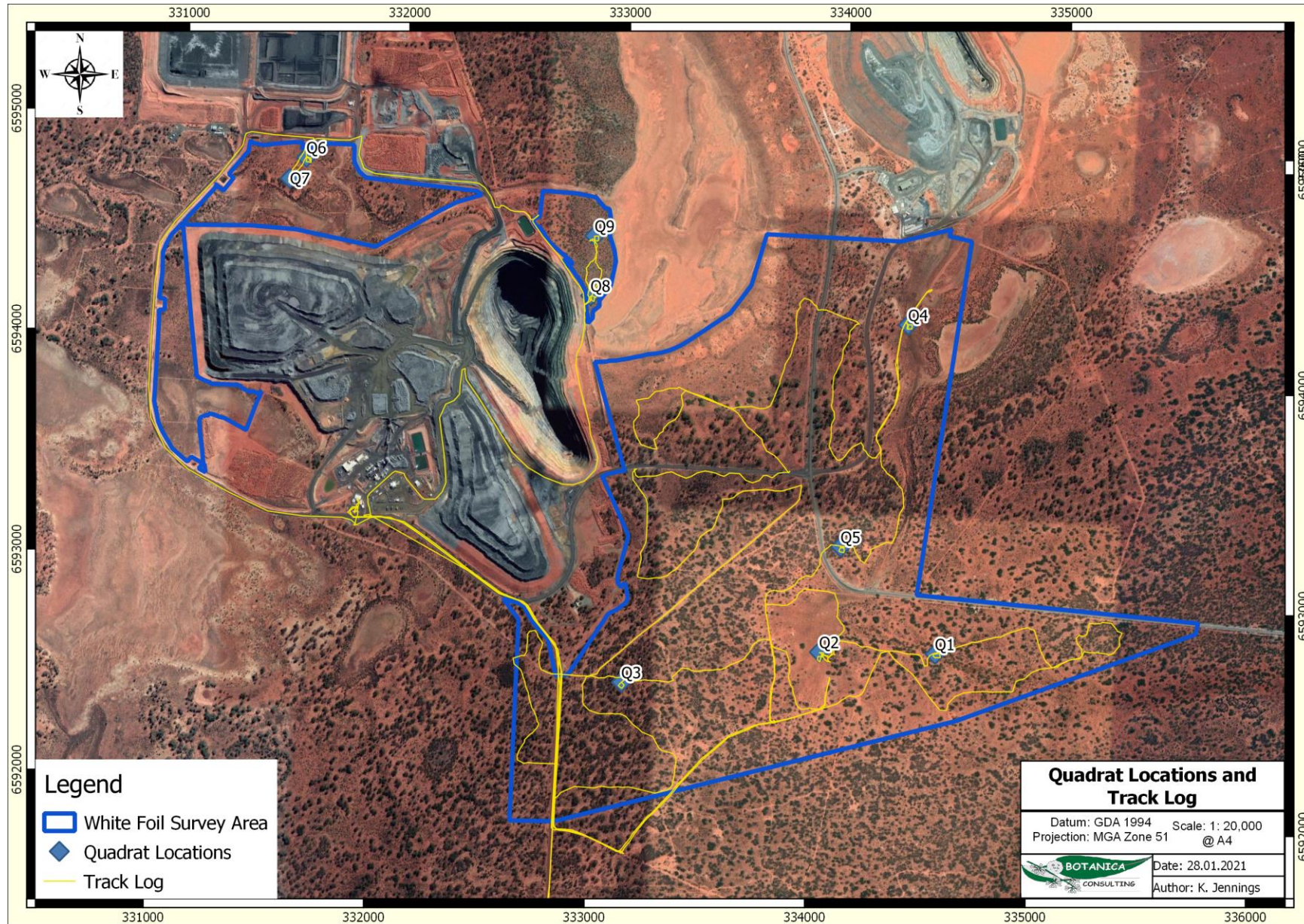


Figure 3-1: Quadrat Locations and GPS track log

### **3.3 Data Analysis Tools**

At the completion of the survey effort, the data obtained was analysed to generate a vegetation map (Figure 4-4) and complete list of flora species (Appendix 5). The statistical program PATN was used to assess species composition of the quadrats (Appendix 11).

#### **3.3.1 PATN Analysis**

The PATN software package was used to assess the similarities/ dissimilarities between quadrats based on presence/ absence of species.

Annual taxa were removed from the data prior to analysis (four taxa). No sterile taxa were recorded within the quadrats. Singleton taxa were included in the analysis. A total of 48 perennial taxa were included in the final 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.).

#### **3.3.2 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.

#### **3.3.3 Fauna Assessment**

Vegetation and landform units identified during the flora assessment have been used to define broad fauna habitat types across the site. This information has been supplemented with observations made during the fauna assessment.

The main aim of the fauna habitat assessment was to determine the likelihood of fauna species of conservation significance utilizing the areas that may be impacted during site development. The habitat information obtained was also used to aid in finalizing the overall potential fauna list.

As part of the desktop literature review, available information on the habitat requirements of the species of conservation significance listed as possibly occurring in the area was researched. During the field survey, the habitats within the study area were assessed and specific elements identified, if present, to determine the likelihood of listed threatened species utilizing the area and its significance to them.

Opportunistic observations of fauna species were made during all field survey work which involved a series of transects across the study area during the day including observations of bird species with binoculars. Secondary evidence of a species presence such as tracks, scats, skeletal remains, foraging evidence or calls were also noted if observed/heard.

### 3.3.4 Targeted Fauna Survey

Suitable Malleefowl habitat within the survey area was systematically searched on foot and by vehicle by two Botanica staff members to identify and record the locations of any Malleefowl activity (i.e. mounds, footprints and feathers). Any locations/ observations of Malleefowl activity were recorded using a hand-held GPS.

### 3.3.5 Scientific Licences

**Table 3-1: Scientific Licences of Botanica Staff coordinating the flora survey**

Licensed staff	Permit Number	Valid Until
Jennifer Jackson	SW019268 (Licence to take flora for scientific purposes)	18/02/2021

### 3.4 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 3-2.

The conclusions presented in this report are based upon field data and environmental assessments and/or testing carried out over a limited period of time and are therefore merely indicative of the environmental condition of the site at the time of the field assessments. Also, it should be recognised that site conditions can change with time. Information not available at the time of this assessment which may subsequently become available may alter the conclusions presented.

Some species are reported as potentially occurring based on there being suitable habitat (quality and extent) within the survey area or immediately adjacent. The habitat requirements and ecology of many of the species known to occur in the wider area are however often not well understood or documented. It can therefore be difficult to exclude species from the potential list based on a lack of a specific habitats or microhabitats within the survey area. As a consequence of this limitation, the potential species list produced is most likely an overestimation of those species that actually utilise the survey area for some purpose.

In recognition of survey limitations, a precautionary approach has been adopted for this assessment. Any flora and fauna species that would possibly occur within the survey area (or immediately adjacent), as identified through ecological databases, publications, discussions with local experts/residents and the habitat knowledge of the author, has been listed as having the potential to occur.

**Table 3-2: Limitations and constraints associated with the survey**

Variable	Potential Impact on Survey	Details
Access problems	Not a constraint	The survey was conducted via ATV and on foot. Numerous tracks were located within the survey area, providing ease of access.
Competency/ Experience	Not a constraint	The BC personnel that conducted the survey were regarded as suitably qualified and experienced. <b>Coordinating Botanist/ Zoologist:</b> Jennifer Jackson <b>Data Interpretation:</b> Kelby Jennings & Lauren Pick
Timing of survey, weather & season	Minor constraint	Fieldwork was undertaken within the EPA's recommended survey period (September - November) for the South-West and Interzone Province. Reduced rainfall was recorded in the preceding months, with minimal ephemeral species present. However, this is unlikely to significantly affect the survey results.
Area disturbance	Not a constraint	The area has been disturbed from exploration and mining operations, 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 reconnaissance survey completed to identify vegetation types/fauna habitats and conservation significant species/communities.
Availability of contextual information at a regional and local scale	Not a constraint	Threatened flora database searches provided by the DBCA were used to identify any potential locations of Threatened/Priority taxa.  BoM, DWER, DPIRD, DBCA and DAWE databases were reviewed to obtain appropriate regional desktop information on the biophysical environment of the local region.  Previous Flora/ Fauna surveys within the local area have been assessed for pertinent information and environmental context of the regional area.
Completeness	Not a constraint	In the opinion of Botanica, the survey area was covered sufficiently in order to identify vegetation assemblages. All observed flora individuals were able to be identified to species level.  The vegetation types for this study were based on visual descriptions of locations in the field. The distribution of these vegetation communities/ fauna habitats outside the study area is not known, however vegetation types identified were categorised via comparison to vegetation distributions throughout WA specified in the NVIS Major Vegetation Groups (DotEE, 2017b).

## 4 RESULTS

### 4.1 Desktop Assessment

#### 4.1.1 Flora

The desktop review identified 838 vascular flora species as occurring within 40 km of the survey area, representing 309 genera from 74 families. The most diverse families were Asteraceae (105 species), Fabaceae (105 species) and Myrtaceae (105 species). Significant genera include *Eucalyptus* (56 species), *Acacia* (53 species) and *Eremophila* (38 species). This total includes 83 introduced (weed) species (9.9%).

##### 4.1.1.1 Introduced Flora

The desktop review identified 83 introduced flora (weed) species as potentially occurring in the vicinity of the survey area. These species are comprised of 25 families, with the most commonly represented being Asteraceae (14 species), Poaceae (14 species) and Fabaceae (seven species). Of these, nine are listed as a Declared Pest on the Western Australian Organism List (WAOL) under the *Biosecurity and Agriculture Management (BAM) Act 2007*, with six of these also listed as a Weed of National Significance (Table 4-1).

The full list of potential weed species is contained in Appendix 2.

**Table 4-1: Potentially occurring Declared Pests and WoNS**

Family	Species	Common Name	WAOL Status	Control Category	WONS
Asteraceae	<i>Xanthium spinosum</i>	Spiny Cocklebur	Declared Pest - s22(2)	C3 Management, Whole of State	No
Boraginaceae	<i>Echium plantagineum</i>	Paterson's Curse	Declared Pest - s22(2)	No Control Category, Whole of State	No
Cactaceae	<i>Cylindropuntia fulgida</i> var. <i>mamillata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia imbricata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia kleiniae</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia tunicata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Opuntia elata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Opuntia ficus-indica</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Fabaceae	<i>Alhagi maurorum</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	No

##### 4.1.1.2 Significant Flora

The assessment of the DBCA Priority/ Threatened flora data (DBCA, 2019), NatureMap search (DBCA, 2020), Protected Matters searches (DAWE, 2020a) and previous relevant literature identified 50 significant flora species recorded within a 40 km radius of the survey area. These are comprised of three Endangered, 17 Priority 1, eight Priority 2, 18 Priority 3 and four Priority 4 taxa (Appendix 3).



These taxa were assessed for distribution and known habitat to determine their likelihood of occurrence within the survey area. The assessment did not identify any significant flora species as likely to occur in the survey area. Seven taxa were assessed as possibly occurring in the survey area, consisting of four Priority 1, one Priority 2 and two Priority 3 taxa (Table 4-2). The full flora likelihood assessment is listed in Appendix 3. The locations of the DBCA database records are illustrated spatially in Figure 4-1.

**Table 4-2: Potentially occurring significant flora species**

Species	Rank	Habitat	Comments	Likelihood
<i>Acacia websteri</i>	P1	Red sand, clay or loam. Low-lying areas, flats.	At extreme of range, habitat unlikely to be present.	Possible
<i>Phebalium appressum</i>	P1	Yellow sandplain.	Extreme of known range, habitat may be present.	Possible
<i>Rhodanthe uniflora</i>	P1	Brown earth. Open eucalyptus woodland.	Within species range, habitat may be present.	Possible
<i>Eremophila praecox</i>	P2	Red/brown sandy loam. Undulating plains.	Within known range of species, habitat may be present.	Possible
<i>Angianthus prostratus</i>	P3	Red clay or loamy soils. Saline depressions.	Extreme of known range, habitat may be present.	Possible
<i>Notisia intonsa</i>	P3	Red sand, disturbed areas.	Within known range of species, habitat may be present.	Possible

#### 4.1.1.3 Significant Ecological Communities

The Protected Matters search (DAWE, 2020a) did not identify any Threatened Ecological Communities recorded within 40 km of the survey area. Analysis of the Priority Ecological Communities within the Goldfields region (DBCA, 2017) did not identify any significant vegetation assemblages as likely or possibly occurring within the survey area.

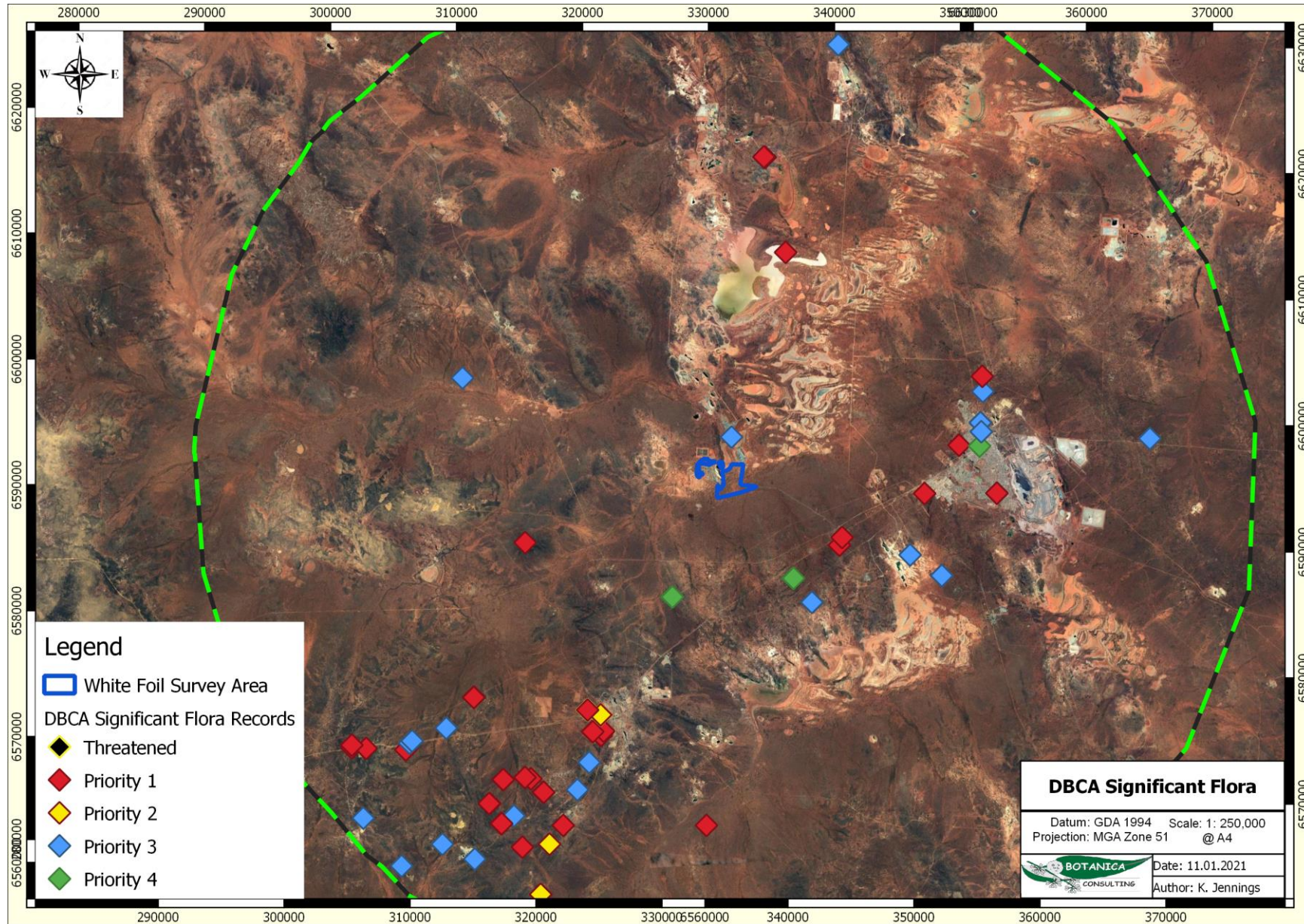


Figure 4-1: DBCA significant flora records

#### 4.1.2 Vegetation Associations

The Pre-European vegetation association spatial mapping dataset (DPIRD, 2018) identifies three vegetation associations as occurring within the survey area (Figure 4-2). The association descriptions and their remaining extent, as specified in the 2018 Statewide Vegetation Statistics (DBCA, 2018) are provided in Table 4-3. 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). All vegetation associations >93% of their Pre-European extent. Development within the survey area will not significantly reduce the pre-European extent of these vegetation associations.

**Table 4-3: Pre-European Vegetation Associations within the survey area**

Vegetation Association	Current Extent (ha)	Pre-European extent remaining (%)	% in DBCA managed lands	Floristic Description	Extent within Survey Area ha (%)
Coolgardie 125	13,222.82	98.75	0	Bare areas; salt lakes	19 ha (4%)
Coolgardie 468	61,726.56	93.60	0	Medium woodland; salmon gum & goldfields blackbutt	327 ha (70%)
Coolgardie 540	48,376.16	95.69	0	Succulent steppe with open low woodland; sheoak over saltbush	124 ha (26%)

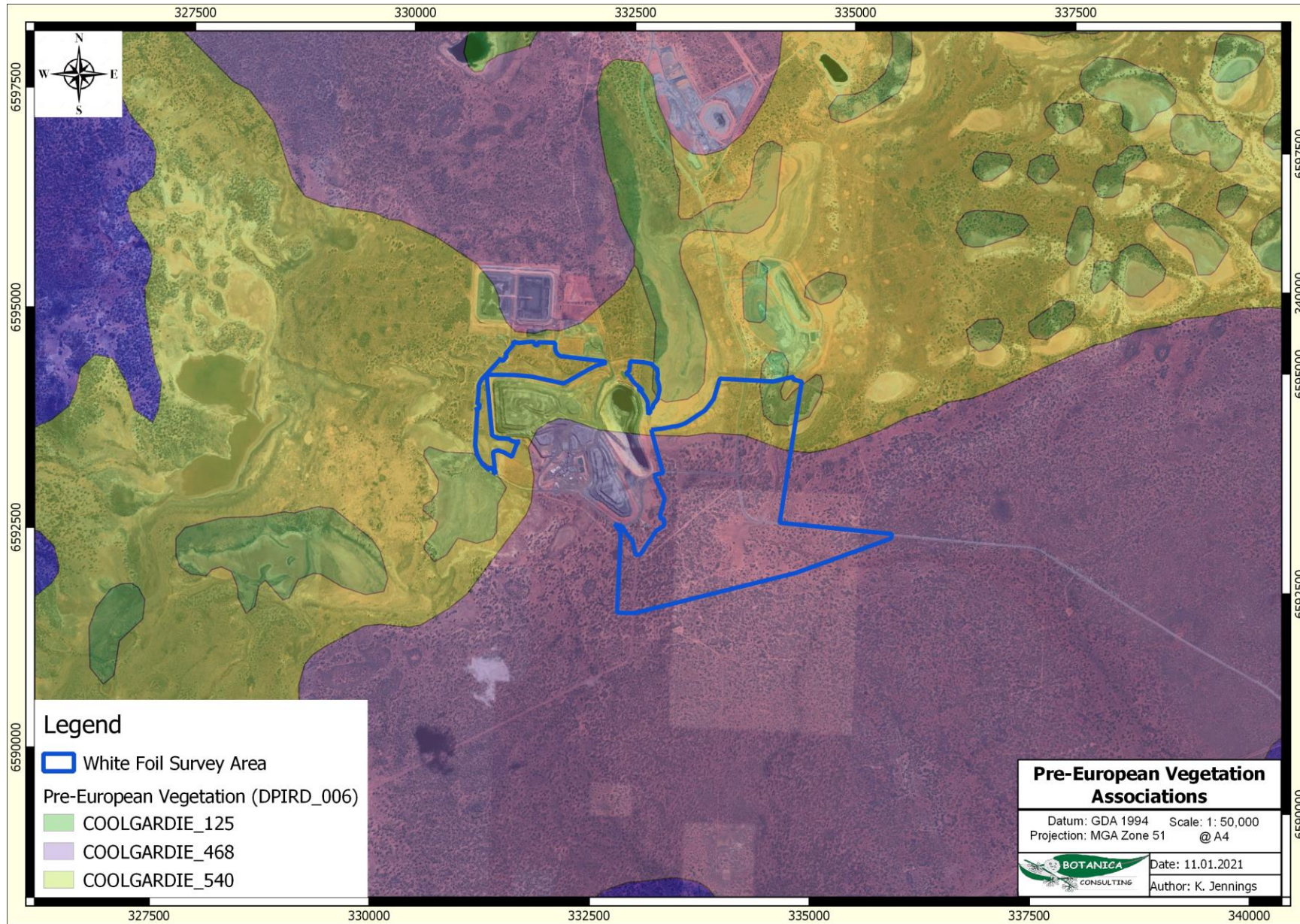


Figure 4-2: Pre-European Vegetation Associations within the survey area

### 4.1.3 Fauna

According to the results of the NatureMap search (DBCA, 2020), a total of 264 terrestrial vertebrate fauna taxa have been recorded within a 40 km radius of the survey area, consisting of 149 bird, 32 mammal, 76 reptile and six amphibian taxa. This total includes nine introduced (feral) species (3.4%).

#### 4.1.3.1 Introduced (Feral) Fauna

The NatureMap and EPBC database searches identified 14 feral fauna species from nine families as potentially occurring in the survey area (Table 4-4).

**Table 4-4: Potentially Occurring Introduced Fauna**

Family	Species	Common Name
Bovidae	<i>Bos taurus</i>	European Cattle
	<i>Capra hircus</i>	Goat
	<i>Ovis aries</i>	Sheep
Canidae	<i>Canis lupus familiaris</i>	Domestic Dog
	<i>Vulpes vulpes</i>	Red Fox
Columbidae	<i>Columba livia</i>	Domestic Pigeon
	<i>Streptopelia chinensis</i>	Spotted Turtle-Dove
	<i>Streptopelia senegalensis</i>	Laughing Turtle-Dove
Equidae	<i>Equus asinus</i>	Donkey, Ass
	<i>Equus caballus</i>	Horse
Felidae	<i>Felis catus</i>	Cat
Gekkonidae	<i>Hemidactylus frenatus</i>	Asian House Gecko
Leporidae	<i>Oryctolagus cuniculus</i>	Rabbit
Muridae	<i>Mus musculus</i>	House Mouse

#### 4.1.3.2 Conservation Significant Fauna

The desktop review identified ten terrestrial vertebrate fauna species of conservation significance as previously being recorded in the regional area, consisting of seven Threatened, three migratory or otherwise protected species. In addition, nine migratory wading/shorebird species were assessed collectively due to their similar habitat requirements. The full fauna likelihood assessment is listed in Appendix 4.

Habitat and distribution data was used to determine the likelihood of occurrence within the survey area. The assessment identified three significant fauna species as potentially occurring in the survey area (Table 4-5).

**Table 4-5: Significant fauna species potentially occurring in survey area**

Species	Status	Likelihood
Grey Falcon ( <i>Falco hypoleucos</i> )	T (VU)	Possible
Malleefowl ( <i>Leipoa ocellata</i> )	T (VU)	Possible
Peregrine Falcon ( <i>Falco peregrinus</i> )	OS	Possible

#### **4.1.4 Conservation Areas**

There are no vested Conservation Reserves located within the survey area.

There are no DBCA managed lands located within the survey area.

There are no Environmentally Sensitive Areas located within the survey area.

There are no Nationally Important or RAMSAR wetlands located within the survey area.

The closest significant environmental feature is the Kurrawang Nature Reserve, which is DBCA-managed land located approximately 7 km south-east of the survey area. Disturbances within the survey area are unlikely to impact these areas. The location of conservation areas in relation to the survey area is provided in Figure 4-3.

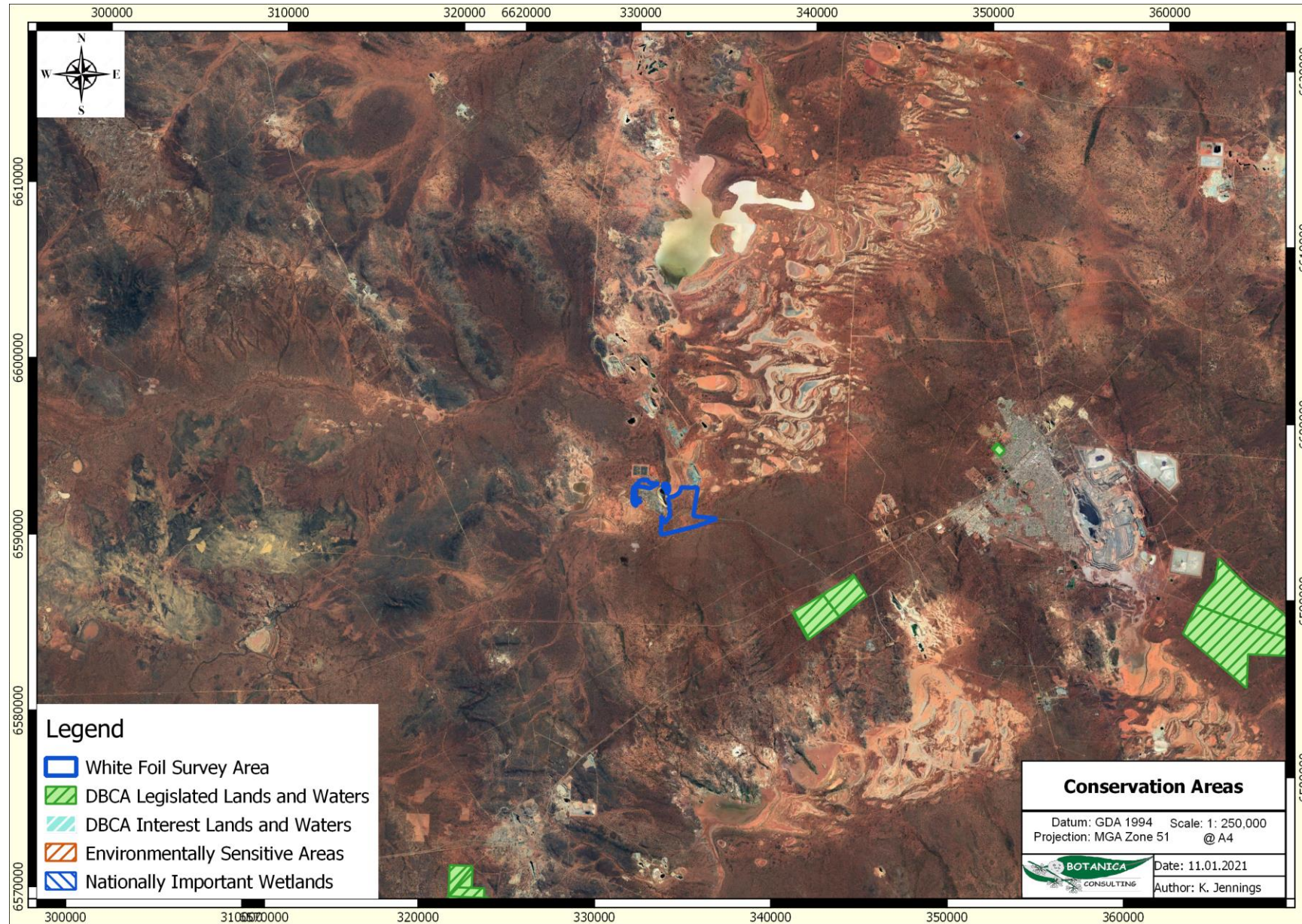


Figure 4-3: Conservation Areas

## 4.2 Field Assessment

### 4.2.1 Flora

The field survey identified 62 flora taxa within the survey area. These taxa represented 34 genera across 24 families, with the most diverse genera being *Maireana* (eight species), *Eremophila* (seven species) and *Eucalyptus* and *Acacia* (five species each). Dominant families include Chenopodiaceae (17 species) Fabaceae (eight species) and Myrtaceae (six species). No introduced (weed) species were recorded. The full field species inventory is listed in Appendix 5.

#### 4.2.1.1 Introduced Flora

No species of introduced flora were recorded within the survey area.

#### 4.2.1.2 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 or Priority flora species were recorded within the survey area. No other significant flora (as described above) were recorded within the survey area.



### 4.2.2 Vegetation Communities


A total of three broad-scale vegetation communities were identified within the survey area. Vegetation community descriptions and extent are listed below in Table 4-6 and illustrated spatially in Figure 4-4. Vegetation community descriptions and extents were determined from field survey results, aerial imagery interpretation, PATN analysis and extrapolation of the communities.

The survey found SLP-EW1 was the most widespread community in the survey area, occupying 341 ha (72.8%), while HS-AS1 was the most restricted with 8 ha (1.7%). SLP-EW1 was the most diverse community, with 41 flora species recorded, and HS-AS1 was the least diverse with 12 flora species.



**Table 4-6: Vegetation Community Descriptions and Extent**

Vegetation Community	Broad Floristic Formation (NVIS III)	Vegetation Description (NVIS V)	Landform	Image
<p>SLP-EW1 342 ha (72.8%)</p>	<p>Eucalyptus open woodland</p>	<p><i>Eucalyptus clelandiorum</i>, <i>E. griffithsii</i> and <i>E. yilgarnensis</i> woodland over <i>Eremophila scoparia</i>, <i>Eremophila parvifolia</i> subsp. <i>auricampi</i> and <i>Scaevola spinescens</i> open shrubland over <i>Ptilotus obovatus</i> var. <i>obovatus</i>, <i>Rhagodia drummondii</i> and <i>Olearia muelleri</i> low open shrubland.</p>	<p>Sandy-Loam plain</p>	
<p>CLP-CS1 107 ha (22.7%)</p>	<p>Chenopod shrubland</p>	<p><i>Tecticornia disarticulata</i> and <i>Atriplex vesicaria</i> open chenopod shrubland over <i>Frankenia setosa</i>, <i>Maireana glomerata</i> and <i>Sclerolaena cuneata</i> low open chenopod shrubland.</p>	<p>Clay/loam plain</p>	

Vegetation Community	Broad Floristic Formation (NVIS III)	Vegetation Description (NVIS V)	Landform	Image
HS-AS1 8 ha (1.7%)	Acacia open shrubland	<i>Acacia acuminata</i> and <i>A. tetragonophylla</i> open shrubland over <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Cheilanthes sieberi</i> and <i>Austrostipa elegantissima</i> low sparse shrubland/ tussock grassland.	Hillslope	
CD 13 ha (2.8%)	N/A	Completely Degraded (cleared vegetation)	N/A	No image available

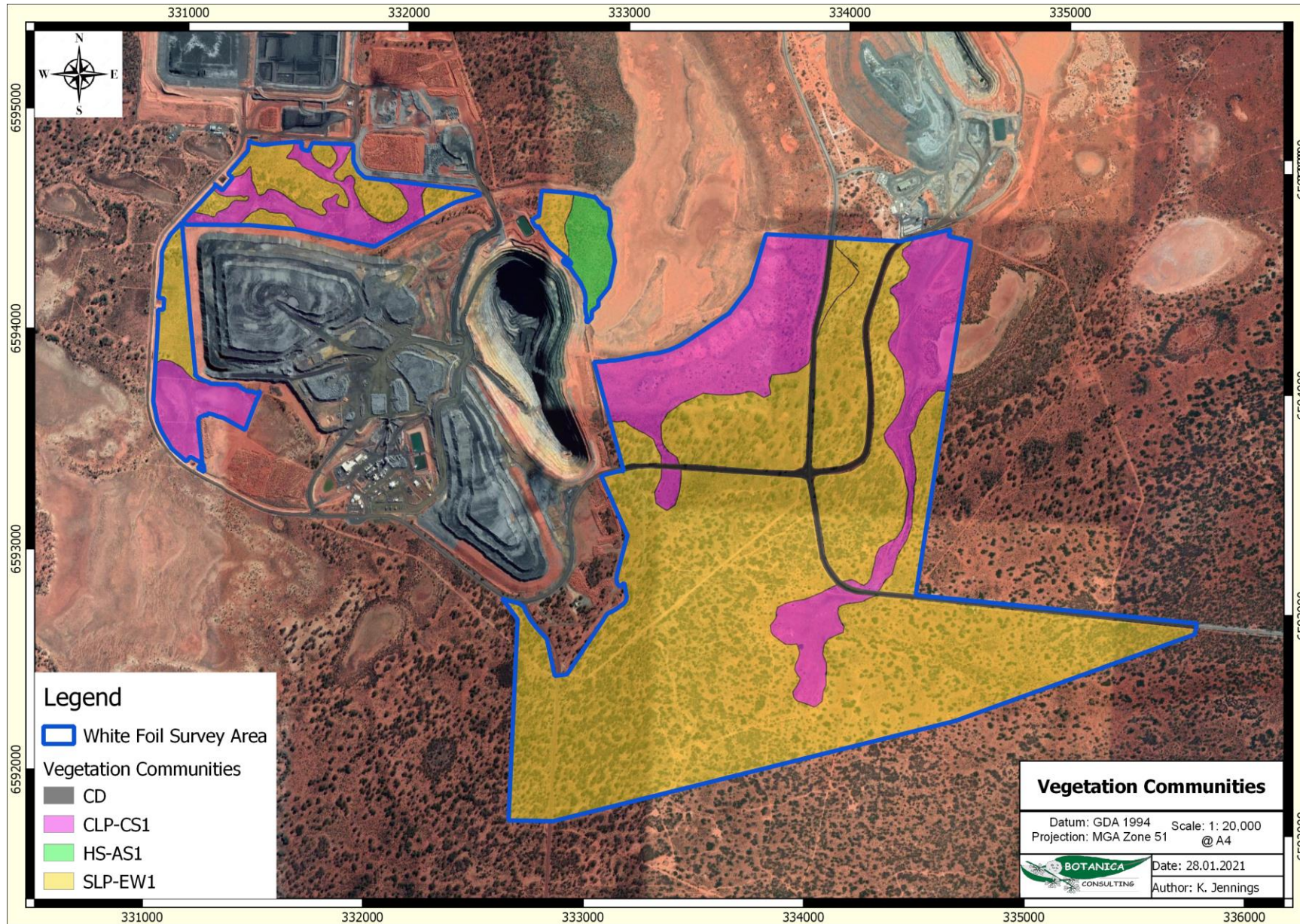


Figure 4-4: Vegetation Communities

### 4.2.3 Floristic Composition

PATN analysis was used to determine the similarities or differences between vegetation types identified within the survey area. Appendix 11 provides the dendrogram, two way-table (specifying species group) and ordination graph for all generated from the PATN statistical analysis. A list of the nine quadrats and their respective floristic groups are provided in Table 4-7 below. The PATN analysis produced a stress value of 0.1208.

**Table 4-7: Floristic Groups identified within the survey area and corresponding quadrats**

Landform	Major Vegetation Group	Floristic Group	Vegetation Code	Quadrat
Sandy-Loam Plain	Eucalyptus open woodland	<i>Eucalyptus clelandiorum</i> , <i>E. griffithsii</i> and <i>E. yilgarnensis</i> woodland over <i>Eremophila scoparia</i> , <i>Eremophila parvifolia</i> subsp. <i>auricampi</i> and <i>Scaevola spinescens</i> open shrubland over <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Rhagodia drummondii</i> and <i>Olearia muelleri</i> low open shrubland.	SLP-EW1	Q1 Q3 Q5 Q7
Clay-Loam Plain	Chenopod shrubland	<i>Tecticornia disarticulata</i> and <i>Atriplex vesicaria</i> open chenopod shrubland over <i>Frankenia setosa</i> , <i>Maireana glomerata</i> and <i>Sclerolaena cuneata</i> low open chenopod shrubland.	CLP-CS1	Q2 Q4 Q6
Hillslope	Acacia open shrubland	<i>Acacia acuminata</i> and <i>A. tetragonophylla</i> open shrubland over <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Cheilanthes sieberi</i> and <i>Austrostipa elegantissima</i> low sparse shrubland/ tussock grassland.	HS-AS1	Q8 Q9

The first floristic group comprised of *Eucalyptus griffithsii*/*E. clelandiorum*/*E. yilgarnensis* woodland quadrats and was mostly characterised by species group C (see two-way table provided in Appendix 11) with an average species richness of 13 taxa per quadrat (ranged from 10 to 15 taxa per quadrat).

The second floristic group comprised of *Acacia acuminata*/*A. tetragonophylla*. shrubland quadrats. This floristic group was mostly characterised by species group A (Appendix 11) with a species richness of 8 taxa per quadrat.

The third floristic group comprised of chenopod shrubland quadrats. This floristic group was mostly characterised by species group A (Appendix 11). This floristic group had an average species richness of 10 taxa per quadrat (ranged from 9 to 11 taxa per quadrat).

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

#### 4.2.3.1 Species Richness and accumulation estimates

The Chaos 2 richness estimator provided an estimated species richness of 62 species in 30 sample sites (quadrats). Species richness recorded for the nine quadrats was 53 species which indicates survey intensity was adequate.

A species accumulation curve was created to display the rate of species accumulation. The  $R^2$  value (0.95) suggests that the data “fits” the species accumulation curve shown in Figure 4-5. The rate of species accumulation for the first 12 quadrats ranged from eight to two species per quadrat. The rate of species accumulation between 12-19 quadrats was one species per quadrat. Species accumulation reduced to  $\leq 1$  species per quadrat as quadrat number increased above 19. 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.

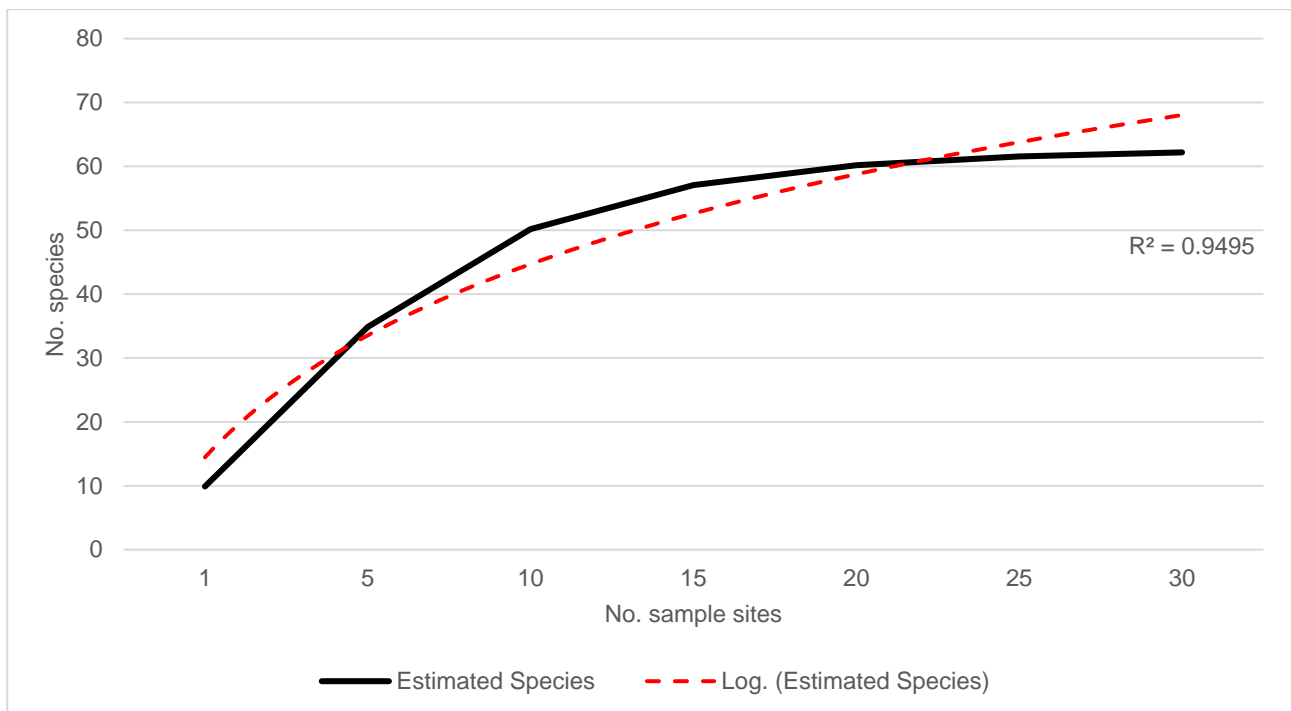


Figure 4-5: Species accumulation curve

#### 4.2.4 Vegetation Condition

Based on the vegetation condition rating scale adapted from Keighery (1994) and Trudgen, (1988), native vegetation within the survey area was rated as 'good' (Table 4-8, Figure 4-6). 'Good' condition depicts more obvious signs of damage caused by human activity since European settlement, including impacts to vegetation structure and composition from low levels of grazing, changed fire regimes and/or slightly aggressive weeds. Areas associated with road infrastructure were categorized as completely degraded.

**Table 4-8: Vegetation Condition within the survey area**

Condition Rating	Area (ha)	Area (%)
Good	457	97.2
Completely Degraded	13	2.8
<b>Total</b>	<b>470</b>	<b>100</b>

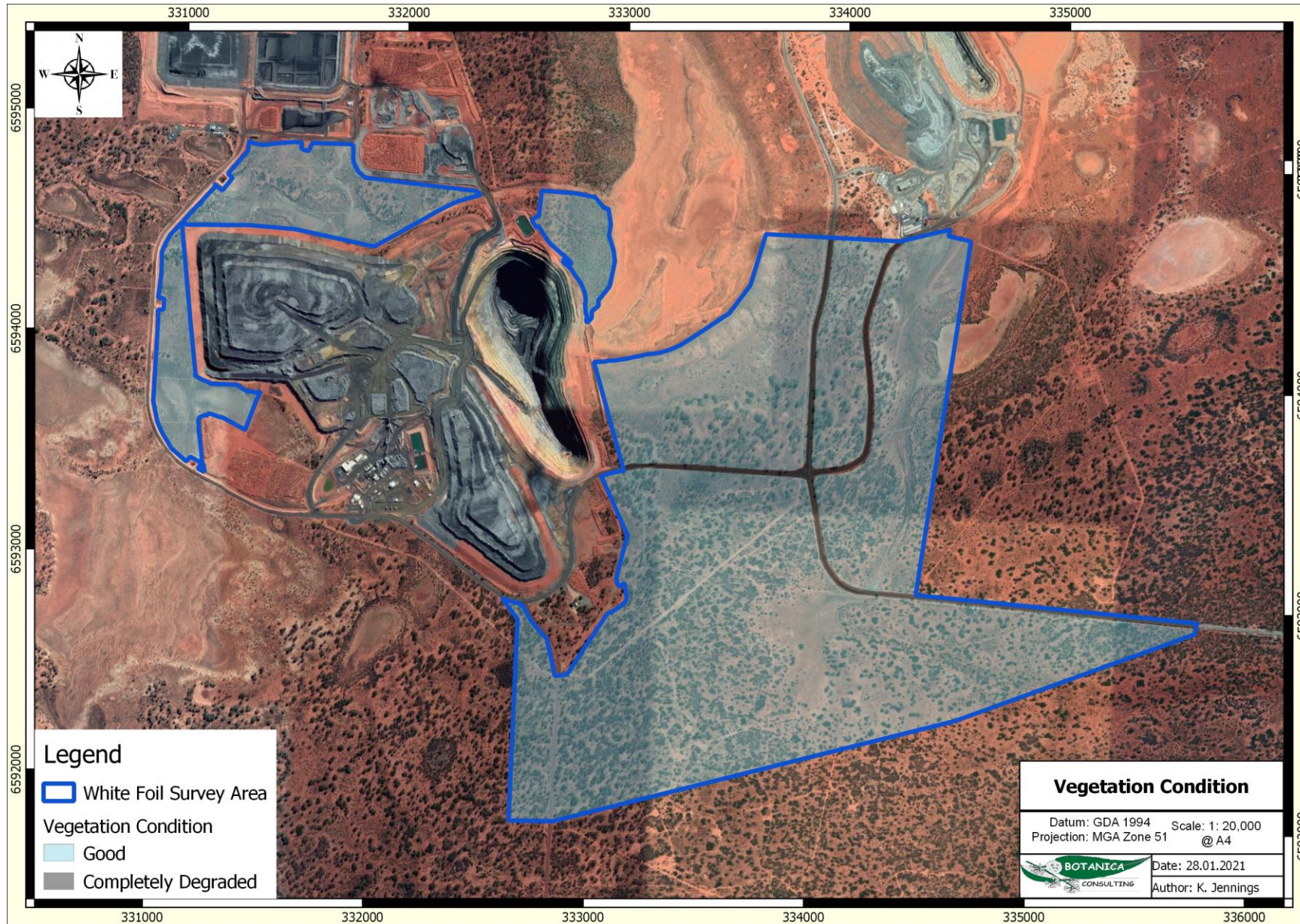


Figure 4-6: Vegetation Condition within the survey area

#### **4.2.5 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 Threatened or Priority Ecological Communities or otherwise significant vegetation were identified within the survey area.

#### **4.2.6 Fauna Habitat**

Based on vegetation and associated landforms identified during the flora and vegetation assessment, three broad scale terrestrial fauna habitats were identified as occurring within the survey area. Table 4-9 provides a visual representation of this habitat type, and the extent of fauna habitat is shown spatially in Figure 4-7.



**Table 4-9: Terrestrial Fauna Habitats within the survey area**

Fauna Habitat	Example Image
<p><u>Mixed <i>Eucalyptus</i> woodland on sand-loam plain</u>                      Area: 342 ha (72.8%)</p>	
<p><u>Chenopod shrubland on clay-loam plain</u>                      Area: 107 ha (22.7%)</p>	
<p><u>Acacia shrubland on hillslope</u>                      Area: 8 ha (1.7%)</p>	
<p><u>Completely Degraded</u>                      13 ha (2.8%)</p>	<p>No image available</p>

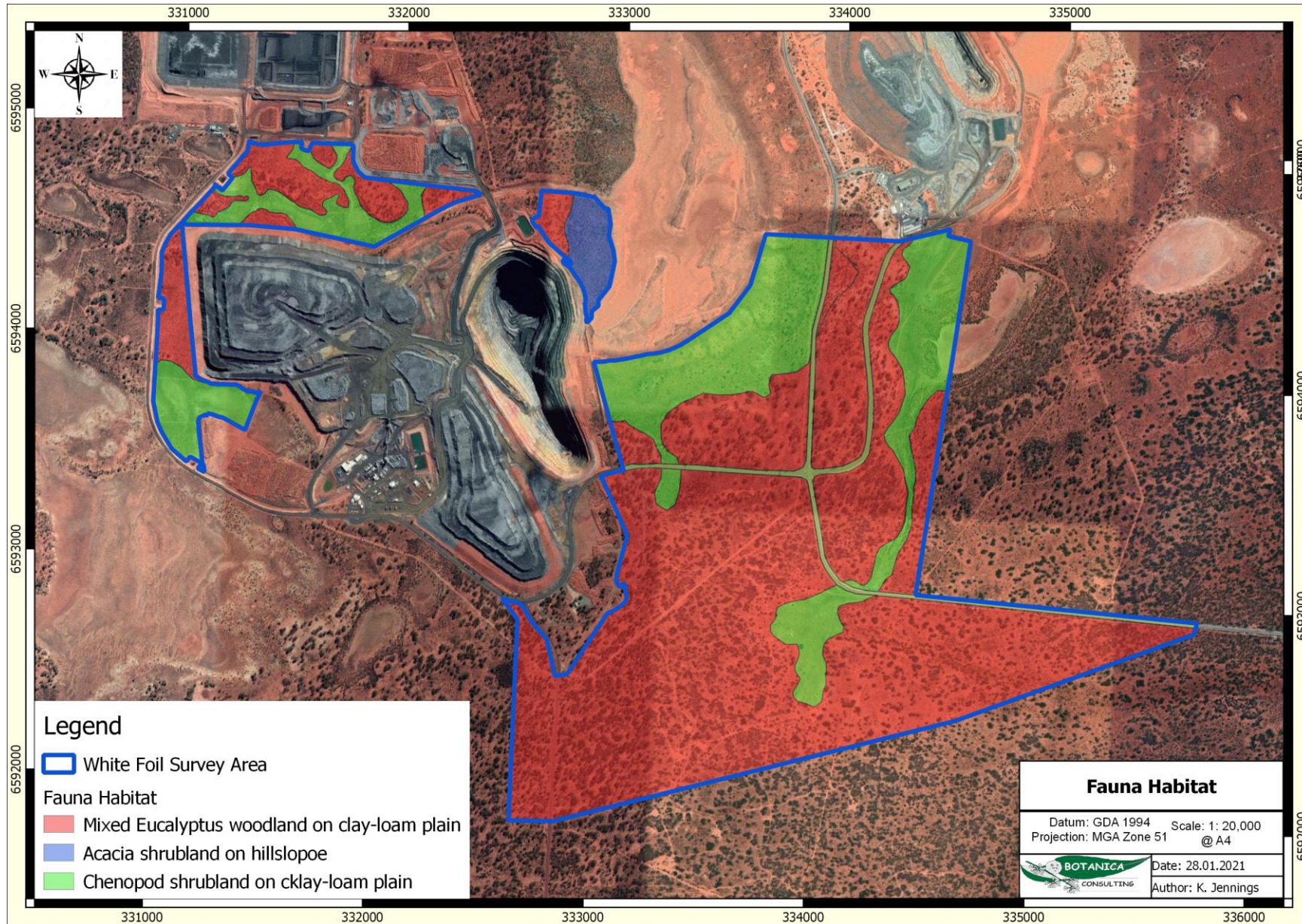


Figure 4-7: Terrestrial Fauna Habitats

#### 4.2.7 Significant Fauna

According to the EPA *Environmental Factor Guideline for Terrestrial Fauna* (EPA, 2016d) significant fauna includes:

- Fauna being identified as a threatened or priority species;
- Fauna species with restricted distribution;
- Fauna subject to a high degree of historical impact from threatening processes; and
- Fauna providing an important function required to maintain the ecological integrity of a significant ecosystem.

No evidence of significant fauna species were observed during the survey, including no evidence of Malleefowl nesting mounds or other activity.

The current status of some species on site and/or in the general area is difficult to determine, however, based on the habitats present and, in some cases, direct observations or recent nearby records, the following species of conservation significance can be regarded as possibly utilising the survey area for some purpose at times, these being:

- **Malleefowl (*Leipoa ocellata*) - Vulnerable (EPBC Act and BC Act)**  
This species is occasionally recorded in the Eastern Goldfield subregion. Habitat appears marginal/or unsuitable for breeding, however occasional transients could potentially occur. No evidence of malleefowl activity (inactive or active mounds, tracks, feathers or bird observations etc.) were observed within the survey area. Significant impact unlikely.
- **Grey Falcon (*Falco hypoleucos*) - Vulnerable (EPBC Act and BC Act)**  
This species is sparsely recorded throughout inland Australia. Suitable habitat likely to be present but is unlikely to represent critical habitat. Significant impact unlikely.
- **Peregrine Falcon (*Falco peregrinus*) – OS (BC Act)**  
This species potentially utilises some sections of the survey area as part of a much larger home range, though records in this area are uncommon. It is considered unlikely to breed within the survey area. Significant impact unlikely.

It should be noted that while habitats onsite for one or more of the species listed above are considered possibly suitable, some or all may be marginal in extent/quality and therefore the fauna species considered as possibly occurring may in fact only visit the area for short periods as infrequent vagrants.

### 4.3 Matters of National Environmental Significance

#### 4.3.1 *Environment Protection and Biodiversity Conservation Act 1999*

The EPBC Act protects matters of national environmental significance, and is used by the Commonwealth DAWE to list threatened taxa and ecological communities into categories based on the criteria set out in the Act ([www.environment.gov.au/epbc/index.html](http://www.environment.gov.au/epbc/index.html)). The Act provides a national environmental assessment and approval system for proposed developments and enforces strict penalties for unauthorised actions that may affect matters of national environmental significance. Matters of national environmental significance as defined by the Commonwealth EPBC Act include:

- Nationally threatened flora species;
- World heritage properties;
- National heritage places;
- Wetlands of international importance (often called ‘Ramsar’ wetlands after the international treaty under which such wetlands are listed);
- Nationally threatened ecological communities;
- Commonwealth marine area;
- The Great Barrier Reef Marine Park; and
- Nuclear actions (including uranium mining) a water resource, in relation to coal seam gas development and large coal mining development.

No matters of national environmental significance as defined by the Commonwealth EPBC Act were identified within the survey area.

### 4.4 Matters of State Environmental Significance

#### 4.4.1 *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 (Regulations) WA 2004* any clearing of native vegetation in Western Australia that is not eligible for exemption under Schedule 6 of the *EP Act 1986* or under the Regulations 2004 requires a clearing permit from the DWER or DMIRS. Under Section 51A of the *EP Act 1986* 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 1986* 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”. Exemptions under Schedule 6 of the EP Act and the EP Regulations do not apply in ESAs as declared under Section 51B of the EP Act or TEC listed under State and Commonwealth legislation.

No evidence of the survey area containing any TEC or Threatened flora or fauna was found during the survey period. The survey area is not located within an ESA.

#### 4.4.2 Biodiversity Conservation Act 2016

This Act is used by the Western Australian DBCA for the conservation and protection of biodiversity and biodiversity components in Western Australia and to promote the ecologically sustainable use of biodiversity components in the State. Taxa are classified as ‘Threatened’ when their populations are geographically restricted or are threatened by local processes (see following sections for Threatened definitions). Under this Act all native flora and fauna are protected throughout the State. Financial penalties are enforced under this Act if threatened species are collected without an appropriate licence.

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 threatened species or critical habitat listed under the BC Act were recorded within the survey area.

#### 4.5 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 4-10). The assessment found that the proposed vegetation clearing activities may be at variance with clearing principles (f) and (i).

**Table 4-10: Assessment against native vegetation clearing principles**

Letter	Principle	Assessment	Outcome
	<b>Native vegetation should not be cleared if it:</b>		
(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.  The survey area does not occur within any mapped Priority Ecological Communities (PECs), Threatened Ecological Communities (TECs) or associated buffer zones and does not contain any Banded Ironstone Formations.  No Threatened Flora taxa listed under the BC Act and EPBC Act are located within the survey area. No Priority Flora taxa were identified within the survey area.	Clearing is unlikely to be at variance to this principle
(b)	comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to WA.	No significant fauna were observed within the survey area. No significant fauna habitat was observed within the survey area.	Clearing is unlikely to be at variance to 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 to this principle

Letter	Principle	Assessment	Outcome
	<b>Native vegetation should not be cleared if it:</b>		
(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 to this principle
(e)	is significant as a remnant of native vegetation in an area that has been extensively cleared	All vegetation associations in the survey area retains >93% of their original pre-European vegetation extent.	Clearing is unlikely to be at variance to this principle
(f)	is growing, in, or in association with, an environment associated with a watercourse or wetland	Several ephemeral water bodies and an ephemeral drainage line were identified within the survey area.	Clearing may be at variance to 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 to 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.	The survey area is not located within a conservation area. The Kurrawang Nature Reserve, is located approximately 7 km south-east of the survey area and is not expected to be impacted through development within the survey area.	Clearing is unlikely to be at variance to 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.	Disturbance to ephemeral water bodies within the survey area will need to be avoided/ minimised where possible.	Clearing may be at variance to 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 Goldfield subregion has an average rainfall of 200-300mm and an evaporation rate of 2400 mm. Rainfall data for Kalgoorlie-Boulder indicates that rainfall is spread throughout the year and rainfall events are unlikely to result in localised flooding. 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 to this principle

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## Appendix 1: Conservation Ratings BC Act and EPBC Act

### Definitions of Conservation Significant Species

Code	Category
<b>State categories of threatened and priority species</b>	
<b>Threatened Species (T)</b>	
Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).	
CR	<p><b>Critically Endangered</b></p> <p>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”.</p> <p>Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for critically endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for critically endangered flora.</p>
EN	<p><b>Endangered</b></p> <p>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”.</p> <p>Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for endangered fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for endangered flora.</p>
VU	<p><b>Vulnerable</b></p> <p>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”.</p> <p>Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the Wildlife Conservation (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the Wildlife Conservation (Rare Flora) Notice 2018 for vulnerable flora.</p>
<b>Extinct species</b>	
Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.	
EX	<p><b>Extinct</b></p> <p>Species where “<i>there is no reasonable doubt that the last member of the species has died</i>”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).</p> <p>Published as presumed extinct under schedule 4 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018</i> for extinct fauna or the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for extinct flora.</p>
EW	<p><b>Extinct in the Wild</b></p> <p>Species that “<i>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</i>”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).</p> <p>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.</p>
<b>Specially protected species</b>	
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.	
IA	<p><b>International Agreement/ Migratory</b></p> <p>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).</p> <p>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 <i>Convention on the Conservation of Migratory Species of Wild Animals</i> (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.</p>

Code	Category
	Published as migratory birds protected under an international agreement under schedule 5 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018</i> .
CD	<b>Species of special conservation interest</b> Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act). Published as conservation dependent fauna under schedule 6 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018</i> .
OS	<b>Other specially protected species</b> Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act). Published as other specially protected fauna under schedule 7 of the <i>Wildlife Conservation (Specially Protected Fauna) Notice 2018</i> .
<b>Priority species</b> 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	<b>Priority 1: Poorly-known species</b> 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	<b>Priority 2: Poorly-known species</b> 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	<b>Priority 3: Poorly-known species</b> 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	<b>Priority 4: Rare, Near Threatened and other species in need of monitoring</b> (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.
<b>Commonwealth categories of threatened species</b>	
EX	<b>Extinct</b> Taxa where there is no reasonable doubt that the last member of the species has died.
EW	<b>Extinct in the Wild</b> 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	<b>Critically Endangered</b> 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	<b>Endangered</b>

Code	Category
	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	<b>Vulnerable</b> 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	<b>Conservation Dependent</b> 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
<b>State categories of Threatened Ecological Communities (TEC)</b>	
PD	<b>Presumed Totally Destroyed</b>
	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:
	<ul style="list-style-type: none"> <li>records within the last 50 years have not been confirmed despite thorough searches or known likely habitats or;</li> <li>all occurrences recorded within the last 50 years have since been destroyed.</li> </ul>
CR	<b>Critically Endangered</b>
	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	<b>Endangered</b>
	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	<b>Vulnerable</b>
	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;

Category Code	Category
	The ecological community may be widespread but has potential to move to a higher threat category due to existing or impending threatening processes.
<b>Commonwealth categories of Threatened Ecological Communities (TEC)</b>	
CE	<b>Critically Endangered</b> 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	<b>Endangered</b> 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	<b>Vulnerable</b> 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).
<b>Priority Ecological Communities (PEC)</b>	
P1	<b>Poorly-known ecological communities</b>
	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	<b>Poorly-known ecological communities</b>
	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	<b>Poorly known ecological communities</b>
	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	<b>Ecological communities that are adequately known, rare but not threatened</b> or meet criteria for near threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
P5	<b>Conservation Dependent ecological communities</b>
	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 2: Potentially Occurring Introduced (Weed) Flora Species

Family	Species	Common Name	WAOL Status	Control Category	WONS
Aizoaceae	<i>Aizoon pubescens</i>	-	Permitted - s11	No Control Category	No
Aizoaceae	<i>Mesembryanthemum crystallinum</i>	Iceplant	Permitted - s11	No Control Category	No
Aizoaceae	<i>Mesembryanthemum nodiflorum</i>	Slender Iceplant	Permitted - s11	No Control Category	No
Amaranthaceae	<i>Amaranthus viridis</i>	Green Amaranth	Permitted - s11	No Control Category	No
Anacardiaceae	<i>Schinus molle</i> var. <i>areira</i>	-	Permitted - s11	No Control Category	No
Apocynaceae	<i>Asclepias curassavica</i>	Redhead Cottonbush	Permitted - s11	No Control Category	No
Apocynaceae	<i>Orbea variegata</i>	-	Permitted - s11	No Control Category	No
Asparagaceae	<i>Agave americana</i>	Century Plant	Permitted - s11	No Control Category	No
Asteraceae	<i>Arctotheca calendula</i>	Cape Weed, African Marigold	Permitted - s11	No Control Category	No
Asteraceae	<i>Carthamus lanatus</i>	Saffron Thistle	Permitted - s11	No Control Category	No
Asteraceae	<i>Centaurea melitensis</i>	Maltese Cockspur, Malta Thistle	Permitted - s11	No Control Category	No
Asteraceae	<i>Cichorium intybus</i>	Chicory	Permitted - s11	No Control Category	No
Asteraceae	<i>Conyza bonariensis</i>	Flax-leaf Fleabane	Permitted - s11	No Control Category	No
Asteraceae	<i>Conyza sumatrensis</i>	-	Permitted - s11	No Control Category	No
Asteraceae	<i>Helianthus annuus</i>	Sunflower, Common Sunflower	Permitted - s11	No Control Category	No
Asteraceae	<i>Lactuca serriola</i> forma <i>serriola</i>	-	Permitted - s11	No Control Category	No
Asteraceae	<i>Monoculus monstrosus</i>	-	Permitted - s11	No Control Category	No
Asteraceae	<i>Oligocarpus calendulaceus</i>	-	Permitted - s11	No Control Category	No
Asteraceae	<i>Oncosiphon suffruticosum</i>	Calomba Daisy	Permitted - s11	No Control Category	No
Asteraceae	<i>Sonchus oleraceus</i>	Common Sowthistle	Permitted - s11	No Control Category	No
Asteraceae	<i>Symphotrichum squamatum</i>	Bushy Starwort	Permitted - s11	No Control Category	No
Asteraceae	<i>Xanthium spinosum</i>	Spiny Cocklebur	Declared Pest - s22(2)	C3 Management, Whole of State	No
Boraginaceae	<i>Buglossoides arvensis</i>	Corn Gromwell	Permitted - s11	No Control Category	No
Boraginaceae	<i>Echium plantagineum</i>	Paterson's Curse	Declared Pest - s22(2)	No Control Category, Whole of State	No
Boraginaceae	<i>Heliotropium europaeum</i>	Common Heliotrope	Permitted - s11	No Control Category	No
Brassicaceae	<i>Alyssum linifolium</i>	Flax-leaf Alyssum	Permitted - s11	No Control Category	No
Brassicaceae	<i>Brassica tournefortii</i>	Mediterranean Turnip	Permitted - s11	No Control Category	No
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's Purse	Permitted - s11	No Control Category	No
Brassicaceae	<i>Carrichtera annua</i>	Ward's Weed	Permitted - s11	No Control Category	No
Brassicaceae	<i>Sisymbrium irio</i>	London Rocket	Permitted - s11	No Control Category	No

Family	Species	Common Name	WAOL Status	Control Category	WONS
Brassicaceae	<i>Sisymbrium orientale</i>	Indian Hedge Mustard	Permitted - s11	No Control Category	No
Cactaceae	<i>Cylindropuntia fulgida</i> var. <i>mamillata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia imbricata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia kleiniae</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Cylindropuntia tunicata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Opuntia elata</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Cactaceae	<i>Opuntia ficus-indica</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	Yes
Caryophyllaceae	<i>Spergularia diandra</i>	Lesser Sand Spurry	Permitted - s11	No Control Category	No
Chenopodiaceae	<i>Chenopodium album</i>	Fat Hen	Permitted - s11	No Control Category	No
Chenopodiaceae	<i>Chenopodium murale</i>	Nettle-leaf Goosefoot	Permitted - s11	No Control Category	No
Fabaceae	<i>Acacia pycnantha</i>	Golden Wattle	Permitted - s11	No Control Category	No
Fabaceae	<i>Alhagi maurorum</i>	-	Declared Pest - s22(2)	C3 Management, Whole of State	No
Fabaceae	<i>Erythrostemon gilliesii</i>	-	Permitted - s11	No Control Category	No
Fabaceae	<i>Medicago laciniata</i>	Cut-leaf Medic	Permitted - s11	No Control Category	No
Fabaceae	<i>Medicago minima</i>	Small Burr Medic	Permitted - s11	No Control Category	No
Fabaceae	<i>Medicago polymorpha</i>	Burr Medic	Permitted - s11	No Control Category	No
Fabaceae	<i>Vicia monantha</i> subsp. <i>triflora</i>	-	Permitted - s11	No Control Category	No
Geraniaceae	<i>Erodium aureum</i>	-	Permitted - s11	No Control Category	No
Geraniaceae	<i>Erodium botrys</i>	Long Storksbill	Permitted - s11	No Control Category	No
Geraniaceae	<i>Erodium cicutarium</i>	Common Storksbill	Permitted - s11	No Control Category	No
Lamiaceae	<i>Marrubium vulgare</i>	Horehound	Permitted - s11	No Control Category	No
Lamiaceae	<i>Salvia reflexa</i>	Mintweed	Permitted - s11	No Control Category	No
Lamiaceae	<i>Salvia verbenaca</i>	Wild Sage	Permitted - s11	No Control Category	No
Malvaceae	<i>Malva parviflora</i>	Marshmallow	Permitted - s11	No Control Category	No
Oxalidaceae	<i>Oxalis bowiei</i>	Bowie Wood Sorrel	Permitted - s11	No Control Category	No
Oxalidaceae	<i>Oxalis pes-caprae</i>	Soursob	Permitted - s11	No Control Category	No
Papaveraceae	<i>Papaver hybridum</i>	Rough Poppy	Permitted - s11	No Control Category	No
Plumbaginaceae	<i>Limonium sinuatum</i>	Perennial Sea Lavender	Permitted - s11	No Control Category	No
Poaceae	<i>Bromus catharticus</i>	Prairie Grass	Permitted - s11	No Control Category	No

Family	Species	Common Name	WAOL Status	Control Category	WONS
Poaceae	<i>Bromus diandrus</i>	Great Brome	Permitted - s11	No Control Category	No
Poaceae	<i>Cenchrus ciliaris</i>	Buffel Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Ehrharta villosa</i>	Pyp Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Eragrostis curvula</i>	African Lovegrass	Permitted - s11	No Control Category	No
Poaceae	<i>Hordeum glaucum</i>	Northern Barley Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Hordeum leporinum</i>	Barley Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Pentameris airoides</i> subsp. <i>airoides</i>	-	Permitted - s11	No Control Category	No
Poaceae	<i>Phalaris paradoxa</i>	Paradoxa Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Rostraria pumila</i>	-	Permitted - s11	No Control Category	No
Poaceae	<i>Schismus arabicus</i>	Araby Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Schismus barbatus</i>	Kelch Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Sorghum halepense</i>	Johnson Grass	Permitted - s11	No Control Category	No
Poaceae	<i>Urochloa panicoides</i>	-	Permitted - s11	No Control Category	No
Polygonaceae	<i>Polygonum aviculare</i>	Wireweed	Permitted - s11	No Control Category	No
Polygonaceae	<i>Rumex vesicarius</i>	Ruby Dock	Permitted - s11	No Control Category	No
Primulaceae	<i>Lysimachia arvensis</i>	Pimpernel	Permitted - s11	No Control Category	No
Solanaceae	<i>Datura innoxia</i>	-	Permitted - s11	No Control Category	No
Solanaceae	<i>Lycium ferocissimum</i>	African Boxthorn	Permitted - s11	No Control Category	Yes
Solanaceae	<i>Nicotiana glauca</i>	Tree Tobacco	Permitted - s11	No Control Category	No
Solanaceae	<i>Solanum nigrum</i>	Black Berry Nightshade	Permitted - s11	No Control Category	No
Urticaceae	<i>Urtica urens</i>	Small Nettle	Permitted - s11	No Control Category	No
Verbenaceae	<i>Glandularia aristigera</i>	-	Permitted - s11	No Control Category	No
Verbenaceae	<i>Phyla canescens</i>	-	Permitted - s11	No Control Category	No
Zygophyllaceae	<i>Tribulus terrestris</i>	Caltrop	Permitted - s11	No Control Category	No

### Appendix 3: Significant Flora Likelihood Assessment

Species	Rank	Habitat	Comments	Likelihood
<i>Conostylis lepidospermoides</i>	T (EN)	Grey or yellow-brown sand over laterite.	Outside known range of species.	Unlikely
<i>Gastrolobium graniticum</i>		Sand, sandy loam, granite. Margins of rock outcrops, along drainage lines.	Outside known range of species.	Unlikely
<i>Thelymitra stellata</i>		Sand, gravel, lateritic loam.	Outside known range of species.	Unlikely
<i>Acacia coatesii</i>	P1	-	Outside known range of species.	Unlikely
<i>Acacia epedunculata</i>		Yellow sand. Sandplains.	Outside known range, habitat may be present.	Unlikely
<i>Acacia sclerophylla</i> var. <i>teretiuscula</i>		Clay & loamy soils.	Outside known range of species.	Unlikely
<i>Acacia websteri</i>		Red sand, clay or loam. Low-lying areas, flats.	At extreme of range, habitat unlikely to be present.	Possible
<i>Austrostipa</i> sp. Carlingup Road (S. Kern & R. Jasper LCH 18459)		Rocky basalt hillslopes and crests.	Outside known range of species.	Unlikely
<i>Dampiera plumosa</i>		Red sandy soils.	Outside known range of species.	Unlikely
<i>Eucalyptus websteriana</i> subsp. <i>norsemanica</i>		Rocky rises.	Outside known range of species.	Unlikely
<i>Lepidosperma</i> sp. Parker Range (N. Gibson & M. Lyons 2094)		-	Outside known range of species.	Unlikely
<i>Melichrus</i> sp. Coolgardie (K.R. Newbey 8698)		-	Outside known range.	Unlikely
<i>Phebalium appressum</i>		Yellow sandplain.	Extreme of known range, habitat may be present.	Possible
<i>Philotheca pachyphylla</i>		Sand, red loam, clay loam. Sandplains, hill tops.	Outside known range of species.	Unlikely
<i>Ptilotus chortophytus</i>		-	Outside known range of species.	Unlikely
<i>Ptilotus procumbens</i>		Red clay.	Outside known range of species.	Unlikely
<i>Ptilotus rigidus</i>		-	At extreme of range.	Unlikely
<i>Rhodanthe uniflora</i>		Brown earth. Open eucalyptus woodland.	Within species range, habitat may be present.	Possible
<i>Thryptomene planiflora</i>		-	Outside known range of species.	Unlikely
<i>Thryptomene</i> sp. Coolgardie (E. Kelso s.n. 1902)		-	Outside known range of species.	Unlikely
<i>Austrostipa</i> sp. Dowerin (G. Wiehl F 8004)		-	Outside known range of species.	Unlikely
<i>Elachanthus pusillus</i>		-	Sparse regional records.	Unlikely
<i>Eremophila praecox</i>	Red/brown sandy loam. Undulating plains.	Within known range of species, habitat may be present.	Possible	
<i>Eucalyptus educta</i>	Shallow soils. Granite rocks.	At extreme of known range, habitat unlikely to be present.	Unlikely	
<i>Goodenia salina</i>	Low gypseous dunes near salt pans.	Outside known range of species.	Unlikely	
<i>Hakea rigida</i>	Sandy soils, yellow sand.	Outside known range of species.	Unlikely	
<i>Lepidium merrallii</i>	Clay loam.	Outside known range of species.	Unlikely	
<i>Phebalium clavatum</i>	Sandy soils. Sandplains.	Outside known range of species.	Unlikely	
	P2			



Species	Rank	Habitat	Comments	Likelihood
<i>Acacia crenulata</i>	P3	Clay, sandy clay, yellow sand. Rocky rises, granite outcrops, breakaways.	Outside known range of species.	Unlikely
<i>Allocasuarina eriochlamys</i> subsp. <i>grossa</i>		Stony loam, laterite clay. Granite outcrops.	Outside known range of species.	Unlikely
<i>Alyxia tetanifolia</i>		Sandy clay, loam, concretionary gravel. Drainage lines, near lakes.	Habitat unlikely to be present.	Unlikely
<i>Angianthus prostratus</i>		Red clay or loamy soils. Saline depressions.	Extreme of known range, habitat may be present.	Possible
<i>Atriplex lindleyi</i> subsp. <i>conduplicata</i>		Crabhole plains.	Habitat unlikely to be present.	Unlikely
<i>Austrostipa blackii</i>		-	Outside known range of species.	Unlikely
<i>Chrysocephalum apiculatum</i> subsp. <i>norsemanense</i>		-	Outside known range of species.	Unlikely
<i>Cyathostemon verrucosus</i>		Slopes of Red Hill, Kambalda	Outside known range of species.	Unlikely
<i>Eremophila veronica</i>		Stony clay, clay loam. Lateritic breakaways.	Outside known range of species.	Unlikely
<i>Gompholobium cinereum</i>		Yellow sand, clayey sand, brown loam, sandy gravel, laterite. Well-drained open sites, slopes, plains, roadsides.	Outside known range of species.	Unlikely
<i>Grevillea georgeana</i>		Stony loam/clay. Ironstone hilltops & slopes.	Outside known range of species.	Unlikely
<i>Isolepis australiensis</i>		Silty sand, sandy clay. Lake margins, pools.	Outside known range of species.	Unlikely
<i>Lepidium fasciculatum</i>		-	Sparse regional records.	Unlikely
<i>Melaleuca coccinea</i>		Sandy loam over granite. Granite outcrops, sandplain, river valleys.	Outside known range of species.	Unlikely
<i>Notisia intonsa</i>		Red sand, disturbed areas.	Within known range of species, habitat may be present.	Possible
<i>Phlegmatospermum eremaeum</i>		Stony loam.	Widespread but sparse records in region.	Unlikely
<i>Rinzia triplex</i>		-	Outside known range of species.	Unlikely
<i>Styphelia saxicola</i>	-	Outside known range of species.	Unlikely	
<i>Eremophila caerulea</i> subsp. <i>merrallii</i>	P4	Sand, clay or loam. Undulating plains.	Outside known range of species.	Unlikely
<i>Eucalyptus jutsonii</i> subsp. <i>jutsonii</i>		Red to pale orange deep sands. Undulating areas and on dunes.	Outside known range of species.	Unlikely
<i>Eucalyptus x brachyphylla</i>		Sandy loam. Granite outcrops.	Outside known range of species.	Unlikely
<i>Frankenia glomerata</i>		White sand.	Outside known range of species.	Unlikely

#### Appendix 4: Significant Fauna Likelihood Assessment

Species	Conservation Status			Habitat Description	Assessment	Likelihood
	EPBC Act	BC Act	DBC Priority			
Night Parrot <i>Pezoporus occidentalis</i>	EN	CR	-	Most habitat records are of <i>Triodia</i> ( <i>Spinifex</i> ) grasslands and/or chenopod shrublands in the arid and semi-arid zones, or <i>Astrebla</i> spp. (Mitchell grass), shrubby samphire and chenopod associations, scattered trees and shrubs, <i>Acacia aneura</i> (Mulga) woodland, treeless areas and bare gibber are associated with sightings of the species. Roosting and nesting sites are consistently reported as within clumps of dense vegetation, primarily old and large <i>Spinifex</i> ( <i>Triodia</i> ) clumps, but sometimes other vegetation types (DAWE, 2020b).	Would not occur. Very marginal habitat.	Would Not Occur
Carnaby's Cockatoo <i>Calyptorhynchus latirostris</i>	EN	EN		Carnaby's Cockatoo is endemic to, and widespread in, the south-west of Western Australia. It occurs from the wheatbelt, in areas that receive between 300 and 750 mm of rainfall annually, across to wetter regions in the extreme south-west, including the Swan Coastal Plain and the southern coast. Its range extends from Cape Arid in the south-east to Kalbarri in the north, and inland to Hatter Hill, Gibb Rock, Naremben, Noongar, Wongan Hills, Nugadong, near Perenjori, Wilroy and Nabawa.	Would Not Occur. No documented records in the region.	Would Not Occur
Grey Falcon <i>Falco hypoleucos</i>	VU	VU		The Grey Falcon occurs at low densities across inland Australia. The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter. While breeding Grey Falcons feed almost exclusively on birds. Prey species include doves, pigeons, small parrots and cockatoos and finches, but a variety of other bird prey species has been recorded. Nonavian prey recorded by direct observation include small mammals and lizards.	Possibly Occurs. Survey area may form part of larger home range.	Possible
Malleefowl <i>Leipoa ocellata</i>	VU	VU	-	Scrublands and woodlands dominated by mallee and wattle species (DAWE, 2020b).	Possibly Occurs. Habitat likely marginal and unsuitable for breeding. Occasional transients only.	Possible
Fork-tailed Swift <i>Apus pacificus</i>	MI	MI	-	Low to very high airspace over varied habitat from rainforest to semi desert (Birdlife Australia, 2019).	Unlikely to occur. Very occasional transients only.	Unlikely

Species	Conservation Status			Habitat Description	Assessment	Likelihood
	EPBC Act	BC Act	DBCA Priority			
Migratory Shorebirds (Various species)	IA/MI	IA/MI	T-P4	Prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, salt pans and hypersaline salt lakes inland (DAWE, 2020b).	Habitat may be present, but is considered marginal and would not represent critical habitat.	Unlikely
Grey Wagtail <i>Motacilla cinerea</i>	MI	MI	-	Running water in disused quarries, sandy, rocky streams in escarpments and rainforest, sewerage ponds, ploughed fields and airfields (Morecombe 2004).	Would Not Occur. No suitable habitat.	Would Not Occur
Peregrine Falcon <i>Falco peregrinus</i>	-	OS	-	The Peregrine Falcon is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites, and prefers coastal and inland cliffs or open woodlands near water, and may even be found nesting on high city buildings (Birdlife Australia, 2018).	Possibly Occurs. Survey area may form part of larger home range but unlikely to breed in area	Possible
Numbat <i>Myrmecobius fasciatus</i>	EN	EN		Previously widespread in arid and semi-arid Australia, the species is now restricted to two isolated wild populations in south-west Western Australia and a number of translocations to predator proof locations.	Would Not Occur. No documented records in the region.	Would Not Occur
Chuditch, Western Quoll <i>Dasyurus geoffroii</i>	VU	VU		Previously occurred throughout arid and semi-arid Australia but is now restricted to south-west Western Australia. (DAWE, 2020b).	Unlikely to Occur. Considered to be locally extinct.	Unlikely
Bilby <i>Macrotis lagotis</i>	VU	VU		In Western Australia, it is mainly restricted to the Gibson Desert, Little Sandy Desert, Great Sandy Desert and parts of the Pilbara and Southern Kimberley.	Would Not Occur. No documented records in the region.	Would Not Occur

## Appendix 5: List of species identified within each vegetation type

(A) blue text- indicates annual taxa (WAHERB, 2021)

Family	Species	SLP-EW1	CLP-CS1	HS-AS1
Aizoaceae	<i>Disphyma crassifolium</i>		*	
	<i>Gunniopsis quadrifida</i>	*	*	
Amaranthaceae	<i>Ptilotus obovatus</i> var. <i>obovatus</i>	*	*	*
Apocynaceae	<i>Marsdenia australis</i>	*	*	
Asteraceae	<i>Cratystylis microphylla</i>	*		
	<i>Cratystylis subspinescens</i>		*	
	<i>Olearia muelleri</i>	*	*	
Chenopodiaceae	<i>Atriplex codonocarpa</i> (A)		*	
	<i>Atriplex stipitata</i>		*	
	<i>Atriplex vesicaria</i>		*	
	<i>Eriochiton sclerolaenoides</i>		*	
	<i>Maireana brevifolia</i>	*		
	<i>Maireana georgei</i>	*	*	
	<i>Maireana glomerata</i>	*	*	
	<i>Maireana pentatropis</i>		*	
	<i>Maireana pyramidata</i>	*	*	
	<i>Maireana sedifolia</i>	*		
	<i>Maireana trichoptera</i>	*	*	
	<i>Maireana triptera</i>	*	*	
	<i>Rhagodia drummondii</i>	*		
	<i>Sclerolaena cuneata</i>		*	
	<i>Sclerolaena diacantha</i>		*	
	<i>Sclerolaena patenticuspis</i>		*	
<i>Tecticornia disarticulata</i>		*		
Fabaceae	<i>Acacia acuminata</i>			*
	<i>Acacia collegialis</i>	*		
	<i>Acacia colletioides</i>	*		
	<i>Acacia hemiteles</i>	*		
	<i>Acacia tetragonophylla</i>			*
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>	*		
	<i>Senna cardiosperma</i>	*		
	<i>Swainsona canescens</i>	*		
Frankeniaceae	<i>Frankenia setosa</i>		*	
Goodeniaceae	<i>Scaevola spinescens</i>	*	*	*
Hemerocallidaceae	<i>Dianella revoluta</i>	*		
Lamiaceae	<i>Westringia rigida</i>	*		
Malvaceae	<i>Abutilon cryptopetalum</i>		*	
	<i>Brachychiton gregorii</i>			*
Montiaceae	<i>Calandrinia eremaea</i> (A)		*	
Myrtaceae	<i>Eucalyptus celastroides</i>	*		
	<i>Eucalyptus griffithsii</i>	*		
	<i>Eucalyptus salmonophloia</i>	*		
	<i>Eucalyptus salubris</i>	*		
	<i>Eucalyptus yilgarnensis</i>	*		
	<i>Melaleuca pauperiflora</i>	*		

Family	Species	SLP-EW1	CLP-CS1	HS-AS1
Poaceae	<i>Austrostipa elegantissima</i>	*		*
Poaceae	<i>Triodia scariosa</i>	*		
Polygonaceae	<i>Duma florulenta</i>	*		
Proteaceae	<i>Grevillea acuaria</i>	*		
Pteridaceae	<i>Cheilanthes sieberi (A)</i>			*
Santalaceae	<i>Exocarpos aphyllus</i>	*		
Sapindaceae	<i>Dodonaea lobulata</i>			*
Scrophulariaceae	<i>Eremophila caperata</i>	*		
	<i>Eremophila decipiens</i>	*		
	<i>Eremophila dempsteri</i>	*		
	<i>Eremophila ionantha</i>	*		
	<i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>			*
	<i>Eremophila parvifolia</i> subsp. <i>auricampa</i>	*		
	<i>Eremophila scoparia</i>	*	*	
Solanaceae	<i>Lycium australe</i>	*		
	<i>Solanum nummularium</i>	*		
Zygophyllaceae	<i>Roepera eremaea (A)</i>			*

## Appendix 6: Vegetation Condition Rating

Vegetation Condition Rating	South West 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.	N/A
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	N/A	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 7: NatureMap Species List (40km buffer)

# NatureMap Species Report

Created By Guest user on 13/01/2021

Current Names Only Yes  
Core Datasets Only Yes  
Method 'By Circle'  
Centre 121° 11' 17" E, 30° 46' 45" S  
Buffer 40km  
Group By Family

Family	Species	Records
Acanthizidae	9	470
Acarosporaceae	3	13
Accipitridae	8	43
Actinopodidae	1	4
Aegothelidae	1	2
Agamidae	12	138
Aizoaceae	6	15
Amaranthaceae	16	95
Anacardiaceae	1	4
Anatidae	11	244
Anhingidae	1	2
Apiaceae	1	9
Apocynaceae	6	53
Araliaceae	1	4
Araneidae	8	24
Arcyriaceae	1	2
Ardeidae	3	25
Artamidae	3	29
Asparagaceae	6	20
Asphodelaceae	1	4
Asteraceae	105	436
Barychelidae	1	1
Boidae	1	2
Boraginaceae	9	53
Bothriuridae	1	1
Bovidae	3	5
Branchipodidae	1	11
Brassicaceae	17	70
Bryaceae	3	3
Burramyidae	1	50
Buthidae	1	1
Cacatuidae	1	24
Cactaceae	6	8
Campanulaceae	2	8
Campephagidae	3	85
Caprimulgidae	1	2
Carphodactylidae	1	1
Caryophyllaceae	2	3
Casuaridae	1	41
Casuarinaceae	8	30
Celastraceae	2	3
Charadriidae	5	20
Cheluidae	1	1
Chenopodiaceae	73	414
Cladoniaceae	3	4
Climacteridae	1	1
Colchicaceae	1	1
Collemataceae	1	1
Columbidae	4	201
Convolvulaceae	3	7
Corvidae	3	269
Cracticidae	4	409
Crassulaceae	3	10
Cuculidae	3	16
Cupressaceae	2	16
Cyperaceae	9	11
Cyprinidae	1	1
Cyzicidae	1	1
Daphniidae	1	6
Dasyuridae	7	65
Desidae	2	2
Dicaeidae	1	18
Dicruridae	3	263
Didiereaceae	1	1
Diplodactylidae	8	134
Droseraceae	1	1
Dytiscidae	1	1
Echinosteliaceae	1	3
Elaeocarpaceae	1	2
Elapidae	16	98
Emballonuridae	1	2
Ericaceae	4	5
Estrilidae	1	12
Euphorbiaceae	9	15
Fabaceae	105	516
Falconidae	4	48
Felidae	1	17



Fissidentaceae	2	2
Frankeniaceae	9	21
Gaistraceae	1	1
Gekkonidae	5	138
Geraniaceae	5	20
Gnaphosidae	1	1
Goodeniaceae	28	131
Graphidaceae	5	11
Grimmiaceae	1	2
Gyrostemonaceae	2	3
Haemodoraceae	1	1
Halcyonidae	2	4
Haloragaceae	6	21
Hersiliidae	1	1
Hirundinidae	4	94
Hydnaceae	1	1
Hydrophilidae	2	2
Hylidae	1	1
Icmadophilaceae	1	1
Idiopidae	1	2
Juncaceae	1	1
Lamiaceae	21	129
Lamponidae	2	7
Laridae	1	2
Lecideaceae	1	2
Leporidae	1	61
Liceaceae	1	3
Limnodynastidae	4	66
Loganiaceae	3	3
Loranthaceae	6	12
Lycaenidae	3	23
Lycosidae	5	10
Lythraceae	1	1
Macropodidae	3	28
Maluridae	3	101
Malvaceae	20	82
Megalosporaceae	2	8
Megapodiidae	1	37
Meliaceae	1	1
Meliphagidae	10	970
Meropidae	1	37
Montiaceae	4	16
Motacillidae	2	3
Muridae	5	111
Myobatrachidae	1	29
Myrmecobiidae	1	1
Myrtaceae	105	601
Nemesiidae	2	4
Neosittidae	2	6
Nicodamidae	1	6
Nitriariaceae	1	2
Nyctaginaceae	1	1
Ophioglossaceae	1	1
Orchidaceae	11	14
Ostracoda	1	1
Otididae	1	3
Oxalidaceae	3	4
Oxyopidae	3	12
Pachycephalidae	5	232
Papaveraceae	1	1
Pardalotidae	3	188
Parmeliaceae	31	68
Peltulaceae	1	1
Petroicidae	5	68
Phalacrocoracidae	2	11
Phasianidae	1	1
Phocidae	1	1
Physaraceae	1	1
Physciaceae	3	5
Pileolariaceae	1	2
Pittosporaceae	3	10
Plantaginaceae	3	11
Plumbaginaceae	1	1
Poaceae	55	168
Podargidae	1	4
Podicipedidae	2	52
Polygalaceae	2	3
Polygonaceae	3	4
Pomatostomidae	2	57
Portulacaceae	1	1
Pottiaceae	6	8
Primulaceae	1	1
Proteaceae	27	83
Psittacidae	10	100
Psoraceae	3	20
Pteridaceae	2	4
Pygopodidae	4	15
Rallidae	3	27
Ranunculaceae	1	1
Recurvirostridae	4	17
Restionaceae	2	2
Rhamnaceae	5	38
Rhizocarpaceae	1	1
Ricciaceae	1	1
Ruppiaceae	1	2
Rutaceae	12	40
Salticidae	4	15
Santalaceae	3	63
Sapindaceae	8	113
Scincidae	25	212
Scolopacidae	8	15
Scolopendridae	3	6
Scrophulariaceae	40	455
Solanaceae	17	76
Sparassidae	2	14

Stemonitidaceae	2	3
Sternophoridae	1	1
Stylidiaceae	3	7
Tachyglossidae	1	8
Teloschistaceae	5	8
Thamnocephalidae	1	1
Theraphosidae	1	3
Theridiidae	1	11
Threskiornithidae	2	10
Thylacomyidae	1	2
Thymelaeaceae	4	12
Trichiaceae	1	1
Triopsidae	1	4
Trochanteridae	2	4
Turnicidae	1	1
Tytonidae	1	2
Urodacidae	3	3
Urticaceae	1	1
Varanidae	3	25
Verbenaceae	2	2
Verrucariaceae	4	8
Vespertilionidae	7	131
Violaceae	1	6
Zodariidae	1	1
Zosteropidae	1	25
Zygophyllaceae	8	15
<b>TOTAL</b>	<b>1250</b>	<b>10001</b>

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
<b>Acanthizidae</b>				
1.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
2.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
3.	24265 <i>Acanthiza uropygialis</i> (Chestnut-rumped Thornbill)			
4.	25528 <i>Aphelocephala leucopsis</i> (Southern Whiteface)			
5.	24266 <i>Aphelocephala leucopsis</i> subsp. <i>castaneiventris</i> (Southern Whiteface)			
6.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
7.	34001 <i>Hylacola cauta</i> subsp. <i>whitlocki</i> (Shy Groundwren)			
8.	24278 <i>Pyrrholaemus brunneus</i> (Redthroat)			
9.	30948 <i>Smicronis brevirostris</i> (Weebill)			
<b>Acarosporaceae</b>				
10.	27574 <i>Acarospora citrina</i>			
11.	27576 <i>Acarospora nodulosa</i>			
12.	28195 <i>Acarospora nodulosa</i> var. <i>reagens</i>			
<b>Accipitridae</b>				
13.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
14.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
15.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
16.	<i>Elanus axillaris</i>			
17.	25540 <i>Elanus caeruleus</i> (Black-shouldered Kite)			
18.	24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
19.	24295 <i>Haliastur sphenurus</i> (Whistling Kite)			
20.	47965 <i>Hieraaetus morphnoides</i> (Little Eagle)			
<b>Actinopodidae</b>				
21.	<i>Missulena occatoria</i>			
<b>Aegothelidae</b>				
22.	25544 <i>Aegotheles cristatus</i> (Australian Owlet-nightjar)			
<b>Agamidae</b>				
23.	25458 <i>Ctenophorus caudicinctus</i> (Ring-tailed Dragon)			
24.	24871 <i>Ctenophorus cristatus</i> (Bicycle Dragon)			
25.	24873 <i>Ctenophorus fordi</i> (Mallee Sand Dragon)			
26.	24874 <i>Ctenophorus isolepis</i> subsp. <i>citrinus</i> (Yellow Military Dragon)			
27.	24882 <i>Ctenophorus nuchalis</i> (Central Netted Dragon)			
28.	24886 <i>Ctenophorus reticulatus</i> (Western Netted Dragon)			
29.	24888 <i>Ctenophorus salinarum</i> (Salt Pan Dragon)			
30.	24889 <i>Ctenophorus scutulatus</i> (Lozenge-marked Dragon)			
31.	24904 <i>Moloch horridus</i> (Thorny Devil)			
32.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
33.	30814 <i>Tympanocryptis cephalus</i> (Pebble Dragon)			
34.	39408 <i>Tympanocryptis lineata</i> (Lined Earless Dragon)			
<b>Aizoaceae</b>				
35.	48513 <i>Aizoon pubescens</i>	Y		
36.	11681 <i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>			
37.	2807 <i>Gunningsia quadrifida</i> (Sturts Pigface)			
38.	2813 <i>Mesembryanthemum crystallinum</i> (Iceplant)	Y		
39.	2814 <i>Mesembryanthemum nodiflorum</i> (Slender Iceplant)	Y		
40.	2822 <i>Tetragonia eremaea</i>			
<b>Amaranthaceae</b>				
41.	2648 <i>Alternanthera denticulata</i> (Lesser Joyweed)			
42.	2652 <i>Alternanthera nodiflora</i> (Common Joyweed)			
43.	2671 <i>Amaranthus viridis</i> (Green Amaranth)	Y		
44.	2690 <i>Ptilotus aervoides</i>			
45.	2707 <i>Ptilotus carlsonii</i>			
46.	38463 <i>Ptilotus chortophytus</i>		P1	
47.	48602 <i>Ptilotus eremita</i>			
48.	2721 <i>Ptilotus exaltatus</i> (Tall Mulla Mulla)			
49.	2727 <i>Ptilotus gaudichaudii</i>			
50.	2729 <i>Ptilotus grandiflorus</i>			
51.	2730 <i>Ptilotus helichrysoides</i>			
52.	2732 <i>Ptilotus holosericeus</i>			
53.	2747 <i>Ptilotus obovatus</i> (Cotton Bush)			
54.	2751 <i>Ptilotus polystachyus</i> (Prince of Wales Feather)			
55.	2752 <i>Ptilotus procumbens</i>		P1	
56.	43203 <i>Surreya diandra</i>			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
<b>Anacardiaceae</b>				
57.	17056 <i>Schinus molle</i> var. <i>areira</i>	Y		
<b>Anatidae</b>				
58.	24312 <i>Anas gracilis</i> (Grey Teal)			
59.	24313 <i>Anas platyrhynchos</i> (Mallard)			
60.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
61.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
62.	24318 <i>Aythya australis</i> (Hardhead)			
63.	24319 <i>Biziura lobata</i> (Musk Duck)			
64.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
65.	24322 <i>Cygnus atratus</i> (Black Swan)			
66.	24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
67.	24329 <i>Stictonetta naevosa</i> (Freckled Duck)			
68.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
<b>Anhingidae</b>				
69.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
<b>Apiaceae</b>				
70.	6218 <i>Daucus glochidiatus</i> (Australian Carrot)			
<b>Apocynaceae</b>				
71.	6565 <i>Alyxia buxifolia</i> (Dysentery Bush)			
72.	14636 <i>Alyxia tetanifolia</i>		P3	
73.	6580 <i>Asclepias curassavica</i> (Redhead Cottonbush)	Y		
74.	12949 <i>Marsdenia australis</i>			
75.	20233 <i>Orbea variegata</i>	Y		Y
76.	48986 <i>Vincetoxicum lineare</i>			
<b>Araliaceae</b>				
77.	6279 <i>Trachymene ornata</i> (Spongefruit)			
<b>Araneidae</b>				
78.	<i>Argiope protensa</i>			
79.	<i>Argiope trifasciata</i>			
80.	<i>Austracantha minax</i>			
81.	<i>Backobourkia heroine</i>			
82.	<i>Celaenia excavata</i>			
83.	<i>Cyrtophora parnasia</i>			
84.	<i>Eriophora biapicata</i>			
85.	<i>Nephila edulis</i>			
<b>Arcyriaceae</b>				
86.	38964 <i>Arcyria cinerea</i>			
<b>Ardeidae</b>				
87.	41324 <i>Ardea modesta</i> (great egret, white egret)			
88.	24341 <i>Ardea pacifica</i> (White-necked Heron)			
89.	<i>Egretta novaehollandiae</i>			
<b>Artamidae</b>				
90.	25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)			
91.	24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)			
92.	24356 <i>Artamus personatus</i> (Masked Woodswallow)			
<b>Asparagaceae</b>				
93.	1505 <i>Agave americana</i> (Century Plant)	Y		
94.	1215 <i>Chamaexeros fimbriata</i>			
95.	1216 <i>Chamaexeros macranthera</i>			
96.	1338 <i>Thysanotus manglesianus</i> (Fringed Lily)			
97.	1343 <i>Thysanotus patersonii</i>			
98.	<i>Thysanotus</i> sp.			
<b>Asphodelaceae</b>				
99.	1366 <i>Bulbine semibarbata</i> (Leek Lily)			
<b>Asteraceae</b>				
100.	7817 <i>Actinobole uliginosum</i> (Flannel Cudweed)			
101.	7834 <i>Angianthus prostratus</i>		P3	
102.	7836 <i>Angianthus tomentosus</i> (Camel-grass)			
103.	7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold)	Y		
104.	7846 <i>Asteridea athrixioides</i>			
105.	7847 <i>Asteridea chaetopoda</i>			
106.	7871 <i>Brachyscome ciliaris</i>			
107.	7878 <i>Brachyscome iberidifolia</i>			

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108.	7880 <i>Brachyscome lineariloba</i>			
109.	7882 <i>Brachyscome perpusilla</i>			
110.	7903 <i>Calotis hispidula</i> (Bindy Eye)			
111.	7905 <i>Calotis multicaulis</i> (Many-stemmed Burr-daisy)			
112.	7911 <i>Carthamus lanatus</i> (Saffron Thistle)	Y		
113.	7916 <i>Centaurea melitensis</i> (Maltese Cockspur, Malta Thistle)	Y		
114.	7922 <i>Cephalipterum drummondii</i> (Pompom Head)			
115.	7924 <i>Ceratogyne obionoides</i> (Wingwort)			
116.	47074 <i>Chrysocephalum apiculatum</i> subsp. <i>norsemanense</i>		P3	
117.	13138 <i>Chrysocephalum puteale</i>			
118.	7935 <i>Cichorium intybus</i> (Chicory)	Y		
119.	7939 <i>Conyza bonariensis</i> (Flaxleaf Fleabane)	Y		
120.	20074 <i>Conyza sumatrensis</i>	Y		
121.	7943 <i>Cotula australis</i> (Common Cotula)			
122.	13353 <i>Craspedia haplorrhiza</i>			Y
123.	7949 <i>Cratystylis conocephala</i> (Greybush)			
124.	7950 <i>Cratystylis microphylla</i> (Small-leaved Grey Bush)			
125.	7951 <i>Cratystylis subspinescens</i> (Australian Sage, Spiny Grey Bush)			
126.	7964 <i>Elachanthus pusillus</i> (Elacanth)		P2	
127.	12739 <i>Erymophyllum ramosum</i>			
128.	14377 <i>Erymophyllum ramosum</i> subsp. <i>ramosum</i>			
129.	16311 <i>Gazania linearis</i>	Y		
130.	12780 <i>Gilberta tenuifolia</i>			
131.	7989 <i>Gnephosis brevifolia</i> (Short-leaved Gnephosis)			
132.	7998 <i>Gnephosis macrocephala</i>			
133.	8002 <i>Gnephosis tenuissima</i>			
134.	8008 <i>Helianthus annuus</i> (Sunflower, Common Sunflower)	Y		
135.	8045 <i>Helipterum craspedioides</i> (Yellow Billy Buttons)			
136.	12743 <i>Hyalosperma glutinosum</i>			
137.	15447 <i>Hyalosperma glutinosum</i> subsp. <i>glutinosum</i>			
138.	12756 <i>Hyalosperma zacchaeus</i>			
139.	8087 <i>Isoetopsis graminifolia</i> (Cushion Grass)			
140.	8094 <i>Kippistia suaedifolia</i>			
141.	29046 <i>Lactuca serriola</i> forma <i>serriola</i>	Y		
142.	13284 <i>Lawrencella rosea</i>			
143.	19237 <i>Leiocarpa websteri</i>			
144.	12628 <i>Lemooria burkittii</i>			
145.	8105 <i>Millotia myosotidifolia</i>			
146.	12631 <i>Millotia perpusilla</i>			
147.	8107 <i>Minuria cunninghamii</i> (Bush Minuria)			
148.	8108 <i>Minuria gardneri</i>			
149.	8110 <i>Minuria leptophylla</i> (Minnie Daisy)			
150.	29418 <i>Monoculus monstrosus</i>	Y		
151.	14186 <i>Myriocephalus pygmaeus</i>			
152.	48227 <i>Notisia intonsa</i>		P3	
153.	8134 <i>Olearia exiguiifolia</i> (Small-leaved Daisy Bush)			
154.	8136 <i>Olearia homolepis</i>			
155.	19023 <i>Olearia incana</i>			
156.	8140 <i>Olearia muelleri</i> (Goldfields Daisy)			
157.	8145 <i>Olearia pimeleoides</i> (Pimelea Daisybush, Burrobunga)			
158.	8149 <i>Olearia rudis</i> (Rough Daisybush)			
159.	<i>Olearia</i> sp.			
160.	44401 <i>Olearia</i> sp. <i>Eremicola</i> (Diels & Pritzel s.n. PERTH 00449628)			
161.	8152 <i>Olearia subspicata</i> (Spiked Daisy Bush)			
162.	19828 <i>Oligocarpus calendulaceus</i>	Y		
163.	20661 <i>Oncosiphon suffruticosum</i> (Calomba Daisy)	Y		
164.	12642 <i>Ozothamnus cassiope</i>			
165.	45238 <i>Podolepis aristata</i> subsp. <i>affinis</i>			
166.	8173 <i>Podolepis capillaris</i> (Wiry Podolepis)			
167.	8177 <i>Podolepis lessonii</i>			
168.	8180 <i>Podolepis rugata</i> (Pleated Podolepis)			
169.	12731 <i>Podotheca wilsonii</i>			
170.	8187 <i>Pogonolepis muelleriana</i>			
171.	8188 <i>Pogonolepis stricta</i>			
172.	13306 <i>Rhodanthe battii</i>			
173.	13308 <i>Rhodanthe charsleyae</i>			
174.	13241 <i>Rhodanthe chlorocephala</i> subsp. <i>rosea</i>			
175.	13242 <i>Rhodanthe chlorocephala</i> subsp. <i>splendida</i>			
176.	13301 <i>Rhodanthe floribunda</i>			
177.	13293 <i>Rhodanthe haigii</i>			

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178.	13294 <i>Rhodanthe laevis</i>			
179.	13234 <i>Rhodanthe manglesii</i>			
180.	13249 <i>Rhodanthe oppositifolia</i> subsp. <i>oppositifolia</i>			
181.	13252 <i>Rhodanthe pygmaea</i>			
182.	13253 <i>Rhodanthe rubella</i>			
183.	13254 <i>Rhodanthe stricta</i>			
184.	13237 <i>Rhodanthe uniflora</i>		P1	
185.	8200 <i>Schoenia cassiniana</i> ( <i>Schoenia</i> )			
186.	13287 <i>Schoenia filifolia</i> subsp. <i>filifolia</i>			
187.	20722 <i>Senecio dolichocephalus</i>			
188.	8207 <i>Senecio glossanthus</i> ( <i>Slender Groundsel</i> )			
189.	25881 <i>Senecio lacustrinus</i>			
190.	8213 <i>Senecio magnificus</i> ( <i>Showy Groundsel</i> )			
191.	20161 <i>Senecio pinnatifolius</i>			
192.	8231 <i>Sonchus oleraceus</i> ( <i>Common Sowthistle</i> )	Y		
193.	8238 <i>Streptoglossa liatroides</i>			
194.	25902 <i>Symphotrichum squamatum</i> ( <i>Bushy Starwort</i> )	Y		
195.	12652 <i>Trichanthodium skirrophorum</i>			
196.	8253 <i>Triptilodiscus pygmaeus</i>			
197.	11387 <i>Vittadinia cervicularis</i> var. <i>cervicularis</i>			
198.	11788 <i>Vittadinia dissecta</i> var. <i>hirta</i>			
199.	8268 <i>Vittadinia humerata</i>			
200.	8273 <i>Vittadinia sulcata</i>			
201.	13331 <i>Waitzia acuminata</i> var. <i>acuminata</i>			
202.	46093 <i>Waitzia fitzgiibbonii</i>			
203.	13328 <i>Waitzia nitida</i>			
204.	8287 <i>Xanthium spinosum</i> ( <i>Bathurst Burr, Common Cockleburr, Spiny Cockleburr, Spiny Clotburr</i> )	Y		
<b>Barychelidae</b>				
205.	<i>Idiommata blackwalli</i>			
<b>Boidae</b>				
206.	25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> ( <i>Carpet Python</i> )			
<b>Boraginaceae</b>				
207.	6675 <i>Buglossoides arvensis</i> ( <i>Corn Gromwell</i> )	Y		
208.	6681 <i>Echium plantagineum</i> ( <i>Paterson's Curse</i> )	Y		
209.	6684 <i>Halgania andromedifolia</i>			
210.	29840 <i>Halgania cyanea</i> var. <i>Allambi Strn</i> ( <i>B.W. Strong 676</i> )			
211.	31117 <i>Halgania cyanea</i> var. <i>Charleville</i> ( <i>R.W. Purdie +111</i> )			
212.	6691 <i>Halgania integerrima</i>			
213.	6710 <i>Heliotropium europaeum</i> ( <i>Common Heliotrope</i> )	Y		
214.	6723 <i>Omphalolappula concava</i> ( <i>Burr Stickseed</i> )			
215.	6727 <i>Trichodesma zeylanicum</i> ( <i>Camel Bush, Kumbalin</i> )			
<b>Bothriuridae</b>				
216.	<i>Cercophonius michaelseni</i>			
<b>Bovidae</b>				
217.	24251 <i>Bos taurus</i> ( <i>European Cattle</i> )	Y		
218.	24253 <i>Capra hircus</i> ( <i>Goat</i> )	Y		
219.	34016 <i>Ovis aries</i> ( <i>Sheep</i> )			
<b>Branchipodidae</b>				
220.	<i>Parartemia</i> sp.			
<b>Brassicaceae</b>				
221.	2990 <i>Alyssum linifolium</i> ( <i>Flax-leaf Alyssum</i> )	Y		
222.	31876 <i>Arabidella chrysodema</i>			
223.	2992 <i>Arabidella trisecta</i>			
224.	3000 <i>Brassica tournefortii</i> ( <i>Mediterranean Turnip</i> )	Y		
225.	3004 <i>Capsella bursa-pastoris</i> ( <i>Shepherd's Purse</i> )	Y		
226.	3008 <i>Carrichtera annua</i> ( <i>Ward's Weed</i> )	Y		
227.	3026 <i>Lepidium fasciculatum</i> ( <i>Bundled Peppercross</i> )		P3	
228.	3031 <i>Lepidium merrallii</i>		P2	
229.	3033 <i>Lepidium oxytrichum</i>			
230.	3034 <i>Lepidium papillosum</i> ( <i>Warty Peppercross</i> )			Y
231.	3059 <i>Phlegmatospermum eremaeum</i>		P3	
232.	3070 <i>Sisymbrium irio</i> ( <i>London Rocket</i> )	Y		
233.	3072 <i>Sisymbrium orientale</i> ( <i>Indian Hedge Mustard</i> )	Y		
234.	3076 <i>Stenopetalum filifolium</i>			
235.	3077 <i>Stenopetalum lineare</i> ( <i>Narrow Thread Petal</i> )			
236.	30212 <i>Stenopetalum lineare</i> var. <i>lineare</i>			

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237.	3079 <i>Stenopetalum pedicellare</i>			
<b>Bryaceae</b>				
238.	32331 <i>Bryum lanatum</i>			
239.	44608 <i>Rosulabryum billardieri</i>			
240.	32427 <i>Rosulabryum capillare</i>			
<b>Burramyidae</b>				
241.	24086 <i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)			
<b>Buthidae</b>				
242.	<i>Isometroides vescus</i>			
<b>Cacatuidae</b>				
243.	<i>Eolophus roseicapillus</i>			
<b>Cactaceae</b>				
244.	20759 <i>Cylindropuntia fulgida</i> var. <i>mamillata</i>	Y		
245.	33077 <i>Cylindropuntia imbricata</i>	Y		
246.	45513 <i>Cylindropuntia kleiniae</i>	Y		Y
247.	20281 <i>Cylindropuntia tunicata</i>	Y		Y
248.	31799 <i>Opuntia elata</i>	Y		
249.	44779 <i>Opuntia ficus-indica</i>	Y		
<b>Campanulaceae</b>				
250.	7397 <i>Isotoma petraea</i> (Rock Isotome, Tundiwari)			
251.	7386 <i>Wahlenbergia gracilentia</i> (Annual Bluebell)			
<b>Campephagidae</b>				
252.	24361 <i>Coracina maxima</i> (Ground Cuckoo-shrike)			
253.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
254.	24367 <i>Lalage tricolor</i> (White-winged Triller)			
<b>Caprimulgidae</b>				
255.	24368 <i>Eurostopodus argus</i> (Spotted Nightjar)			
<b>Carphodactylidae</b>				
256.	24971 <i>Nephrurus vertebralis</i>			
<b>Caryophyllaceae</b>				
257.	2914 <i>Spergularia diandra</i> (Lesser Sand Spurry)	Y		
258.	8900 <i>Spergularia marina</i>			
<b>Casuariidae</b>				
259.	24470 <i>Dromaius novaehollandiae</i> (Emu)			
<b>Casuarinaceae</b>				
260.	13904 <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i>			
261.	1721 <i>Allocasuarina campestris</i>			
262.	1722 <i>Allocasuarina corniculata</i>			
263.	13906 <i>Allocasuarina eriochlamys</i> subsp. <i>eriochlamys</i>			
264.	13897 <i>Allocasuarina eriochlamys</i> subsp. <i>grossa</i>		P3	
265.	1730 <i>Allocasuarina helmsii</i>			
266.	1742 <i>Casuarina obesa</i> (Swamp Sheoak, Kuli)			
267.	12658 <i>Casuarina pauper</i> (Black Oak)			
<b>Celastraceae</b>				
268.	4734 <i>Stackhousia muricata</i>			
269.	4737 <i>Tripterococcus brunonis</i> (Winged Stackhousia)			
<b>Charadriidae</b>				
270.	24377 <i>Charadrius ruficapillus</i> (Red-capped Plover)			
271.	47937 <i>Elseya melanops</i> (Black-fronted Dotterel)			
272.	24379 <i>Erythronyx cinctus</i> (Red-kneed Dotterel)			
273.	48135 <i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)		P4	
274.	24386 <i>Vanellus tricolor</i> (Banded Lapwing)			
<b>Cheluidae</b>				
275.	43380 <i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
<b>Chenopodiaceae</b>				
276.	11435 <i>Atriplex acutibractea</i> subsp. <i>acutibractea</i>			
277.	11489 <i>Atriplex acutibractea</i> subsp. <i>karoniensis</i>			
278.	2450 <i>Atriplex amnicola</i> (Swamp Saltbush)			
279.	2453 <i>Atriplex codonocarpa</i> (Flat-topped Saltbush)			
280.	2455 <i>Atriplex eardleyae</i>			
281.	2459 <i>Atriplex holocarpa</i> (Pop Saltbush)			
282.	12042 <i>Atriplex lindleyi</i> subsp. <i>inflata</i>			

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283.	2469 <i>Atriplex nummularia</i> (Old Man Saltbush)			
284.	11516 <i>Atriplex nummularia</i> subsp. <i>spathulata</i> (Old Man Saltbush)			
285.	2472 <i>Atriplex pumilio</i>			
286.	11791 <i>Atriplex quadrivalvata</i> var. <i>quadrivalvata</i>			
287.	2475 <i>Atriplex semibaccata</i> (Berry Saltbush)			
288.	2478 <i>Atriplex spongiosa</i> (Pop Saltbush)			
289.	2479 <i>Atriplex stipitata</i> (Mallee Saltbush)			
290.	2480 <i>Atriplex suberecta</i>			
291.	2481 <i>Atriplex vesicaria</i> (Bladder Saltbush)			
292.	2483 <i>Chenopodium album</i> (Fat Hen)	Y		
293.	2487 <i>Chenopodium curvispicatum</i>			
294.	2494 <i>Chenopodium murale</i> (Nettle-leaf Goosefoot)	Y		
295.	2498 <i>Didymanthus roei</i>			
296.	2499 <i>Dissocarpus paradoxus</i> (Curious Saltbush)			
297.	33501 <i>Dysphania cristata</i> (Crested Goosefoot)			
298.	2502 <i>Dysphania kalpari</i> (Rat's Tail, Kalpari)			
299.	33480 <i>Dysphania pumilio</i> (Clammy Goosefoot)			
300.	11704 <i>Einadia nutans</i> subsp. <i>eremaea</i> (Climbing Saltbush)			
301.	2510 <i>Enchylaena lanata</i>			
302.	2511 <i>Enchylaena tomentosa</i> (Barrier Saltbush)			
303.	12064 <i>Enchylaena tomentosa</i> var. <i>tomentosa</i> (Barrier Saltbush)			
304.	2514 <i>Eriochiton sclerolaenoides</i> (Woolly Bindii)			
305.	2533 <i>Maireana amoena</i>			
306.	2535 <i>Maireana appressa</i>			
307.	2536 <i>Maireana atkinsiana</i> (Bronze Bluebush)			
308.	2537 <i>Maireana brevifolia</i> (Small Leaf Bluebush)			
309.	2538 <i>Maireana carnosia</i> (Cottony Bluebush)			
310.	2542 <i>Maireana erioclada</i>			
311.	2543 <i>Maireana eriosphaera</i>			
312.	2544 <i>Maireana georgei</i> (Satiny Bluebush)			
313.	2545 <i>Maireana glomerifolia</i> (Ball Leaf Bluebush)			
314.	2554 <i>Maireana pentagona</i> (Hairy Bluebush)			
315.	2555 <i>Maireana pentatropis</i>			
316.	2560 <i>Maireana pyramidata</i> (Sago Bush)			
317.	2561 <i>Maireana radiata</i>			
318.	2563 <i>Maireana sedifolia</i> (Pearl Bluebush, Myall)			
319.	2565 <i>Maireana suaedifolia</i>			
320.	2567 <i>Maireana tomentosa</i> (Felt Bluebush)			
321.	11662 <i>Maireana tomentosa</i> subsp. <i>tomentosa</i>			
322.	2568 <i>Maireana trichoptera</i> (Downy Bluebush)			
323.	2569 <i>Maireana triptera</i> (Threewinged Bluebush)			
324.	2570 <i>Maireana turbinata</i>			
325.	2581 <i>Rhagodia drummondii</i>			
326.	2582 <i>Rhagodia eremaea</i> (Thorny Saltbush)			
327.	2587 <i>Roycea divaricata</i>			
328.	30434 <i>Salsola australis</i>			
329.	2606 <i>Sclerolaena cuneata</i> (Yellow Bindii)			
330.	2609 <i>Sclerolaena diacantha</i> (Grey Copperburr)			
331.	2610 <i>Sclerolaena drummondii</i>			
332.	2612 <i>Sclerolaena eurotioides</i> (Fluffy Bindii)			
333.	2615 <i>Sclerolaena fusiformis</i>			
334.	8877 <i>Sclerolaena gardneri</i>			
335.	2625 <i>Sclerolaena obliquispis</i> (Limestone Bindii)			
336.	2626 <i>Sclerolaena parviflora</i> (Small-flower Saltbush)			
337.	31719 <i>Tecticornia chartacea</i>			
338.	31492 <i>Tecticornia disarticulata</i>			
339.	46513 <i>Tecticornia doliiformis</i>			
340.	33319 <i>Tecticornia indica</i> subsp. <i>bidens</i>			
341.	33299 <i>Tecticornia pergranulata</i> subsp. <i>elongata</i>			
342.	33297 <i>Tecticornia pergranulata</i> subsp. <i>pergranulata</i> (Blackseed Samphire)			
343.	31618 <i>Tecticornia pruinosa</i>			
344.	33218 <i>Tecticornia pterygosperma</i> subsp. <i>pterygosperma</i>			
345.	31853 <i>Tecticornia</i> sp. <i>Burnerbinmah</i> (D. Edinger et al. 101)			
346.	33216 <i>Tecticornia</i> sp. <i>Dennys Crossing</i> (K.A. Shepherd & J. English KS 552)			
347.	31494 <i>Tecticornia triandra</i> (Desert Glasswort)			
348.	31717 <i>Tecticornia undulata</i>			

#### Cladoniaceae

349.	48176 <i>Cladia beaugholei</i>			
350.	48177 <i>Cladia muelleri</i>			
351.	28208 <i>Cladonia cervicornis</i> subsp. <i>verticillata</i>			



Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
<b>Climacteridae</b>				
352.	25581 <i>Climacteris affinis</i> (White-browed Treecreeper)			
<b>Colchicaceae</b>				
353.	1403 <i>Wurmbea tenella</i> (Eight Nancy)			
<b>Collemataceae</b>				
354.	27703 <i>Collema coccophorum</i>			
<b>Columbidae</b>				
355.	24399 <i>Columba livia</i> (Domestic Pigeon)	Y		
356.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
357.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
358.	25590 <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
<b>Convolvulaceae</b>				
359.	6612 <i>Convolvulus clementii</i>			
360.	6614 <i>Convolvulus remotus</i>			
361.	6621 <i>Ipomoea calobra</i> (Weir Vine)			
<b>Corvidae</b>				
362.	24416 <i>Corvus bennetti</i> (Little Crow)			
363.	25592 <i>Corvus coronoides</i> (Australian Raven)			
364.	25593 <i>Corvus orru</i> (Torresian Crow)			
<b>Cracticidae</b>				
365.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
366.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
367.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
368.	25597 <i>Strepera versicolor</i> (Grey Currawong)			
<b>Crassulaceae</b>				
369.	11709 <i>Crassula colorata</i> var. <i>acuminata</i>			
370.	11563 <i>Crassula colorata</i> var. <i>colorata</i>			
371.	20268 <i>Crassula tetramera</i>			
<b>Cuculidae</b>				
372.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
373.	24431 <i>Chrysococcyx basalis</i> (Horsfield's Bronze Cuckoo)			
374.	24434 <i>Chrysococcyx osculans</i> (Black-eared Cuckoo)			
<b>Cupressaceae</b>				
375.	8466 <i>Callitris columellaris</i> (White Cypress Pine)			
376.	96 <i>Callitris preissii</i> (Rottnest Island Pine, Maro)			
<b>Cyperaceae</b>				
377.	765 <i>Chrysitrix distigmata</i>			
378.	903 <i>Gahnia deusta</i>			
379.	14539 <i>Isolepis australiensis</i>		P3	
380.	911 <i>Isolepis congrua</i>			
381.	31760 <i>Lepidosperma diurnum</i>			
382.	<i>Lepidosperma</i> sp.			
383.	30438 <i>Lepidosperma</i> sp. Parker Range (N. Gibson & M. Lyons 2094)		P1	
384.	954 <i>Mesomelaena preissii</i>			
385.	1015 <i>Schoenus subaphyllus</i>			
<b>Cyprinidae</b>				
386.	<i>Carassius auratus</i>			
<b>Cyzicidae</b>				
387.	<i>Ozestheria packardii</i>			
<b>Daphniidae</b>				
388.	<i>Daphnia carinata</i>			
<b>Dasyuridae</b>				
389.	24087 <i>Antechinomys laniger</i> (Kultarr)			
390.	24094 <i>Ningau ridei</i> (Wongai Ningau)			
391.	24096 <i>Ningau yvonneae</i> (Southern Ningau)			
392.	24108 <i>Sminthopsis crassicaudata</i> (Fat-tailed Dunnart)			
393.	24109 <i>Sminthopsis dolichura</i> (Little long-tailed Dunnart)			
394.	24111 <i>Sminthopsis gilberti</i> (Gilbert's Dunnart)			
395.	24117 <i>Sminthopsis ooldea</i> (Ooldea Dunnart)			
<b>Desidae</b>				
396.	<i>Baiami tegenarioides</i>			
397.	<i>Corasoides australis</i>			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
<b>Dicaeidae</b>				
398.	25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird)			
<b>Dicruridae</b>				
399.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
400.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
401.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
<b>Didiereaceae</b>				
402.	20374 <i>Portulacaria afra</i>	Y		
<b>Diplodactylidae</b>				
403.	25469 <i>Diplodactylus granariensis</i>			
404.	24929 <i>Diplodactylus granariensis</i> subsp. <i>granariensis</i>			
405.	24940 <i>Diplodactylus pulcher</i>			
406.	42408 <i>Hesperoedura reticulata</i>			
407.	30935 <i>Lucasium maini</i>			
408.	24982 <i>Rhynchoedura ornata</i> (Western Beaked Gecko)			
409.	24923 <i>Strophurus assimilis</i> (Goldfields Spiny-tailed Gecko)			
410.	24927 <i>Strophurus elderi</i>			
<b>Droseraceae</b>				
411.	49090 <i>Drosera</i> sp. <i>Branched styles</i> (S.C. Coffey 193)			
<b>Dytiscidae</b>				
412.	<i>Allodessus bistrigatus</i>			
<b>Echinosteliaceae</b>				
413.	39027 <i>Echinostelium apitectum</i>			
<b>Elaeocarpaceae</b>				
414.	4530 <i>Tetratheca efoliata</i>			
<b>Elapidae</b>				
415.	25243 <i>Acanthophis pyrrhus</i> (Desert Death Adder)			
416.	42380 <i>Brachyurophis fasciolatus</i> subsp. <i>fasciolatus</i> (Narrow-banded Shovel-nosed Snake)			
417.	42381 <i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
418.	25468 <i>Demansia psammophis</i> (Yellow-faced Whipsnake)			
419.	25247 <i>Demansia psammophis</i> subsp. <i>psammophis</i> (Yellow-faced Whipsnake)			
420.	25301 <i>Furina ornata</i> (Moon Snake)			
421.	25248 <i>Neelaps bimaculatus</i> (Black-naped Snake)			
422.	25253 <i>Parasuta gouldii</i>			
423.	25254 <i>Parasuta monachus</i>			
424.	25261 <i>Pseudechis australis</i> (Mulga Snake)			
425.	42416 <i>Pseudonaja mengdeni</i> (Western Brown Snake)			
426.	25263 <i>Pseudonaja modesta</i> (Ringed Brown Snake)			
427.	25264 <i>Pseudonaja nuchalis</i> (Gwardar, Northern Brown Snake)			
428.	25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
429.	<i>Simoselaps semifasciata</i>			Y
430.	25269 <i>Suta fasciata</i> (Rosen's Snake)			
<b>Emballonuridae</b>				
431.	24176 <i>Taphozous hillii</i> (Hill's Sheath-tail-bat)			
<b>Ericaceae</b>				
432.	6336 <i>Astroloma serratifolium</i> (Kondrung)			
433.	6401 <i>Leucopogon hamulosus</i>			
434.	16049 <i>Leucopogon</i> sp. <i>Clyde Hill</i> (M.A. Burgman 1207)			
435.	33018 <i>Styphelia</i> sp. <i>Bullfinch</i> (M. Hislop 3574)		P3	
<b>Estrilidae</b>				
436.	30870 <i>Taeniopygia guttata</i> (Zebra Finch)			
<b>Euphorbiaceae</b>				
437.	4598 <i>Beyeria lechenaultii</i> (Pale Turpentine Bush)			
438.	34276 <i>Beyeria sulcata</i> var. <i>brevipes</i>			
439.	34257 <i>Beyeria sulcata</i> var. <i>sulcata</i>			
440.	42868 <i>Euphorbia philochalix</i>			
441.	42869 <i>Euphorbia porcata</i>			
442.	19587 <i>Monotaxis grandiflora</i> var. <i>obtusifolia</i>			
443.	4664 <i>Monotaxis luteiflora</i>			
444.	4701 <i>Ricinocarpos stylosus</i>			
445.	4704 <i>Ricinocarpos velutinus</i>			
<b>Fabaceae</b>				
446.	3200 <i>Acacia acuminata</i> (Jam, Mangard)			

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447.	14584 <i>Acacia ancistrophylla</i> var. <i>ancistrophylla</i>			
448.	3216 <i>Acacia andrewsii</i>			
449.	3236 <i>Acacia beauverdiana</i> (Pukkati)			
450.	3248 <i>Acacia burkittii</i> (Sandhill Wattle)			
451.	3249 <i>Acacia calcarata</i>			
452.	3251 <i>Acacia camptoclada</i>			
453.	3256 <i>Acacia chrysellia</i>			
454.	44469 <i>Acacia coatesii</i>		P1	Y
455.	44514 <i>Acacia collegialis</i>			
456.	3264 <i>Acacia colletioides</i> (Wait-a-while)			
457.	3269 <i>Acacia coolgardiensis</i> (Spinifex Wattle)			
458.	14623 <i>Acacia crenulata</i>		P3	
459.	16169 <i>Acacia deficiens</i>			
460.	15281 <i>Acacia desertorum</i> var. <i>desertorum</i>			
461.	3315 <i>Acacia duriuscula</i>			
462.	32118 <i>Acacia effusifolia</i>			
463.	3318 <i>Acacia enervia</i>			
464.	12257 <i>Acacia enervia</i> subsp. <i>explicata</i>			
465.	16020 <i>Acacia eremophila</i> var. <i>eremophila</i>			
466.	3324 <i>Acacia erinacea</i>			
467.	15282 <i>Acacia gibbosa</i>			
468.	3366 <i>Acacia hemiteles</i>			
469.	3378 <i>Acacia inaequiloba</i>			
470.	16164 <i>Acacia inceana</i> subsp. <i>inceana</i>			
471.	3393 <i>Acacia jennerae</i>			
472.	3394 <i>Acacia jensenii</i>			
473.	3395 <i>Acacia jibberdingensis</i>			
474.	14610 <i>Acacia kalgoorliensis</i>			
475.	3408 <i>Acacia lasiocalyx</i> (Silver Wattle, Wilyurwur)			
476.	3416 <i>Acacia leptopetala</i>			
477.	3419 <i>Acacia ligulata</i> (Umbrella Bush, Watarka)			
478.	3426 <i>Acacia longispinea</i>			
479.	13503 <i>Acacia masliniana</i>			
480.	3440 <i>Acacia merrallii</i>			
481.	3451 <i>Acacia multispicata</i>			
482.	3452 <i>Acacia murrayana</i> (Sandplain Wattle)			
483.	3463 <i>Acacia nyssophylla</i>			
484.	3478 <i>Acacia pachypoda</i>			
485.	3495 <i>Acacia prainii</i> (Prain's Wattle)			
486.	3504 <i>Acacia pycnantha</i> (Golden Wattle)	Y		
487.	3512 <i>Acacia rendlei</i>			
488.	3513 <i>Acacia resinimarginea</i>			
489.	3514 <i>Acacia resinistipulea</i>			
490.	11765 <i>Acacia sclerophylla</i> var. <i>teretiuscula</i>		P1	
491.	13078 <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>			
492.	3539 <i>Acacia sericocarpa</i>			
493.	<i>Acacia</i> sp.			
494.	13070 <i>Acacia synchronicia</i>			
495.	3577 <i>Acacia tetragonophylla</i> (Kurara, Wakalpuka)			
496.	3600 <i>Acacia websteri</i>		P1	
497.	16157 <i>Acacia xerophila</i> var. <i>brevior</i>			
498.	15292 <i>Acacia yorkrakinensis</i> subsp. <i>acrita</i>			
499.	3682 <i>Alhagi maurorum</i>	Y		Y
500.	18427 <i>Bossiaea cucullata</i>			
501.	17417 <i>Cullen discolor</i>			
502.	17118 <i>Cullen leucanthum</i>			
503.	8977 <i>Daviesia aphylla</i>			
504.	3813 <i>Daviesia grahamii</i>			
505.	3823 <i>Daviesia nematophylla</i>			
506.	3829 <i>Daviesia pachyloma</i>			
507.	19854 <i>Dillwynia</i> sp. <i>Coolgardie</i> (V.E. Sands 637.3.1)			
508.	48860 <i>Erythrostemon gilliesii</i>	Y		
509.	11034 <i>Gastrolobium graniticum</i>		T	
510.	3943 <i>Glycyrrhiza acanthocarpa</i> (Native Liquorice)			
511.	29285 <i>Gompholobium cinereum</i>		P3	
512.	10777 <i>Gompholobium gompholobioides</i>			
513.	3963 <i>Hovea acanthoclada</i> (Thorny Hovea)			
514.	14779 <i>Jacksonia arida</i>			
515.	4043 <i>Kennedia prorepens</i>			
516.	4056 <i>Leptosema daviesioides</i>			

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517.	4061 <i>Lotus cruentus</i> (Redflower Lotus)			
518.	4074 <i>Medicago laciniata</i> (Cutleaf Medic)	Y		
519.	4077 <i>Medicago minima</i> (Small Burr Medic)	Y		
520.	4079 <i>Medicago polymorpha</i> (Burr Medic)	Y		
521.	4089 <i>Mirbelia depressa</i>			
522.	4094 <i>Mirbelia microphylla</i>			
523.	4097 <i>Mirbelia ramulosa</i>			
524.	4099 <i>Mirbelia seorsifolia</i>			
525.	3674 <i>Petalostylis cassioides</i>			
526.	17645 <i>Senna artemisioides</i>			
527.	12276 <i>Senna artemisioides</i> subsp. <i>filifolia</i>			
528.	17558 <i>Senna artemisioides</i> subsp. <i>x artemisioides</i>			
529.	18430 <i>Senna cardiosperma</i>			
530.	16378 <i>Senna pleurocarpa</i>			
531.	12315 <i>Senna pleurocarpa</i> var. <i>angustifolia</i>			
532.	12314 <i>Senna pleurocarpa</i> var. <i>pleurocarpa</i>			
533.	14579 <i>Senna</i> sp. <i>Austin</i> (A. Strid 20210)			
534.	18446 <i>Senna stowardii</i>			
535.	12355 <i>Swainsona affinis</i>			
536.	4217 <i>Swainsona beasleyana</i>			
537.	4220 <i>Swainsona canescens</i> (Grey Swainsona)			
538.	4221 <i>Swainsona colutooides</i> (Bladder Vetch)			
539.	4229 <i>Swainsona gracilis</i>			
540.	13590 <i>Swainsona halophila</i>			
541.	4230 <i>Swainsona incei</i>			
542.	4231 <i>Swainsona kingii</i>			
543.	4233 <i>Swainsona leeana</i>			
544.	4237 <i>Swainsona oliveri</i>			
545.	4238 <i>Swainsona oroboides</i> (Variable Swainsona)			
546.	13581 <i>Swainsona paradoxa</i>			
547.	12357 <i>Swainsona purpurea</i>			
548.	4243 <i>Swainsona rostellata</i>			
549.	35841 <i>Templetonia incrassata</i>			
550.	17261 <i>Vicia monantha</i> subsp. <i>triflora</i>	Y		
<b>Falconidae</b>				
551.	25621 <i>Falco berigora</i> (Brown Falcon)			
552.	24471 <i>Falco berigora</i> subsp. <i>berigora</i> (Brown Falcon)			
553.	25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
554.	25623 <i>Falco longipennis</i> (Australian Hobby)			
<b>Felidae</b>				
555.	24041 <i>Felis catus</i> (Cat)	Y		
<b>Fissidentaceae</b>				
556.	32367 <i>Fissidens megalotis</i>			
557.	<i>Fissidens oblongifolius</i>			
<b>Frankeniaceae</b>				
558.	5191 <i>Frankenia cinerea</i>			
559.	5197 <i>Frankenia desertorum</i>			
560.	5202 <i>Frankenia glomerata</i> (Cluster Head Frankenia)		P4	
561.	5204 <i>Frankenia interioris</i>			
562.	11592 <i>Frankenia interioris</i> var. <i>interioris</i>			
563.	5209 <i>Frankenia pauciflora</i> (Seaheath)			
564.	14297 <i>Frankenia pauciflora</i> var. <i>pauciflora</i>			
565.	5212 <i>Frankenia setosa</i> (Bristly Frankenia)			
566.	5213 <i>Frankenia tetrapetala</i> (Four Petaled Frankenia)			
<b>Geastraceae</b>				
567.	<i>Geastrum</i> sp.			
<b>Gekkonidae</b>				
568.	24957 <i>Gehyra purpurascens</i>			
569.	24959 <i>Gehyra variegata</i>			
570.	25232 <i>Hemidactylus frenatus</i> (Asian House Gecko)	Y		
571.	24961 <i>Heteronotia binoei</i> (Bynoe's Gecko)			
572.	24983 <i>Underwoodisaurus milii</i> (Barking Gecko)			
<b>Geraniaceae</b>				
573.	4331 <i>Erodium aureum</i>	Y		
574.	4332 <i>Erodium botrys</i> (Long Storksbill)	Y		
575.	4333 <i>Erodium cicutarium</i> (Common Storksbill)	Y		
576.	4334 <i>Erodium crinitum</i> (Corkscrew)			

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577.	4335 <i>Erodium cygnorum</i> (Blue Heronsbill)			
<b>Gnaphosidae</b>				
578.	<i>Hemicloea sublimbata</i>			
<b>Goodeniaceae</b>				
579.	7413 <i>Brunonia australis</i> (Native Cornflower)			
580.	19069 <i>Brunonia</i> sp. Goldfields (K.R. Newbey 6044)			
581.	7419 <i>Coopermookia strophiolata</i>			
582.	7438 <i>Dampiera eriocephala</i> (Woolly-headed Dampiera)			
583.	13155 <i>Dampiera latealata</i>			
584.	7451 <i>Dampiera lavandulacea</i>			
585.	7456 <i>Dampiera luteiflora</i> (Yellow Dampiera)			
586.	7463 <i>Dampiera plumosa</i>		P1	
587.	7477 <i>Dampiera stenostachya</i> (Narrow-spiked Dampiera)			
588.	7480 <i>Dampiera tenuicaulis</i> (Slender-stemmed Dampiera)			
589.	13158 <i>Dampiera tenuicaulis</i> var. <i>curvula</i>			
590.	13159 <i>Dampiera tenuicaulis</i> var. <i>tenuicaulis</i>			
591.	7499 <i>Goodenia concinna</i> (Elegant Goodenia)			
592.	7504 <i>Goodenia dyeri</i>			
593.	7506 <i>Goodenia elderi</i>			
594.	7514 <i>Goodenia havilandii</i>			
595.	12523 <i>Goodenia helmsii</i>			
596.	7527 <i>Goodenia mimuloides</i>			
597.	7531 <i>Goodenia occidentalis</i>			
598.	7541 <i>Goodenia pusilliflora</i> (Smallflower Goodenia)			
599.	31837 <i>Goodenia salina</i>		P2	
600.	7565 <i>Goodenia xanthosperma</i> (Yellow-seeded Goodenia)			
601.	7569 <i>Lechenaultia brevifolia</i>			
602.	7644 <i>Scaevola spinescens</i> (Currant Bush, Maroon)			
603.	7656 <i>Velleia cynopotamica</i>			
604.	7658 <i>Velleia discophora</i> (Cabbage Poison)			
605.	7664 <i>Velleia rosea</i> (Pink Velleia)			
606.	38061 <i>Verreauxia dyeri</i> (Hairy Verreauxia)			
<b>Graphidaceae</b>				
607.	32976 <i>Diploschistes elixii</i>			
608.	27720 <i>Diploschistes hensseniae</i>			
609.	27723 <i>Diploschistes scruposus</i>			
610.	27725 <i>Diploschistes thunbergianus</i>			
611.	44221 <i>Xalocoa ocellata</i>			
<b>Grimmiaceae</b>				
612.	32386 <i>Grimmia laevigata</i>			
<b>Gyrostemonaceae</b>				
613.	2778 <i>Codonocarpus cotinifolius</i> (Native Poplar, Kundurangu)			
614.	2783 <i>Gyrostemon racemiger</i>			
<b>Haemodoraceae</b>				
615.	1439 <i>Conostylis lepidospermoides</i> (Sedge Conostylis)		T	
<b>Halcyonidae</b>				
616.	42351 <i>Todiramphus pyrrhopygius</i> (Red-backed Kingfisher)			
617.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
<b>Haloragaceae</b>				
618.	33620 <i>Glischrocaryon angustifolium</i>			
619.	6143 <i>Glischrocaryon aureum</i> (Common Popflower)			
620.	6144 <i>Glischrocaryon flavescens</i>			
621.	11801 <i>Gonocarpus confertifolius</i> var. <i>helmsii</i>			
622.	20669 <i>Haloragis maierae</i>			
623.	6180 <i>Haloragis trigonocarpa</i>			
<b>Hersiliidae</b>				
624.	<i>Tamopsis circumvidens</i>			
<b>Hirundinidae</b>				
625.	47909 <i>Cheramoeca leucosterna</i> (White-backed Swallow)			
626.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
627.	48060 <i>Petrochelidon ariel</i> (Fairy Martin)			
628.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
<b>Hydnaceae</b>				
629.	38794 <i>Hydnum repandum</i>			

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<b>Hydrophilidae</b>				
630.	<i>Berosus nutans</i>			
631.	<i>Enochrus elongatulus</i>			
<b>Hylidae</b>				
632.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
<b>Icmadophilaceae</b>				
633.	28060 <i>Siphula coriacea</i>			
<b>Idiopidae</b>				
634.	<i>Anidiops villosus</i>			
<b>Juncaceae</b>				
635.	1195 <i>Juncus subsecundus</i> (Finger Rush)			
<b>Lamiaceae</b>				
636.	19437 <i>Brachysola coerulea</i>			
637.	6747 <i>Cyanostegia angustifolia</i> (Tinsel-flower)			
638.	6751 <i>Cyanostegia microphylla</i> (Tinsel Flower)			
639.	41025 <i>Dasymalla terminalis</i> (Native Foxglove)			
640.	6753 <i>Dicrastylis brunnea</i>			
641.	6771 <i>Dicrastylis parvifolia</i>			
642.	6776 <i>Hemiphora elderi</i> (Red Velvet)			
643.	6779 <i>Lachnostachys coolgardiensis</i>			
644.	6881 <i>Marrubium vulgare</i> (Horehound)	Y		
645.	17206 <i>Physopsis viscida</i>			
646.	6812 <i>Pityrodia lepidota</i>			
647.	15822 <i>Prostanthera althoferi</i> subsp. <i>althoferi</i>			
648.	6912 <i>Prostanthera campbellii</i>			
649.	6916 <i>Prostanthera grylloana</i>			
650.	6917 <i>Prostanthera incurvata</i>			
651.	6928 <i>Salvia reflexa</i> (Mintweed)	Y		
652.	6929 <i>Salvia verbenaca</i> (Wild Sage)	Y		
653.	6937 <i>Teucrium sessiliflorum</i> (Camel Bush)			
654.	6938 <i>Westringia cephalantha</i>			
655.	34603 <i>Westringia cephalantha</i> var. <i>caterva</i>			
656.	9247 <i>Westringia rigida</i> (Stiff Westringia)			
<b>Lamponidae</b>				
657.	<i>Lampona cylindrata</i>			
658.	<i>Lamponina scutata</i>			
<b>Laridae</b>				
659.	<i>Chroicocephalus novaehollandiae</i>			
<b>Lecideaceae</b>				
660.	27825 <i>Lecidea ochroleuca</i>			
<b>Leporidae</b>				
661.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
<b>Liceaceae</b>				
662.	39041 <i>Licea kleistobolus</i>			
<b>Limnodynastidae</b>				
663.	25425 <i>Neobatrachus kunapalari</i> (Kunapalari Frog)			
664.	25426 <i>Neobatrachus pelobatooides</i> (Humming Frog)			
665.	25427 <i>Neobatrachus sutor</i> (Shoemaker Frog)			
666.	25428 <i>Neobatrachus wilmorei</i> (Plonking Frog)			
<b>Loganiaceae</b>				
667.	46313 <i>Orianthera flaviflora</i>			
668.	46253 <i>Orianthera tortuosa</i>			
669.	16824 <i>Phyllangium sulcatum</i>			
<b>Loranthaceae</b>				
670.	2369 <i>Amyema benthamii</i>			
671.	11614 <i>Amyema gibberula</i> var. <i>gibberula</i>			
672.	13267 <i>Amyema linophylla</i> subsp. <i>linophylla</i>			
673.	2380 <i>Amyema miquelii</i> (Stalked Mistletoe)			
674.	2383 <i>Amyema preissii</i> (Wireleaf Mistletoe)			
675.	2396 <i>Lysiana casuarinae</i>			
<b>Lycaenidae</b>				
676.	33979 <i>Jalmenus aridus</i> (inland hairstreak, desert blue butterfly)		P1	Y
677.	<i>Jalmenus icilius</i>			Y

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
678.	33987 <i>Ogyris subterrestris</i> subsp. <i>petrina</i> (Arid Bronze Azure Butterfly)			T
<b>Lycosidae</b>				
679.	<i>Hoggicosa castanea</i>			
680.	<i>Hoggicosa forresti</i>			
681.	<i>Hoggicosa storri</i>			
682.	<i>Lycosa ariadnae</i>			
683.	<i>Tasmanicosa leuckartii</i>			
<b>Lythraceae</b>				
684.	5281 <i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
<b>Macropodidae</b>				
685.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
686.	24135 <i>Macropus robustus</i> subsp. <i>erubescens</i> (Euro, Biggada)			
687.	24136 <i>Macropus rufus</i> (Red Kangaroo, Marlu)			
<b>Maluridae</b>				
688.	25652 <i>Malurus leucopterus</i> (White-winged Fairy-wren)			
689.	24551 <i>Malurus pulcherrimus</i> (Blue-breasted Fairy-wren)			
690.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
<b>Malvaceae</b>				
691.	4889 <i>Abutilon cryptopetalum</i>			
692.	40903 <i>Androcalva aphrix</i>			
693.	40910 <i>Androcalva luteiflora</i> (Yellow-flowered Rulingia)			
694.	4999 <i>Brachychiton gregorii</i> (Desert Kurrajong, Ngalta)			
695.	40923 <i>Commersonia crauophylla</i> (Brittle Leaved Rulingia)			
696.	40927 <i>Commersonia magniflora</i> subsp. <i>oblongifolia</i>			
697.	17725 <i>Hannafordia bissillii</i> subsp. <i>latifolia</i>			
698.	4941 <i>Hibiscus solanifolius</i>			
699.	4955 <i>Lawrencia glomerata</i>			
700.	4956 <i>Lawrencia helmsii</i> (Dunna Dunna)			
701.	4957 <i>Lawrencia repens</i>			
702.	4959 <i>Lawrencia squamata</i>			
703.	4961 <i>Malva parviflora</i> (Marshmallow)	Y		
704.	41544 <i>Malva weinmanniana</i>			
705.	4964 <i>Radyera farragei</i> (Knobby Hibiscus)			
706.	46824 <i>Seringia velutina</i> (Velvet firebush)			
707.	4970 <i>Sida calyxhymenia</i> (Tall Sida)			
708.	4977 <i>Sida fibulifera</i> (Silver Sida)			
709.	4981 <i>Sida intricata</i> (Tangled Sida)			
710.	16924 <i>Sida spodochroma</i>			
<b>Megalosporaceae</b>				
711.	27587 <i>Aspicilia calcarea</i>			
712.	48911 <i>Aspicilia contorta</i>			
<b>Megapodiidae</b>				
713.	24557 <i>Leipoa ocellata</i> (Malleefowl)			T
<b>Meliaceae</b>				
714.	4516 <i>Melia azedarach</i> (White Cedar)			
<b>Meliphagidae</b>				
715.	24559 <i>Acanthagenys rufogularis</i> (Spiny-cheeked Honeyeater)			
716.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
717.	24567 <i>Epthianura albifrons</i> (White-fronted Chat)			
718.	24570 <i>Epthianura tricolor</i> (Crimson Chat)			
719.	25659 <i>Lichenostomus leucotis</i> (White-eared Honeyeater)			
720.	24576 <i>Lichenostomus leucotis</i> subsp. <i>novaenorcae</i> (White-eared Honeyeater)			
721.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
722.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
723.	25663 <i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
724.	42344 <i>Purnella albifrons</i> (White-fronted Honeyeater)			
<b>Meropidae</b>				
725.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
<b>Montiaceae</b>				
726.	2846 <i>Calandrinia calyptata</i> (Pink Purslane)			
727.	2853 <i>Calandrinia eremaea</i> (Twining Purslane)			
728.	2860 <i>Calandrinia polyandra</i> (Parakeelya)			
729.	40824 <i>Calandrinia sculpta</i>			
<b>Motacillidae</b>				

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730.	25670 <i>Anthus australis</i> (Australian Pipit)			
731.	24599 <i>Anthus australis</i> subsp. <i>australis</i> (Australian Pipit)			
<b>Muridae</b>				
732.	24223 <i>Mus musculus</i> (House Mouse)	Y		
733.	24229 <i>Notomys mitchellii</i> (Mitchell's Hopping-mouse)			
734.	24230 <i>Pseudomys albocinereus</i> (Ash-grey Mouse)			
735.	24232 <i>Pseudomys bolami</i> (Bolam's Mouse)			
736.	24237 <i>Pseudomys hermannsburgensis</i> (Sandy Inland Mouse)			
<b>Myobatrachidae</b>				
737.	25434 <i>Pseudophryne occidentalis</i> (Western Toadlet)			
<b>Myrmecobiidae</b>				
738.	24146 <i>Myrmecobius fasciatus</i> (Numbat, Walpurti)			T
<b>Myrtaceae</b>				
739.	19467 <i>Aluta appressa</i>			
740.	19466 <i>Aluta aspera</i> subsp. <i>aspera</i>			
741.	20726 <i>Astus subroseus</i>			
742.	5344 <i>Baeckea elderiana</i>			
743.	36038 <i>Baeckea</i> sp. <i>Koonadgin</i> (B.L. Rye & M.E. Trudgen BLR 241137)			
744.	5408 <i>Calothamnus gilesii</i>			
745.	5438 <i>Calytrix amethystina</i>			
746.	5442 <i>Calytrix birdii</i>			
747.	13654 <i>Calytrix breviseta</i> subsp. <i>stipulosa</i>			
748.	44081 <i>Cyathostemon verrucosus</i>		P3	
749.	19846 <i>Enekbatus eremaeus</i>			
750.	45244 <i>Ericomyrtus serpyllifolia</i>			
751.	19508 <i>Eucalyptus calycogona</i> subsp. <i>calycogona</i>			
752.	5581 <i>Eucalyptus campaspe</i> (Silver Gimlet)			
753.	12904 <i>Eucalyptus capillosa</i>			
754.	5584 <i>Eucalyptus celastroides</i> (Mirret, Mired)			
755.	14300 <i>Eucalyptus celastroides</i> subsp. <i>celastroides</i> (Mirret)			
756.	48436 <i>Eucalyptus clelandiorum</i>			
757.	5595 <i>Eucalyptus comitae-vallis</i> (Comet Vale Mallee)			
758.	5596 <i>Eucalyptus concinna</i> (Victoria Desert Mallee)			
759.	5607 <i>Eucalyptus corrugata</i> (Rough-fruited Mallee)			
760.	5612 <i>Eucalyptus cylindrocarpa</i> (Woodline Mallee)			
761.	34811 <i>Eucalyptus distuberosa</i> subsp. <i>distuberosa</i>			
762.	13549 <i>Eucalyptus ebbanoensis</i> subsp. <i>ebbanoensis</i>			
763.	13097 <i>Eucalyptus educta</i>		P2	
764.	5636 <i>Eucalyptus eremicola</i>			
765.	5637 <i>Eucalyptus eremophila</i> (Tall Sand Mallee)			
766.	15667 <i>Eucalyptus eremophila</i> subsp. <i>eremophila</i> (Sand Mallee)			
767.	5641 <i>Eucalyptus ewartiana</i> (Ewart's Mallee)			
768.	12886 <i>Eucalyptus flavida</i> (Yellow-flowered Mallee)			
769.	5648 <i>Eucalyptus flocktoniae</i> (Merrit, Merid)			
770.	18521 <i>Eucalyptus flocktoniae</i> subsp. <i>flocktoniae</i>			
771.	14277 <i>Eucalyptus fraseri</i> subsp. <i>fraseri</i>			
772.	5665 <i>Eucalyptus griffithsii</i> (Griffith's Grey Gum)			
773.	5673 <i>Eucalyptus horistes</i>			
774.	5675 <i>Eucalyptus incrassata</i> (Lerp Mallee)			
775.	31815 <i>Eucalyptus jutsonii</i> subsp. <i>jutsonii</i>		P4	
776.	15682 <i>Eucalyptus leptophylla</i> (Narrow-leaved Red Mallee)			
777.	13056 <i>Eucalyptus leptopoda</i> subsp. <i>subluta</i>			
778.	5697 <i>Eucalyptus lesouefii</i> (Goldfields Blackbutt)			
779.	12901 <i>Eucalyptus livida</i> (Mallee Wandoo)			
780.	5701 <i>Eucalyptus longicornis</i> (Red Morrel, Moril)			
781.	20802 <i>Eucalyptus longissima</i>			
782.	13037 <i>Eucalyptus loxophleba</i> subsp. <i>lissophloia</i>			
783.	19323 <i>Eucalyptus moderata</i>			
784.	5726 <i>Eucalyptus oleosa</i> (Giant Mallee)			
785.	20091 <i>Eucalyptus oleosa</i> subsp. <i>oleosa</i>			
786.	5745 <i>Eucalyptus pileata</i> (Capped Mallee)			
787.	18580 <i>Eucalyptus planipes</i>			
788.	5747 <i>Eucalyptus platycorys</i> (Boorabbin Mallee)			
789.	19064 <i>Eucalyptus prolixa</i>			
790.	12380 <i>Eucalyptus ravida</i> (Silver-topped Gimlet)			
791.	5761 <i>Eucalyptus rigidula</i> (Stiff-leaved Mallee)			
792.	12693 <i>Eucalyptus salicola</i> (Salt Gum)			
793.	5766 <i>Eucalyptus salmonophloia</i> (Salmon Gum, Wurak)			



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794.	5767 <i>Eucalyptus salubris</i> (Gimlet)			
795.	29701 <i>Eucalyptus</i> sp. <i>Mulga Rock</i> (K.D. Hill & L.A.S. Johnson KH 2668)			
796.	46828 <i>Eucalyptus</i> sp. <i>Southern smooth-bark</i> (D. Nicolle & M. French DN 6916)			
797.	13027 <i>Eucalyptus tenera</i>			
798.	5792 <i>Eucalyptus torquata</i> (Coral Gum)			
799.	5793 <i>Eucalyptus transcontinentalis</i> (Redwood, Pungul)			
800.	18293 <i>Eucalyptus urna</i>			
801.	34775 <i>Eucalyptus vittata</i>			
802.	5798 <i>Eucalyptus websteriana</i> (Webster's Mallee)			
803.	13053 <i>Eucalyptus websteriana</i> subsp. <i>norsemanica</i>		P1	
804.	13054 <i>Eucalyptus websteriana</i> subsp. <i>websteriana</i>			
805.	18269 <i>Eucalyptus x brachyphylla</i>		P4	
806.	5802 <i>Eucalyptus yilgarnensis</i> (Yorrell)			
807.	16722 <i>Euryomyrtus maidenii</i>			
808.	5815 <i>Homalocalyx thryptomenoides</i>			
809.	48651 <i>Hysterobaeckea ochropetala</i> subsp. <i>reliqua</i>			
810.	5840 <i>Kunzea pulchella</i> (Granite Kunzea, Silky Kunzea)			
811.	5848 <i>Leptospermum fastigiatum</i>			
812.	12692 <i>Leptospermum subtenue</i>			
813.	5864 <i>Malleostemon peltiger</i>			
814.	5865 <i>Malleostemon roseus</i>			
815.	5866 <i>Malleostemon tuberculatus</i>			
816.	15063 <i>Melaleuca acuminata</i> subsp. <i>acuminata</i>			
817.	19380 <i>Melaleuca calyptroides</i>			
818.	5891 <i>Melaleuca coccinea</i> (Goldfields Bottlebrush)		P3	
819.	5896 <i>Melaleuca cordata</i>			
820.	5909 <i>Melaleuca elliptica</i> (Granite Bottlebrush, Ngow)			
821.	15603 <i>Melaleuca fulgens</i> subsp. <i>fulgens</i>			
822.	5916 <i>Melaleuca halmaturorum</i>			
823.	19486 <i>Melaleuca hamata</i>			
824.	5922 <i>Melaleuca lanceolata</i> (Rottnest Teatree, Moonah)			
825.	5925 <i>Melaleuca lateriflora</i> (Gorada)			
826.	5929 <i>Melaleuca leiocarpa</i>			
827.	14700 <i>Melaleuca macronychia</i> subsp. <i>macronychia</i>			
828.	15663 <i>Melaleuca pauperiflora</i> subsp. <i>fastigiata</i>			
829.	5966 <i>Melaleuca sheathiana</i> (Boree, Buri)			
830.	20287 <i>Melaleuca zeteticorum</i>			
831.	9187 <i>Micromyrtus erichsenii</i>			
832.	19787 <i>Micromyrtus monotaxis</i>			
833.	5999 <i>Micromyrtus obovata</i>			
834.	6002 <i>Micromyrtus stenocalyx</i>			
835.	6018 <i>Rinzia carnos</i> (Fleshy-leaved Rinzia)			
836.	19699 <i>Thryptomene australis</i> subsp. <i>brachyandra</i>			
837.	6058 <i>Thryptomene kochii</i>			
838.	20680 <i>Thryptomene</i> sp. <i>Coolgardie</i> (E. Kelso s.n. 1902)		P1	Y
839.	36017 <i>Thryptomene</i> sp. <i>Londonderry</i> (R.H. Kuchel 1763)		P1	
840.	6068 <i>Thryptomene urceolaris</i>			
841.	6073 <i>Verticordia chrysantha</i>			
842.	6109 <i>Verticordia picta</i> (Painted Featherflower)			
843.	6113 <i>Verticordia pritzelii</i> (Pritzel's Featherflower)			
<b>Nemesiidae</b>				
844.	<i>Aname armigera</i>			
845.	<i>Aname mainae</i>			
<b>Neosittidae</b>				
846.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
847.	24606 <i>Daphoenositta chrysoptera</i> subsp. <i>pileata</i> (Varied Sittella, Black-capped Sittella)			
<b>Nicodamidae</b>				
848.	<i>Nicodamus mainae</i>			
<b>Nitrariaceae</b>				
849.	4366 <i>Nitraria billardierei</i> (Nitre Bush)			
<b>Nyctaginaceae</b>				
850.	2770 <i>Boerhavia coccinea</i> (Tar Vine, Wituka)			
<b>Ophioglossaceae</b>				
851.	18 <i>Ophioglossum polyphyllum</i>			
<b>Orchidaceae</b>				
852.	15502 <i>Caladenia footeana</i>			
853.	17760 <i>Caladenia nobilis</i>			

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854.	1614 <i>Caladenia roei</i> (Ant Orchid)			
855.	30797 <i>Caladenia saxicola</i>			
856.	15400 <i>Cyanicula amplexans</i>			
857.	44161 <i>Diuris hazeliae</i>			
858.	12216 <i>Pterostylis roensis</i>			
859.	18657 <i>Pterostylis</i> sp. inland (A.C. Beaglehole 11880)			
860.	48481 <i>Pterostylis tryphera</i>			
861.	1701 <i>Thelymitra antennifera</i> (Vanilla Orchid)			
862.	20732 <i>Thelymitra petrophila</i>			
<b>Ostracoda</b>				
863.	<i>Ostracoda (unident.)</i>			
<b>Otididae</b>				
864.	24610 <i>Ardeotis australis</i> (Australian Bustard)			
<b>Oxalidaceae</b>				
865.	33256 <i>Oxalis bowiei</i> (Bowie Wood Sorrel)	Y		
866.	4355 <i>Oxalis perennans</i>			
867.	4356 <i>Oxalis pes-caprae</i> (Soursob)	Y		
<b>Oxyopidae</b>				
868.	<i>Oxyopes amoenus</i>			
869.	<i>Oxyopes dingo</i>			
870.	<i>Oxyopes variabilis</i>			
<b>Pachycephalidae</b>				
871.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
872.	24618 <i>Oreoica gutturalis</i> (Crested Bellbird)			
873.	34011 <i>Oreoica gutturalis</i> subsp. <i>gutturalis</i> (Crested Bellbird (southern))			
874.	24619 <i>Pachycephala inornata</i> (Gilbert's Whistler)			
875.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			
<b>Papaveraceae</b>				
876.	2964 <i>Papaver hybridum</i> (Rough Poppy)	Y		
<b>Pardalotidae</b>				
877.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
878.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
879.	24630 <i>Pardalotus striatus</i> subsp. <i>westraliensis</i> (Striated Pardalote)			
<b>Parmeliaceae</b>				
880.	27743 <i>Flavoparmelia diffracta</i>			
881.	27748 <i>Flavoparmelia rutidota</i>			
882.	28102 <i>Xanthoparmelia alternata</i>			
883.	28103 <i>Xanthoparmelia amphixantha</i>			
884.	28104 <i>Xanthoparmelia amplexula</i>			
885.	30660 <i>Xanthoparmelia auricampa</i>			Y
886.	32980 <i>Xanthoparmelia bullbullensis</i>			Y
887.	18001 <i>Xanthoparmelia dayiana</i>		P3	
888.	28132 <i>Xanthoparmelia filarszkyana</i>			
889.	28137 <i>Xanthoparmelia glareosa</i>			
890.	28326 <i>Xanthoparmelia incantata</i>			
891.	28142 <i>Xanthoparmelia incerta</i>			
892.	28144 <i>Xanthoparmelia isidiigera</i>			
893.	28331 <i>Xanthoparmelia luteonotata</i>			
894.	28150 <i>Xanthoparmelia metaclystoides</i>			
895.	28158 <i>Xanthoparmelia neorimalis</i>			
896.	28162 <i>Xanthoparmelia notata</i>			
897.	29984 <i>Xanthoparmelia paratasmanica</i>			Y
898.	28166 <i>Xanthoparmelia pertinax</i>			
899.	28167 <i>Xanthoparmelia praegnans</i>			
900.	29036 <i>Xanthoparmelia pulla</i>			
901.	28172 <i>Xanthoparmelia reptans</i>			
902.	44326 <i>Xanthoparmelia rimalis</i>			
903.	28327 <i>Xanthoparmelia semiviridis</i>			
904.	28180 <i>Xanthoparmelia succedans</i>			
905.	28181 <i>Xanthoparmelia taractica</i>			
906.	28182 <i>Xanthoparmelia tasmanica</i>			
907.	28184 <i>Xanthoparmelia terrestris</i>			
908.	28356 <i>Xanthoparmelia verrucella</i>			
909.	28186 <i>Xanthoparmelia versicolor</i>			
910.	28189 <i>Xanthoparmelia willisii</i>			

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<b>Peltulaceae</b>				
911.	27940 <i>Peltula patellata</i>			
<b>Petroicidae</b>				
912.	24650 <i>Drymodes brunneopygia</i> (Southern Scrub-robin)			
913.	24651 <i>Eopsaltria australis</i> subsp. <i>griseogularis</i> (Western Yellow Robin)			
914.	25693 <i>Microeca fascinans</i> (Jacky Winter)			
915.	24654 <i>Microeca fascinans</i> subsp. <i>assimilis</i> (Jacky Winter)			
916.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
<b>Phalacrocoracidae</b>				
917.	<i>Microcarbo melanoleucos</i>			
918.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
<b>Phasianidae</b>				
919.	24671 <i>Coturnix pectoralis</i> (Stubble Quail)			
<b>Pholcidae</b>				
920.	<i>Trichocyclus balladong</i>			
<b>Physaraceae</b>				
921.	39068 <i>Physarum decipiens</i>			
<b>Physciaceae</b>				
922.	41284 <i>Hyperphyscia syncolla</i>			
923.	27968 <i>Physcia albicans</i>			
924.	<i>Physcia</i> sp.			
<b>Pileolariaceae</b>				
925.	<i>Uromycladium tepperianum</i>			
<b>Pittosporaceae</b>				
926.	25798 <i>Billardiera fusiformis</i> (Australian Bluebell)			
927.	19421 <i>Marianthus bicolor</i> (Painted Marianthus)			
928.	19744 <i>Pittosporum angustifolium</i>			
<b>Plantaginaceae</b>				
929.	7299 <i>Plantago debilis</i>			
930.	7300 <i>Plantago drummondii</i> (Sago Weed)			
931.	14198 <i>Plantago</i> sp. Mt Magnet (A.S. George 6793)			
<b>Plumbaginaceae</b>				
932.	6489 <i>Limonium sinuatum</i> (Perennial Sea Lavender)	Y		
<b>Poaceae</b>				
933.	12025 <i>Amphipogon caricinus</i> var. <i>caricinus</i>			
934.	207 <i>Aristida contorta</i> (Bunched Kerosene Grass)			
935.	12063 <i>Aristida holathera</i> var. <i>holathera</i>			
936.	17232 <i>Austrostipa blackii</i>		P3	
937.	17236 <i>Austrostipa drummondii</i>			
938.	17237 <i>Austrostipa elegantissima</i>			
939.	17238 <i>Austrostipa eremophila</i>			
940.	17241 <i>Austrostipa hemipogon</i>			
941.	17246 <i>Austrostipa nitida</i>			
942.	17247 <i>Austrostipa platychaeta</i>			
943.	17251 <i>Austrostipa scabra</i>			
944.	36283 <i>Austrostipa</i> sp. Carlingup Road (S. Kern & R. Jasper LCH 18459)		P1	
945.	34556 <i>Austrostipa</i> sp. Dowerin (G. Wiehl F 8004)		P2	
946.	44509 <i>Austrostipa</i> sp. Mt Burgess (A.A. Mitchell & P.J. Waddell 10499)			Y
947.	17255 <i>Austrostipa trichophylla</i>			
948.	247 <i>Bromus arenarius</i> (Sand Brome)			
949.	248 <i>Bromus catharticus</i> (Prairie Grass)	Y		
950.	249 <i>Bromus diandrus</i> (Great Brome)	Y		
951.	258 <i>Cenchrus ciliaris</i> (Buffel Grass)	Y		
952.	271 <i>Chloris truncata</i> (Windmill Grass)			
953.	290 <i>Dactyloctenium radulans</i> (Button Grass)			
954.	11964 <i>Dichanthium sericeum</i> subsp. <i>sericeum</i>			
955.	308 <i>Digitaria ammophila</i> (Silky Umbrella Grass)			
956.	310 <i>Digitaria brownii</i> (Cotton Panic Grass)			
957.	351 <i>Ehrharta villosa</i> (Pyp Grass)	Y		
958.	356 <i>Enneapogon avenaceus</i> (Bottle Washers)			
959.	357 <i>Enneapogon caeruleascens</i> (Limestone Grass)			
960.	358 <i>Enneapogon cylindricus</i> (Jointed Nineawn)			
961.	368 <i>Enteropogon ramosus</i> (Windmill Grass, Curly Windmill Grass)			
962.	376 <i>Eragrostis curvula</i> (African Lovegrass)	Y		
963.	378 <i>Eragrostis dielsii</i> (Mallee Lovegrass)			

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964.	381 <i>Eragrostis falcata</i> (Sickle Lovegrass)			
965.	393 <i>Eragrostis setifolia</i> (Neverfail Grass)			
966.	399 <i>Eragrostis xerophila</i> (Knotty-butt Neverfail)			
967.	417 <i>Eriachne pulchella</i> (Pretty Wanderrie)			
968.	448 <i>Hordeum glaucum</i> (Northern Barley Grass)	Y		
969.	449 <i>Hordeum leporinum</i> (Barley Grass)	Y		
970.	471 <i>Leptochloa digitata</i> (Whorled Cane Grass)			
971.	490 <i>Monachather paradoxus</i>			
972.	503 <i>Panicum decompositum</i> (Native Millet, Kaltu-kaltu)			
973.	519 <i>Paspalidium constrictum</i> (Knottybutt Grass)			
974.	524 <i>Paspalidium reflexum</i>			
975.	40424 <i>Pentameris airoides</i> subsp. <i>airoides</i>	Y		
976.	552 <i>Phalaris paradoxa</i> (Paradoxa Grass)	Y		
977.	11151 <i>Rostraria pumila</i>	Y		
978.	40425 <i>Rytidosperma caespitosum</i>			
979.	40427 <i>Rytidosperma setaceum</i>			
980.	596 <i>Schismus arabicus</i> (Araby Grass)	Y		
981.	597 <i>Schismus barbatus</i> (Kelch Grass)	Y		
982.	606 <i>Setaria dielsii</i> (Diels' Pigeon Grass)			
983.	617 <i>Sorghum halepense</i> (Johnson Grass)	Y		
984.	688 <i>Triodia irritans</i> (Porcupine Grass)			
985.	699 <i>Triodia scariosa</i>			
986.	13041 <i>Triodia tomentosa</i>			
987.	18326 <i>Urochloa panicoides</i>	Y		
<b>Podargidae</b>				
988.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
<b>Podicipedidae</b>				
989.	24681 <i>Polyocephalus polyocephalus</i> (Hoary-headed Grebe)			
990.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
<b>Polygalaceae</b>				
991.	4553 <i>Comesperma drummondii</i> (Drummond's Milkwort)			
992.	4561 <i>Comesperma scoparium</i> (Broom Milkwort)			
<b>Polygonaceae</b>				
993.	11052 <i>Persicaria prostrata</i>			
994.	2419 <i>Polygonum aviculare</i> (Wireweed)	Y		
995.	2443 <i>Rumex vesicarius</i> (Ruby Dock)	Y		
<b>Pomatostomidae</b>				
996.	24683 <i>Pomatostomus superciliosus</i> (White-browed Babbler)			
997.	34013 <i>Pomatostomus superciliosus</i> subsp. <i>ashbyi</i> (White-browed Babbler (western wheatbelt))			
<b>Portulacaceae</b>				
998.	2884 <i>Portulaca oleracea</i> (Purslane, Wakati)			
<b>Pottiaceae</b>				
999.	36436 <i>Aloina bifrons</i>			Y
1000.	32319 <i>Barbula luteola</i>			
1001.	32341 <i>Crossidium davidai</i>			
1002.	32346 <i>Didymodon torquatus</i>			
1003.	32438 <i>Syntrichia pagorum</i>			
1004.	32445 <i>Tortula muralis</i>			
<b>Primulaceae</b>				
1005.	36375 <i>Lysimachia arvensis</i> (Pimpernel)	Y		
<b>Proteaceae</b>				
1006.	1815 <i>Banksia elderiana</i> (Swordfish Banksia)			
1007.	15611 <i>Conospermum stoechadis</i> subsp. <i>stoechadis</i> (Common Smokebush)			
1008.	1946 <i>Grevillea acacioides</i>			
1009.	1949 <i>Grevillea acuaria</i>			
1010.	1962 <i>Grevillea beardiana</i> (Red Combs)			
1011.	1971 <i>Grevillea cagiana</i> (Red Toothbrushes)			
1012.	13453 <i>Grevillea didymobotrya</i> subsp. <i>didymobotrya</i>			
1013.	8832 <i>Grevillea excelsior</i> (Flame Grevillea)			
1014.	2009 <i>Grevillea georgeana</i>		P3	
1015.	14413 <i>Grevillea haplantha</i> subsp. <i>haplantha</i>			
1016.	19314 <i>Grevillea hookeriana</i> subsp. <i>apiculoba</i>			
1017.	2018 <i>Grevillea huegelii</i>			
1018.	19541 <i>Grevillea nematophylla</i> subsp. <i>nematophylla</i>			
1019.	15981 <i>Grevillea obliquistigma</i> subsp. <i>obliquistigma</i>			

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1020.	15978 <i>Grevillea oligomera</i>			
1021.	2056 <i>Grevillea paniculata</i>			
1022.	2077 <i>Grevillea pterosperma</i>			
1023.	12822 <i>Grevillea sarissa</i> subsp. <i>bicolor</i>			
1024.	13458 <i>Grevillea sarissa</i> subsp. <i>sarissa</i>			
1025.	2104 <i>Grevillea teretifolia</i> (Round Leaf Grevillea)			
1026.	2116 <i>Grevillea uncinulata</i> (Hook-leaf Grevillea)			
1027.	2163 <i>Hakea francisiana</i> (Emu Tree)			
1028.	2182 <i>Hakea minyma</i>			
1029.	2184 <i>Hakea multilineata</i> (Grass Leaf Hakea)			
1030.	16047 <i>Hakea rigida</i>		P2	
1031.	2274 <i>Persoonia saundersiana</i>			
1032.	2308 <i>Petrophile seminuda</i>			
<b>Psittacidae</b>				
1033.	<i>Barnardius zonarius</i>			
1034.	25715 <i>Cacatua roseicapilla</i> (Galah)			
1035.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
1036.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
1037.	24736 <i>Melopsittacus undulatus</i> (Budgerigar)			
1038.	24742 <i>Nymphicus hollandicus</i> (Cockatiel)			
1039.	24748 <i>Platycercus varius</i> (Mulga Parrot)			
1040.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
1041.	24751 <i>Platycercus zonarius</i> subsp. <i>zonarius</i> (Port Lincoln Parrot)			
1042.	30854 <i>Polytelis anthopeplus</i> subsp. <i>westralis</i> (Regent Parrot)			
<b>Psoraceae</b>				
1043.	27998 <i>Psora crenata</i>			
1044.	27999 <i>Psora crystallifera</i>			
1045.	28000 <i>Psora decipiens</i>			
<b>Pteridaceae</b>				
1046.	12796 <i>Cheilanthes adiantoides</i>			
1047.	12818 <i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>			
<b>Pygopodidae</b>				
1048.	24995 <i>Delma australis</i>			
1049.	25005 <i>Lialis burtonis</i>			
1050.	25008 <i>Pygopus lepidopodus</i> (Common Scaly Foot)			
1051.	25009 <i>Pygopus nigriceps</i>			
<b>Rallidae</b>				
1052.	25727 <i>Fulica atra</i> (Eurasian Coot)			
1053.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
1054.	48141 <i>Tribonyx ventralis</i> (Black-tailed Native-hen)			
<b>Ranunculaceae</b>				
1055.	11080 <i>Myosurus australis</i>			
<b>Recurvirostridae</b>				
1056.	24774 <i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
1057.	25734 <i>Himantopus himantopus</i> (Black-winged Stilt)			
1058.	24775 <i>Himantopus himantopus</i> subsp. <i>leucocephalus</i> (Black-winged Stilt)			
1059.	24776 <i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
<b>Restionaceae</b>				
1060.	1073 <i>Lepidobolus chaetocephalus</i> (Bristle-headed Chaff Rush)			
1061.	1074 <i>Lepidobolus deserti</i>			
<b>Rhamnaceae</b>				
1062.	16183 <i>Cryptandra aridicola</i>			
1063.	4809 <i>Cryptandra pungens</i>			
1064.	4815 <i>Pomaderris forrestiana</i>			
1065.	16200 <i>Stenanthemum stipulosum</i>			
1066.	16986 <i>Trymalium myrtillos</i> subsp. <i>myrtillos</i>			
<b>Rhizocarpaceae</b>				
1067.	28042 <i>Rhizocarpon tinei</i>			
<b>Ricciaceae</b>				
1068.	<i>Riccia limbata</i>			
<b>Ruppiaceae</b>				
1069.	116 <i>Ruppia polycarpa</i>			

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<b>Rutaceae</b>				
1070.	4409 <i>Boronia coerulescens</i>			
1071.	11274 <i>Boronia coerulescens</i> subsp. <i>spinescens</i>			
1072.	4445 <i>Boronia ternata</i>			
1073.	16621 <i>Phebalium appressum</i>		P1	
1074.	4497 <i>Phebalium canaliculatum</i>			
1075.	4498 <i>Phebalium clavatum</i>		P2	
1076.	4500 <i>Phebalium filifolium</i> ( <i>Slender Phebalium</i> )			
1077.	14883 <i>Phebalium laevigatum</i>			
1078.	4501 <i>Phebalium lepidotum</i>			
1079.	4504 <i>Phebalium tuberculosum</i>			
1080.	18537 <i>Philothea brucei</i> subsp. <i>brucei</i>			
1081.	18506 <i>Philothea tomentella</i>			
<b>Salticidae</b>				
1082.	<i>Afraflacilla stridulator</i>			
1083.	<i>Holoplatys kalgoorlie</i>			Y
1084.	<i>Holoplatys planissima</i>			
1085.	<i>Sandalodes scopifer</i>			
<b>Santalaceae</b>				
1086.	10977 <i>Exocarpos aphyllus</i> ( <i>Leafless Ballart</i> )			
1087.	2356 <i>Santalum acuminatum</i> ( <i>Quandong, Wamga</i> )			
1088.	2359 <i>Santalum spicatum</i> ( <i>Sandalwood, Wilarak</i> )			
<b>Sapindaceae</b>				
1089.	11730 <i>Alectryon oleifolius</i> subsp. <i>canescens</i>			
1090.	4752 <i>Dodonaea adenophora</i>			
1091.	4753 <i>Dodonaea amblyophylla</i>			
1092.	4769 <i>Dodonaea lobulata</i> ( <i>Bead Hopbush</i> )			
1093.	4770 <i>Dodonaea microzyga</i>			
1094.	12034 <i>Dodonaea microzyga</i> var. <i>acrolobata</i>			
1095.	4780 <i>Dodonaea stenozyga</i>			
1096.	11247 <i>Dodonaea viscosa</i> subsp. <i>angustissima</i>			
<b>Scincidae</b>				
1097.	30893 <i>Cryptoblepharus buchananii</i>			
1098.	25020 <i>Cryptoblepharus plagiocephalus</i>			
1099.	25026 <i>Ctenotus atlas</i>			
1100.	25052 <i>Ctenotus leonhardii</i>			
1101.	25074 <i>Ctenotus schomburgkii</i>			
1102.	25465 <i>Ctenotus uber</i> ( <i>Spotted Ctenotus</i> )			
1103.	25080 <i>Ctenotus uber</i> subsp. <i>uber</i> ( <i>Spotted Ctenotus</i> )			
1104.	25089 <i>Cyclodomorphus melanops</i> subsp. <i>elongatus</i> ( <i>Slender Blue-tongue</i> )			
1105.	25092 <i>Egernia depressa</i> ( <i>Southern Pygmy Spiny-tailed Skink</i> )			
1106.	25094 <i>Egernia formosa</i>			
1107.	25104 <i>Egernia richardi</i>			
1108.	25109 <i>Eremiascincus richardsonii</i> ( <i>Broad-banded Sand Swimmer</i> )			
1109.	25115 <i>Hemiergis initialis</i> subsp. <i>initialis</i>			
1110.	<i>Lerista kingi</i>			
1111.	25155 <i>Lerista muelleri</i>			
1112.	25162 <i>Lerista picturata</i>			
1113.	25172 <i>Lerista stictopleura</i>			
1114.	42411 <i>Lerista timida</i>			
1115.	41411 <i>Liopholis inornata</i> ( <i>Desert Skink</i> )			
1116.	25184 <i>Menetia greyii</i>			
1117.	25188 <i>Morethia adelaidensis</i>			
1118.	25190 <i>Morethia butleri</i>			
1119.	25203 <i>Tiliqua occipitalis</i> ( <i>Western Bluetongue</i> )			
1120.	25519 <i>Tiliqua rugosa</i>			
1121.	25207 <i>Tiliqua rugosa</i> subsp. <i>rugosa</i>			
<b>Scolopacidae</b>				
1122.	41323 <i>Actitis hypoleucos</i> ( <i>Common Sandpiper</i> )		IA	
1123.	24779 <i>Calidris acuminata</i> ( <i>Sharp-tailed Sandpiper</i> )		IA	
1124.	24780 <i>Calidris alba</i> ( <i>Sanderling</i> )		IA	
1125.	24784 <i>Calidris ferruginea</i> ( <i>Curllew Sandpiper</i> )		T	
1126.	24788 <i>Calidris ruficollis</i> ( <i>Red-necked Stint</i> )		IA	
1127.	24803 <i>Tringa brevipes</i> ( <i>Grey-tailed Tattler</i> )		P4	
1128.	24806 <i>Tringa glareola</i> ( <i>Wood Sandpiper</i> )		IA	
1129.	24808 <i>Tringa nebularia</i> ( <i>Common Greenshank, greenshank</i> )		IA	
<b>Scolopendridae</b>				

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1130.	<i>Cormocephalus bungalbinensis</i>			
1131.	<i>Scolopendra laeta</i>			
1132.	<i>Scolopendra morsitans</i>			
<b>Scrophulariaceae</b>				
1133.	14888 <i>Diocirea microphylla</i>		P3	
1134.	7180 <i>Eremophila alternifolia</i> (Poverty Bush)			
1135.	16377 <i>Eremophila caerulea</i> subsp. <i>caerulea</i>			
1136.	13641 <i>Eremophila caerulea</i> subsp. <i>merrallii</i>		P4	
1137.	13807 <i>Eremophila caperata</i>			
1138.	7189 <i>Eremophila clarkei</i> (Turpentine Bush)			
1139.	17156 <i>Eremophila clavata</i>			
1140.	7193 <i>Eremophila decipiens</i> (Slender Fuchsia)			
1141.	14895 <i>Eremophila decipiens</i> subsp. <i>decipiens</i>			
1142.	7195 <i>Eremophila dempsteri</i>			
1143.	7198 <i>Eremophila deserti</i>			
1144.	7200 <i>Eremophila drummondii</i>			
1145.	7212 <i>Eremophila gibbosa</i>			
1146.	14340 <i>Eremophila glabra</i> subsp. <i>glabra</i>			
1147.	7219 <i>Eremophila granitica</i> (Thin-leaved Poverty Bush)			
1148.	15112 <i>Eremophila interstans</i> subsp. <i>interstans</i>			
1149.	15111 <i>Eremophila interstans</i> subsp. <i>virgata</i>			
1150.	7226 <i>Eremophila ionantha</i> (Violet-flowered Eremophila)			
1151.	7234 <i>Eremophila longifolia</i> (Berrigan, Tulypurpa)			
1152.	16363 <i>Eremophila maculata</i> subsp. <i>brevifolia</i> (Native Fuchsia)			
1153.	7242 <i>Eremophila miniata</i> (Kopi Poverty Bush)			
1154.	14632 <i>Eremophila oblonga</i>			
1155.	15003 <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>			
1156.	17168 <i>Eremophila oldfieldii</i> subsp. <i>oldfieldii</i>			
1157.	18570 <i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>			
1158.	7250 <i>Eremophila pantonii</i>			
1159.	14594 <i>Eremophila parvifolia</i> subsp. <i>auricampa</i>			
1160.	14516 <i>Eremophila praecox</i>		P1	
1161.	10780 <i>Eremophila psilocalyx</i>			
1162.	7259 <i>Eremophila pustulata</i> (Warted Eremophila)			
1163.	15172 <i>Eremophila rugosa</i>			
1164.	7264 <i>Eremophila saligna</i> (Willow Eremophila)			
1165.	7267 <i>Eremophila scoparia</i> (Broom Bush ( ))			
1166.	7269 <i>Eremophila serrulata</i> (Serrate-leaved Eremophila)			
1167.	<i>Eremophila</i> sp.			
1168.	19528 <i>Eremophila</i> sp. Mt Jackson (G.J. Keighery 4372)			
1169.	17162 <i>Eremophila subfloccosa</i> subsp. <i>lanata</i>			
1170.	7278 <i>Eremophila veronica</i>		P3	
1171.	7283 <i>Eremophila weldii</i>			
1172.	17158 <i>Myoporum montanum</i> (Native Myrtle)			
<b>Solanaceae</b>				
1173.	6952 <i>Anthotroche pannosa</i> (Felted Anthotroche)			
1174.	6955 <i>Crenidium spinescens</i>			
1175.	10823 <i>Datura innoxia</i>	Y		
1176.	6966 <i>Duboisia hopwoodii</i> (Pituri, Kundugu)			
1177.	6967 <i>Lycium australe</i> (Australian Boxthorn)			
1178.	6968 <i>Lycium ferocissimum</i> (African Boxthorn)	Y		
1179.	6974 <i>Nicotiana glauca</i> (Tree Tobacco)	Y		
1180.	6978 <i>Nicotiana rotundifolia</i> (Round-leaved Tobacco)			
1181.	6998 <i>Solanum cleistogamum</i>			
1182.	7007 <i>Solanum esuriale</i> (Quena)			
1183.	7013 <i>Solanum hoplopetalum</i> (Thorny Solanum)			
1184.	7018 <i>Solanum lasiophyllum</i> (Flannel Bush, Mindjulu)			
1185.	7022 <i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
1186.	7023 <i>Solanum nummularium</i> (Money-leaved Solanum)			
1187.	7028 <i>Solanum petrophilum</i> (Rock Nightshade)			
1188.	7030 <i>Solanum plicatile</i>			
1189.	7034 <i>Solanum simile</i> (Oondoroo)			
<b>Sparassidae</b>				
1190.	<i>Isopeda magna</i>			
1191.	<i>Isopedella saundersi</i>			
<b>Stemonitidaceae</b>				
1192.	38987 <i>Comatricha ellae</i>			
1193.	39030 <i>Enerthenema papillatum</i>			

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<b>Sternophoridae</b>				
1194.	<i>Afrosterophorus hirsti</i>			Y
<b>Stylidiaceae</b>				
1195.	7685 <i>Stylidium arenicola</i>			
1196.	7714 <i>Stylidium dielsianum</i> (Tangle Triggerplant)			
1197.	7751 <i>Stylidium limbatum</i> (Fringed-leaved Triggerplant)			
<b>Tachyglossidae</b>				
1198.	24207 <i>Tachyglossus aculeatus</i> (Short-beaked Echidna)			
<b>Teloschistaceae</b>				
1199.	48195 <i>Caloplaca scarlatina</i>			
1200.	<i>Caloplaca</i> sp.			
1201.	44983 <i>Fulgensia cranfieldii</i>			
1202.	27754 <i>Fulgensia subbracteata</i>			
1203.	45299 <i>Jackelixia elixii</i>			
<b>Thamnocephalidae</b>				
1204.	33934 <i>Branchinella denticulata</i> (fairy shrimp (Carnarvon to Kalgoorlie))		P3	
<b>Theraphosidae</b>				
1205.	<i>Selenotholus foelschei</i>			
<b>Theridiidae</b>				
1206.	<i>Latrodectus hasseltii</i>			
<b>Threskiornithidae</b>				
1207.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
1208.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
<b>Thylacomylidae</b>				
1209.	24168 <i>Macrotis lagotis</i> (Bilby, Dalgyte, Ninu)		T	
<b>Thymelaeaceae</b>				
1210.	5231 <i>Pimelea angustifolia</i> (Narrow-leaved Pimelea)			
1211.	11185 <i>Pimelea microcephala</i> subsp. <i>microcephala</i>			
1212.	12104 <i>Pimelea spiculigera</i> var. <i>thesioides</i>			
1213.	11910 <i>Pimelea suaveolens</i> subsp. <i>flava</i>			
<b>Trichiaceae</b>				
1214.	39059 <i>Perichaena vermicularis</i>			
<b>Triopsidae</b>				
1215.	39407 <i>Triops australiensis</i> (Shield Shrimp)			
<b>Trochanteriidae</b>				
1216.	<i>Corimaethes campestris</i>			
1217.	<i>Fissarena castanea</i>			
<b>Turnicidae</b>				
1218.	24851 <i>Turnix velox</i> (Little Button-quail)			
<b>Tytonidae</b>				
1219.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
<b>Urodacidae</b>				
1220.	<i>Urodacus armatus</i>			
1221.	<i>Urodacus hoplurus</i>			
1222.	<i>Urodacus yaschenkoi</i>			
<b>Urticaceae</b>				
1223.	1767 <i>Urtica urens</i> (Small Nettle)	Y		
<b>Varanidae</b>				
1224.	25211 <i>Varanus caudolineatus</i>			
1225.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
1226.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			
<b>Verbenaceae</b>				
1227.	29836 <i>Glandularia aristigera</i>	Y		
1228.	13557 <i>Phyla canescens</i>	Y		
<b>Verrucariaceae</b>				
1229.	27739 <i>Endocarpon pusillum</i>			
1230.	27741 <i>Endocarpon simplicatum</i>			
1231.	<i>Placidium lacinulatum</i>			
1232.	27984 <i>Placidium squamulosum</i>			



Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
<b>Vespertilionidae</b>				
1233.	24186 <i>Chalinolobus gouldii</i> (Gould's Wattled Bat)			
1234.	24187 <i>Chalinolobus morio</i> (Chocolate Wattled Bat)			
1235.	24194 <i>Nyctophilus geoffroyi</i> (Lesser Long-eared Bat)			
1236.	24199 <i>Scotorepens balstoni</i> (Inland Broad-nosed Bat)			
1237.	24202 <i>Vespadelus baverstocki</i> (Inland Forest Bat)			
1238.	24205 <i>Vespadelus finlaysoni</i> (Finlayson's Cave Bat)			
1239.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			
<b>Violaceae</b>				
1240.	11973 <i>Hybanthus floribundus</i> subsp. <i>curvifolius</i>			
<b>Zodariidae</b>				
1241.	<i>Storena sinuosa</i>			
<b>Zosteropidae</b>				
1242.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			
<b>Zygophyllaceae</b>				
1243.	48882 <i>Roepera apiculata</i>			
1244.	48885 <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i>			
1245.	48890 <i>Roepera eremaea</i>			
1246.	48892 <i>Roepera glauca</i> (Pale Twinleaf, Pale Twin-leaf)			
1247.	48898 <i>Roepera ovata</i>			
1248.	48899 <i>Roepera reticulata</i>			
1249.	48903 <i>Roepera tetraptera</i>			
1250.	4383 <i>Tribulus terrestris</i> (Caltrop)	Y		

**Conservation Codes**  
T - Rare or likely to become extinct  
X - Presumed extinct  
IA - Protected under international agreement  
S - Other specially protected fauna  
1 - Priority 1  
2 - Priority 2  
3 - Priority 3  
4 - Priority 4  
5 - Priority 5

<sup>1</sup> For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

## Appendix 8: EPBC Protected Matters Search (40km buffer)



# 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.

Report created: 14/01/21 00:46:31

[Summary](#)

[Details](#)

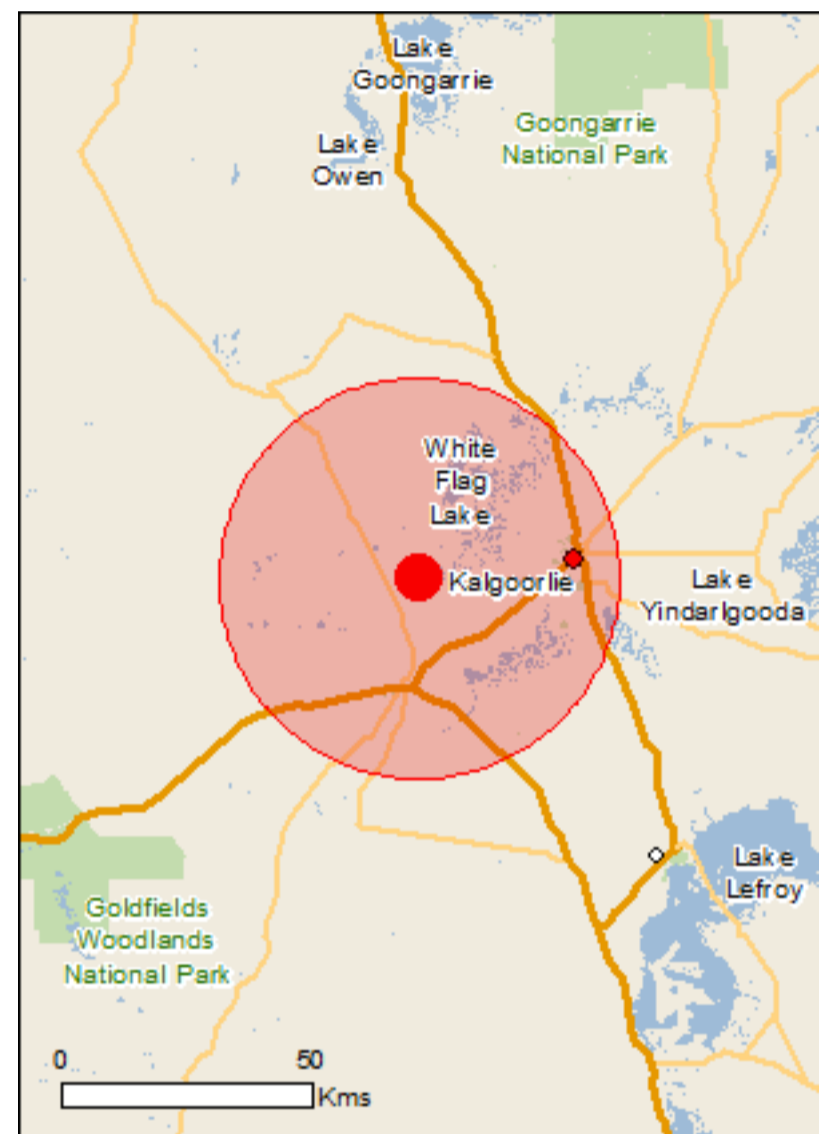
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

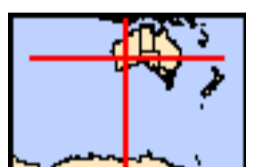
[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

[Coordinates](#)

Buffer: 40.0Km



# 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](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	1
<a href="#">Wetlands of International Importance:</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	None
<a href="#">Listed Threatened Species:</a>	8
<a href="#">Listed Migratory Species:</a>	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.

<a href="#">Commonwealth Land:</a>	4
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	12
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	5
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	16
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

National Heritage Properties		<a href="#">[ Resource Information ]</a>
Name	State	Status
Historic		
<a href="#">Goldfields Water Supply Scheme, Western Australia</a>	WA	Listed place

Listed Threatened Species		<a href="#">[ Resource Information ]</a>
Name	Status	Type of Presence
Birds		
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
<a href="#">Leipoa ocellata</a> Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pezoporus occidentalis</a> Night Parrot [59350]	Endangered	Species or species habitat may occur within area

Insects		
<a href="#">Ogyris subterrestris petrina</a> Arid Bronze Azure [77743]	Critically Endangered	Species or species habitat may occur within area

Mammals		
<a href="#">Dasyurus geoffroii</a> Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat may occur within area

Plants		
<a href="#">Gastrolobium graniticum</a> Granite Poison [14872]	Endangered	Species or species habitat likely to occur within area
<a href="#">Thelymitra stellata</a> Star Sun-orchid [7060]	Endangered	Species or species habitat may occur within area

Listed Migratory Species		<a href="#">[ Resource Information ]</a>
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Migratory Terrestrial Species		
-------------------------------	--	--

Name	Threatened	Type of Presence
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Land [\[ Resource Information \]](#)

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

Name
Commonwealth Land - Defence - AIRTC KALGOORLIE Defence - KALGOORLIE RIFLE RANGE Defence - KALGOORLIE TRAINING DEPOT

### 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
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species

Name	Threatened	Type of Presence
<a href="#">Chrysococcyx osculans</a> Black-eared Cuckoo [705]		habitat may occur within area  Species or species habitat known to occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
<a href="#">Thinornis rubricollis</a> Hooded Plover [59510]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

## Extra Information

### State and Territory Reserves [\[ Resource Information \]](#)

Name	State
Kalgoorlie Arboretum	WA
Kangaroo Hills Timber Reserve	WA
Kurrawang	WA
Scahill Timber Reserve	WA
Yallari Timber Reserve	WA

### 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 Resources Audit, 2001.

Name	Status	Type of Presence
<b>Birds</b>		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
<b>Mammals</b>		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		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
Mus musculus House Mouse [120]		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
<b>Plants</b>		
Carrichtera annua Ward's Weed [9511]		Species or species habitat likely to occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Cylindropuntia spp. Prickly Pears [85131]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
<b>Reptiles</b>		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to 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.

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

Where very little information is available for 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 reliable distribution mapping methods are used to update these distributions as time permits.

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

-30.78337 121.19084

# Acknowledgements

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

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

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

Please feel free to provide feedback via the [Contact Us](#) page.

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**Appendix 9: GPS coordinates of Quadrat locations (GDA94, Zone 51)**

Quadrat	Easting	Northing
Q1	334532	6592741
Q2	334007	6592722
Q3	333116	6592538
Q4	334331	6594227
Q5	334078	6593205
Q6	331560	6594842
Q7	331491	6594742
Q8	332883	6594284
Q9	332887	6594556

## Appendix 10: Quadrat Datasheets and Photos

(A) blue text- indicates annual taxa (WAHERB, 2021)

Project Name: White Foil		
<b>Date:</b> 4/11/2020	<b>Botanist:</b> JJ	<b>Photo (NW corner):</b> 230-232
<b>Quadrat No:</b> 1	<b>Quadrat size:</b> 20m x 20m	<b>Waypoint (NW corner):</b> 232
<b>Aspect:</b> SW	<b>Fire (yrs):</b> > 20 years	<b>Condition rating:</b> Good
<b>Landform:</b> Plain		
<b>Coarse fragments on the surface:</b> No coarse fragments		
<b>Rock outcrop (abundance/runoff):</b> Nil/ No run-off		
<b>Soil (profile/field texture/soil surface):</b> Brown/ Sandy-Loam/ Soft		
<b>Cover leaf litter:</b> 50%		
<b>Cover bare ground:</b> 40%		
Upper stratum	Mid-stratum	Lower stratum
<b>Growth form:</b> Tree	<b>Growth form:</b> Shrub	<b>Growth form:</b> Shrub
<b>Height:</b> 5-12m	<b>Height:</b> 1-3m	<b>Height:</b> <0.5m
<b>Crown cover:</b> 10-30%	<b>Crown cover:</b> 10-30%	<b>Crown cover:</b> <10%
Dominant taxa		
<i>Eucalyptus yilgarnensis</i>	<i>Eremophila scoparia</i>	<i>Rhagodia drummondii</i>
Other Taxa		
	<i>Acacia collegialis</i>	<i>Dianella revoluta</i>
	<i>Acacia colletioides</i>	<i>Lycium australe</i>
	<i>Dodonaea viscosa</i>	<i>Olearia muelleri</i>
	<i>Eremophila dempsteri</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
	<i>Eremophila scoparia</i>	<i>Rhagodia drummondii</i>
	<i>Exocarpos aphyllus</i>	
	<i>Grevillea acuaria</i>	
	<i>Scaevola spinescens</i>	
	<i>Solanum nummularium</i>	



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 234-236
Quadrat No: 2	Quadrat size: 20m x 20m	Waypoint (NW corner): 233
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Floodout		
Coarse fragments on the surface: No coarse fragments		
Rock outcrop (abundance/runoff): Nil/ Slow		
Soil (profile/field texture/soil surface): Medium Clay/ Hard-setting		
Cover leaf litter: <5%		
Cover bare ground: 40%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: -	Growth form: Samphire Shrub	Growth form: Chenopod Shrub
Height: -	Height: 0.5-1m	Height: <0.5m
Crown cover: -	Crown cover: 10-30%	Crown cover: 10-30%
Dominant taxa		
	<i>Tecticornia disarticulata</i>	<i>Sclerolaena cuneata</i>
Other Taxa		
	<i>Atriplex codonocarpa (A)</i>	<i>Austrostipa elegantissima</i>
	<i>Gunniopsis quadrifida</i>	<i>Calandrinia eremaea (A)</i>
		<i>Disphyma crassifolium</i>
		<i>Frankenia setosa</i>
		<i>Maireana glomerata</i>



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 236-238
Quadrat No: 3	Quadrat size: 20m x 20m	Waypoint (NW corner): 234
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Plain		
Coarse fragments on the surface: No coarse fragments		
Rock outcrop (abundance/runoff): Nil/ No run-off		
Soil (profile/field texture/soil surface): Brown/ Sandy clay loam/ Soft		
Cover leaf litter: 60%		
Cover bare ground: 30%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: Tree	Growth form: Shrub	Growth form: Shrub
Height: 3-5m	Height: 1-3m	Height: <0.5m
Crown cover: 10-30%	Crown cover: 10-30%	Crown cover: <10%
Dominant taxa		
<i>Eucalyptus clelandiorum</i>	<i>Eremophila scoparia</i>	<i>Olearia muelleri</i>
Other Taxa		
<i>Melaleuca pauperiflora</i>	<i>Acacia hemiteles</i>	<i>Maireana triptera</i>
	<i>Eremophila caperata</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
	<i>Eremophila parvifolia</i> subsp. <i>auricampa</i>	
	<i>Maireana sedifolia</i>	
	<i>Scaevola spinescens</i>	
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>	



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 239-241
Quadrat No: 4	Quadrat size: 20m x 20m	Waypoint (NW corner): 235
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Floodout		
Coarse fragments on the surface: No coarse fragments		
Rock outcrop (abundance/runoff): Nil/ No run-off		
Soil (profile/field texture/soil surface): Brown/Medium heavy clay/ Hard-setting		
Cover leaf litter: <10%		
Cover bare ground: 60%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: -	Growth form: Samphire Shrubland	Growth form: Shrub
Height: -	Height: 0.5-1m	Height: <0.5m
Crown cover: -	Crown cover: >70%	Crown cover: <10%
Dominant taxa		
	<i>Tecticornia disarticulata</i>	<i>Disphyma crassifolium</i>
Other Taxa		
	<i>Atriplex vesicaria</i>	<i>Austrostipa elegantissima</i>
	<i>Cratystylis subspinescens</i>	<i>Calandrinia eremaea (A)</i>
		<i>Disphyma crassifolium</i>
		<i>Frankenia setosa</i>
		<i>Gunniopsis quadrifida</i>
		<i>Maireana glomerata</i>
		<i>Sclerolaena cuneata</i>



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 242-244
Quadrat No: 5	Quadrat size: 20m x 20m	Waypoint (NW corner): 236
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Midslope		
Coarse fragments on the surface: Very few, rounded, calcrete		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Brown/ sandy clay loam/ soft		
Cover leaf litter: 70%		
Cover bare ground: 25%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: Tree	Growth form: Shrub	Growth form: Shrub
Height: 3-5m	Height: 1-3m	Height: <0.5m
Crown cover: 10-30%	Crown cover: 10-30%	Crown cover: <1%
Dominant taxa		
<i>Eucalyptus clelandiorum</i>	<i>Eremophila scoparia</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
Other Taxa		
	<i>Eremophila ionantha</i>	<i>Olearia muelleri</i>
	<i>Eremophila parvifolia</i> subsp. <i>auricampi</i>	<i>Austrostipa elegantissima</i>
	<i>Exocarpos aphyllus</i>	
	<i>Scaevola spinescens</i>	
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>	
	<i>Solanum nummularium</i>	





<b>Project Name: White Foil</b>		
<b>Date:</b> 4/11/2020	<b>Botanist:</b> JJ	<b>Photo (NW corner):</b> 245-247
<b>Quadrat No:</b> 6	<b>Quadrat size:</b> 20m x 20m	<b>Waypoint (NW corner):</b> 237
<b>Aspect:</b> SW	<b>Fire (yrs):</b> > 20 years	<b>Condition rating:</b> Good
<b>Landform:</b> Floodout		
<b>Coarse fragments on the surface:</b>		
<b>Rock outcrop (abundance/runoff):</b> Nil/ No runoff		
<b>Soil (profile/field texture/soil surface):</b> Brown/light medium clay / hard-setting		
<b>Cover leaf litter:</b> <10%		
<b>Cover bare ground:</b> 60%		
<b>Upper stratum</b>	<b>Mid-stratum</b>	<b>Lower stratum</b>
<b>Growth form:</b> -	<b>Growth form:</b> Samphire Shrub	<b>Growth form:</b> Chenopod
<b>Height:</b> -	<b>Height:</b> 0.5-1m	<b>Height:</b> <0.5m
<b>Crown cover:</b> -	<b>Crown cover:</b> 10-30%	<b>Crown cover:</b> <1%
<b>Dominant taxa</b>		
	<i>Tecticornia disarticulata</i>	<i>Gunniopsis quadrifida</i>
<b>Other Taxa</b>		
	<i>Atriplex stipitata</i>	<i>Maireana glomerata</i>
	<i>Atriplex vesicaria</i>	<i>Sclerolaena cuneata</i>
	<i>Eremophila scoparia</i>	
	<i>Eriochiton sclerolaenoides</i>	
	<i>Frankenia setosa</i>	



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 248-250
Quadrat No: 7	Quadrat size: 20m x 20m	Waypoint (NW corner): 238
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Plain		
Coarse fragments on the surface: None		
Rock outcrop (abundance/runoff): Nil/ Very slow		
Soil (profile/field texture/soil surface): Brown/ sandy loam/ soft		
Cover leaf litter: 60%		
Cover bare ground: 40%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: Tree	Growth form: Shrub	Growth form: Shrub
Height: 3-5m	Height: 1-3m	Height: <0.5m
Crown cover: 10-30%	Crown cover: 10-30%	Crown cover: <10%
Dominant taxa		
<i>Eucalyptus griffithsii</i>	<i>Eremophila ionantha</i>	<i>Olearia muelleri</i>
Other Taxa		
<i>Eucalyptus yilgarnensis</i>	<i>Acacia hemiteles</i>	<i>Enchylaena tomentosa</i>
	<i>Atriplex vesicaria</i>	<i>Gunniopsis quadrifida</i>
	<i>Cratystylis microphylla</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
	<i>Eremophila caperata</i>	<i>Rhagodia drummondii</i>
	<i>Eremophila decipiens</i>	<i>Triodia scariosa</i>
	<i>Scaevola spinescens</i>	



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 251-253
Quadrat No: 8	Quadrat size: 20m x 20m	Waypoint (NW corner): 239
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Hillslope		
Coarse fragments on the surface: very abundant, ironstone, 60-200mm		
Rock outcrop (abundance/runoff): Nil/ No runoff		
Soil (profile/field texture/soil surface): Brown/ clay loam/ soft		
Cover leaf litter:		
Cover bare ground:		
Upper stratum	Mid-stratum	Lower stratum
Growth form: -	Growth form: Shrub	Growth form: Shrub
Height: -	Height: 1-3m	Height: <0.5m
Crown cover: -	Crown cover: 30-70%	Crown cover: <10%
Dominant taxa		
-	<i>Acacia acuminata</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
Other Taxa		
	<i>Acacia tetragonophylla</i>	<i>Austrostipa elegantissima</i>
	<i>Dodonaea lobulata</i>	<i>Cheilanthes sieberi</i>
	<i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>	<a href="#">Roepera eremaea (A)</a>
	<i>Scaevola spinescens</i>	



Project Name: White Foil		
Date: 4/11/2020	Botanist: JJ	Photo (NW corner): 254-256
Quadrat No: 9	Quadrat size: 20m x 20m	Waypoint (NW corner): 240
Aspect: SW	Fire (yrs): > 20 years	Condition rating: Good
Landform: Hillslope		
Coarse fragments on the surface: very abundant, mixed, 60-200mm		
Rock outcrop (abundance/runoff): Nil/ Moderate		
Soil (profile/field texture/soil surface): Brown/ clay loam/ soft		
Cover leaf litter: 20%		
Cover bare ground: 70%		
Upper stratum	Mid-stratum	Lower stratum
Growth form: Tree	Growth form: Shrub	Growth form: Shrub
Height: 3-5m	Height: 1-3m	Height: <0.5m
Crown cover: <10%	Crown cover: 30-70%	Crown cover: <10%
Dominant taxa		
<i>Brachychiton gregorii</i>	<i>Acacia acuminata</i>	<i>Ptilotus obovatus</i> var. <i>obovatus</i>
Other Taxa		
	<i>Acacia tetragonophylla</i>	<i>Austrostipa elegantissima</i>
	<i>Dodonaea lobulata</i>	<i>Cheilanthes sieberi</i> (A)
	<i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>	
	<i>Scaevola spinescens</i>	



## Appendix 11: PATN Analysis

### Row Fusion Dendrogram

