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FORTESCUE LIMITED

BONNEY DOWNS CONSOLIDATED FLORA AND VEGETATION ASSESSMENT

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EXECUTIVE SUMMARY

Fortescue Limited (Fortescue) is assessing potential renewable energy generation sites as part of the commitment to decarbonise its mining operations in the Pilbara region of Western Australia. One of the options under consideration is the Bonney Downs project, a proposed wind generation hub and associated transmission line (PEC 8) with a connection to Cloudbreak and Christmas Creek (the project).

Ecologia Environmental Consultants (*ecologia*) was engaged by Fortescue to undertake a two-phase detailed flora and vegetation assessment of the Bonney Downs Consolidated survey area (the survey area) (approximately 108,841 ha) to inform environmental approvals applications for the potential development of the project. The survey area is located mostly west of Marble Bar Road, approximately 80 km south of Marble Bar in the Pilbara region of Western Australia (WA).

Most of the survey area has been surveyed recently by *ecologia* (Bonney Downs North) and SLR (Bonney Downs East). The objective of this survey was to undertake a detailed flora and vegetation survey and targeted flora survey within the remaining parts of the survey area and to combine the data from all three projects into a consolidated analysis and report detailing the flora and vegetation values of the entire area.

A total of 552 vascular plant taxa from 61 families and 204 genera were recorded within the survey area. These included one *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Biodiversity Conservation Act 2016* (BC Act) listed Threatened species (*Quoya zonalis*) and 18 Department of Biodiversity, Conservation and Attractions (DBCA) listed Priority (P) species. Twenty-five introduced species were recorded, of which one is a Declared Pest (**Calotropis procera*).

Hierarchical agglomerative clustering and ordination analyses were conducted on floristic data from 375 sampling sites, resulting in the classification of 17 vegetation types. Vegetation consisted mostly of low stony hills and undulating plains associated with the Rocklea land system supporting *Acacia inaequilatera* sparse shrubland over *Triodia epactia* low hummock grasslands. Vegetation was mostly in Excellent condition according to the Environmental Protection Authority (EPA) *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016) scale, except for drainage channels and parts of the Wona land system, which were comparatively more degraded in parts.

One of the described vegetation types (VfAl) is consistent with one of the four communities that comprise the 'Four plant assemblages of the Wona Land System', specifically the Priority 1 community 'Cracking clays of the Chichester and Mungaroona Range'. This vegetation type accounts for 7,425.5 ha (6.8%) of the survey area. There were no other plant communities observed that corresponded to any state (BC Act) or Commonwealth (EPBC Act) listed Threatened Ecological Community (TEC), or any DBCA listed PEC.

Thirteen vegetation types were significant according to one or more additional assessed criteria, including: supporting populations of threatened species (one vegetation type), playing a role as a refuge (one vegetation type), potentially locally restricted (nine vegetation types); groundwater dependent or potentially groundwater dependent vegetation (two vegetation types); and sheet-flow dependent mulga (one vegetation type).

TABLE OF CONTENTS

EXECUTIVE SUMMARY ..... **II**

1 INTRODUCTION **1**

1.1 PROJECT BACKGROUND 1

1.2 SCOPE OF WORK 1

1.3 LEGISLATIVE AND REGULATORY FRAMEWORK 1

1.4 DEFINITIONS 2
- 1.4.1 Significant Flora 2
- 1.4.2 Significant Vegetation 2
- 1.4.3 Introduced Plants 2

2 DESKTOP ASSESSMENT **5**

2.1 DESKTOP METHODOLOGY 5

2.2 RAINFALL AND TEMPERATURE 6

2.3 FIRE HISTORY 6

2.4 INTERIM BIOGEOGRAPHIC REGIONALISATION FOR AUSTRALIA 7

2.5 LAND SYSTEMS 7

2.6 DBCA MANAGED LANDS AND NATIONALLY IMPORTANT WETLANDS 7

2.7 FLORA 12
- 2.7.1 Floristic Diversity 12
- 2.7.2 Significant Species 12
- 2.7.3 Introduced Species 12

2.8 VEGETATION 16
- 2.8.1 Pre-European Vegetation 16
- 2.8.2 Threatened and Priority Ecological Communities 16
- 2.8.3 Groundwater Dependent Vegetation 17
- 2.8.4 Sheet-flow Dependent Mulga 17

3 METHODOLOGY **21**

3.1 FLORA AND VEGETATION ASSESSMENT 21
- 3.1.1 Field Survey 21
- 3.1.2 Quadrat Sampling 21
- 3.1.3 Significant Species 22
- 3.1.4 Specimen Identification 22
- 3.1.5 Asymptotic Species Richness and Rarefaction 22
- 3.1.6 Data Consolidation and Vegetation Classification 23
- 3.1.7 Vegetation Characterisation 24
- 3.1.8 Vegetation Mapping 24
- 3.1.9 Assessment of Vegetation Significance 25

3.2 STUDY TEAM AND LICENCES 26

3.3 LIMITATIONS AND CONSTRAINTS 28

4 RESULTS **29**

4.1 FLORA 29

4.1.1 Floristic Diversity and Estimated Species Richness 29
4.1.2 Significant Species 30
4.1.3 Introduced Species 31

4.2 VEGETATION 38
4.2.1 Vegetation Type Classification and Characterisation 38
4.2.2 Vegetation Condition 45
4.2.3 Significant Vegetation 45

5 DISCUSSION 60

5.1 FLORA 60
5.1.1 Floristic Diversity 60
5.1.2 Significant Species 60
5.1.3 Introduced Species 62

5.2 VEGETATION 62
5.2.1 Vegetation Types and Condition 62
5.2.2 Significant Vegetation 63

6 CONCLUSIONS 65

7 REFERENCES 66

8 APPENDICES 69

TABLES

Table 1: Databases queried for the desktop assessment. 5
Table 2: Criteria used to assess the likelihood of occurrence of significant species and communities. 5
Table 3: Land systems associated with the survey area (DPIRD-027). 8
Table 4: Significant plant species recorded within 50 km of the survey area. 13
Table 5: Introduced plant species recorded within 50 km of the survey area including BAM Act status and Weed Prioritisation Process rating. 14
Table 6: Pre-European vegetation associations mapped with the survey area (D. P. Shepherd et al., 2002). 16
Table 7: Threatened and Priority Ecological Communities within 50 km of the survey area. 18
Table 8: Vegetation condition scale. 22
Table 9: Criteria for assessment of potential vegetation significance. 25
Table 10: Project staff and licences. 26
Table 11: Flora and vegetation survey limitations. 28
Table 12: Species richness summary and estimates for the survey area. 29
Table 13: Summary of significant plant species recorded within the survey area. 32
Table 14: Summary of introduced species recorded within the survey area. 33
Table 15: Summary of vegetation types within the survey area – group characterisation. 41
Table 16: Summary of vegetation types within the survey area – landforms, condition, significance, species richness, and extent. 43
Table 17: Vegetation condition of the survey area. 45

FIGURES

Figure 1: Monthly median rainfall and temperature for Bonney Downs (rainfall) and Marble Bar (temperature). 6
Figure 2: Asymptotic species richness estimated by the Chao2 non-parametric richness estimator and rarefaction curve (species observed) for the survey area after 400 sampling sites. 30
Figure 3: Photographs of significant species recorded by Ecologia within the survey area. 37
Figure 4: UPGMA hierarchical agglomerative clustering dendrogram showing floristic relationships among 375 sites. 39
Figure 5: Non-metric multidimensional scaling (NMDS) plots showing relationships among sites and vegetation types. 40
Figure 6: Representative photographs of vegetation types - 1. 54
Figure 7: Representative photographs of vegetation types - 2. 55
Figure 8: Representative photographs of vegetation types - 3. 56
Figure 9: Representative photographs of vegetation types - 4. 57
Figure 10: Representative photographs of vegetation types - 5. 58
Figure 11: Representative photographs of vegetation types - 6. 59

MAP FIGURES

Map 1: Location of the Bonney Downs survey area. 4
Map 2: Recent fire history of the survey area (DBCA-060) (2019-2024). 9
Map 3: Land systems (DPIRD 2016). 10
Map 4: DBCA Legislated Lands and Nationally Important Wetlands near the survey area. 11
Map 5: Significant plant species records within 50 km of the survey area. 15
Map 6: Pre-European vegetation associations (Shepherd et al. 2002). 19
Map 7: Significant ecological communities within 50 km of the survey area. 20
Map 8: Locations of sampling sites within the survey area. 27
Map 9: Significant plant species recorded within the survey area (Threatened, Priority 1, Priority 2). 34
Map 10: Significant plant species recorded within the survey area (Priority 3, Priority 4). 35
Map 11: Locations of *Calotropis procera* (Declared Pest) recorded within the survey area. 36
Map 12: Vegetation types recorded within the survey area (north-west). 47
Map 13: Vegetation types recorded within the survey area (north-east). 48
Map 14: Vegetation types recorded within the survey area (south-west). 49
Map 15: Vegetation types recorded within the survey area (south-east). 50
Map 16: Vegetation types recorded within the survey area (transmission corridor). 51
Map 17: Vegetation condition within the survey area. 52
Map 18: Significant and potentially significant vegetation within the survey area. 53

APPENDICES

Appendix A Desktop assessment database search results.
Appendix B Plant species recorded within the survey area (all Ecologia and SLR records 2023 – 2024) and names amalgamated for data analysis.
Appendix C UPGMA hierarchical agglomerative clustering dendrogram.
Appendix D Species constancy within vegetation types.
Appendix E Flora and vegetation sampling site data.
Appendix F DBCA Significant Species Report Forms.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Fortescue Limited (Fortescue) is investigating potential options for renewable energy generation sites as part of the commitment to decarbonise its mining operations in the Pilbara region of Western Australia. One of the options under consideration is the Bonney Downs project, a proposed wind generation hub and associated transmission line (PEC 8) connecting to Cloudbreak and Christmas Creek (the project).

Ecologia Environmental Consultants (*ecologia*) was engaged by Fortescue to undertake a two-phase detailed flora and vegetation assessment of the Bonney Downs Consolidated survey area (the survey area, Map 1) (approximately 108,841 ha) to inform environmental approvals applications for the potential development of the project. The survey area is located mostly west of Marble Bar Road, approximately 80 km south of Marble Bar in the Pilbara region of Western Australia (WA).

Most of the survey area has been surveyed recently by *ecologia* (Bonney Downs North (*ecologia*, 2024)) and SLR (Bonney Downs East (SLR, 2024)) (Map 1). The objective of this survey was to undertake a detailed flora and vegetation survey and targeted flora survey within the remaining parts of the survey area and to combine the data from all three projects into a consolidated analysis and report detailing the flora and vegetation values of the entire area.

1.2 SCOPE OF WORK

Fortescue required the services of a suitably qualified and experienced consultant to undertake a two-phase detailed flora and vegetation survey, targeted searches for conservation significant plant species and communities, and a consolidated assessment for the whole of the survey area. The following were therefore provided as part of this assessment:

- A desktop assessment to evaluate biological values of the survey area and surrounds, including a review of existing physical and biological values, significant species and communities, and other relevant available data.
- A two-phase detailed flora and vegetation survey and targeted flora assessment within unsurveyed parts of the area in accordance with Environmental Protection Authority (EPA) *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b).
- Consolidated vegetation classification, characterisation, and mapping of vegetation types and condition.
- Consolidated assessment of significant flora, significant vegetation, and introduced species.

1.3 LEGISLATIVE AND REGULATORY FRAMEWORK

The EPA objective for the *Flora and Vegetation* factor (EPA, 2016a) is to protect flora and vegetation so that biological diversity and ecological integrity are maintained. In this context, ecological integrity is the composition, structure, function and processes of ecosystems, and the natural range of variation of these elements. The primary objective of this assessment was to provide sufficient information to assess the impact of any proposed development on the flora and vegetation of the survey area, thereby ensuring that the EPA's objective can be met.

The survey was designed and undertaken to comply with the following EPA guidance documents:

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

1.4 DEFINITIONS

1.4.1 Significant Flora

According to the *EPA Factor Guideline: Flora and Vegetation* (EPA, 2016a), plant taxa (or records) may be considered significant for several reasons including, but not restricted to, the following:

- A taxon listed as Threatened under Western Australia's *Biodiversity Conservation Act 2016* (BC Act) or the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- A taxon on the Department of Biodiversity, Conservation and Attractions (DBCA) Priority Flora List (DBCA, 2020)
- Locally endemic species or those associated with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems).
- New species or those having anomalous features that indicate a potential new species.
- Being representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range).
- Unusual species, including restricted subspecies, varieties or naturally occurring hybrids.
- Being representative of taxonomic groups that no longer occur widely in the broader landscape (relictual species/populations).

1.4.2 Significant Vegetation

According to *EPA Factor Guideline: Flora and Vegetation* (EPA, 2016a), vegetation may be considered significant for reasons including, but not restricted to, the following:

- Being listed as a Threatened Ecological Community (TEC) under the BC Act or the EPBC Act.
- Being listed as a Priority Ecological Community (PEC) by DBCA.
- Having a restricted distribution.
- The degree of historical impact from threatening processes.
- Playing a role as a refuge.
- Providing an important function required to maintain ecological integrity of a significant ecosystem.

1.4.3 Introduced Plants

Weeds of National Significance

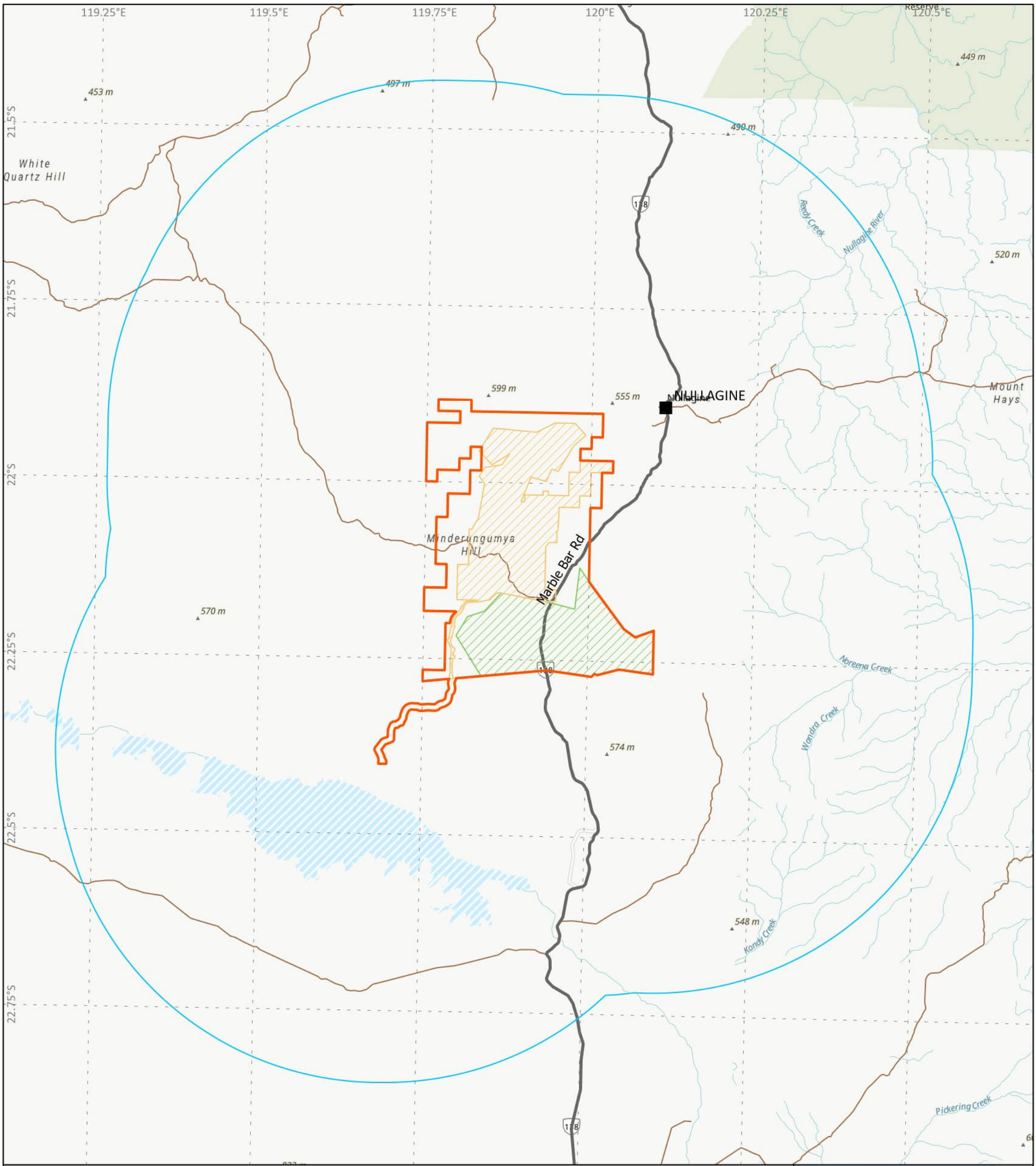
Under the Australian Weeds Strategy there are 32 introduced plant species listed as Weeds of National Significance (WONS) that are "causing major economic, environmental and/or social impacts in a number of states or territories with strong potential for further spread" (DAWR, 2017). These species require "coordinated and strategic management along with shared stakeholder investment to develop and implement best practice to prevent, eradicate, contain and/or minimise impacts in different parts of the nation" (DAWR, 2017).

Biosecurity and Agriculture Management Act 2007

The purpose of Western Australia's *Biosecurity and Agriculture Management Act 2007* (BAM Act) is to prevent serious animal and plant pests and diseases from entering Western Australia and becoming established, and to minimise the spread and impact of those that are already present. The Western Australian Organism List (WAOL) lists organisms that are categorised under the BAM Act into five legal categories: 'Declared Pest, Prohibited -s12', 'Declared Pest -s22(2)', 'Permitted -s11', 'Permitted, Requires Permit -r73', and 'Unlisted -s14'. A Declared Pest may be subject to control and keeping requirements once within Western Australia.

Regional Weed Prioritisation Process

At a regional level in Western Australia, introduced plant species are ranked using the Weed Prioritisation Process (DPaW, 2013). The process is intended to "highlight the species that have the highest ecological impact, most extensive potential distribution, highest invasiveness, lowest current distribution and highest feasibility of control within a regional context based on the information available at the time" (DPaW, 2013).



Bonney Downs Survey area
Bonney Downs North survey area (Ecologia 2023)
Bonney Downs East survey area (SLR 2023)
Desktop study area (50 km)
Minor roads
State roads
Towns

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Project No.: 1991
Author: AS
Created Date: 11 December 2024
Coordinate System: GDA 1994 MGA Zone 50
Projection: Transverse Mercator
Scale: 1:562,683 @A3

Map 1: Location of the Bonney Downs survey area.

0 5 10 20
Kilometers

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

2 DESKTOP ASSESSMENT

2.1 DESKTOP METHODOLOGY

The methodology adopted for the desktop assessment was in accordance with the *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b). A review of background environmental information for the survey area was undertaken, including, but not limited to, climate (Bureau of Meteorology, BOM), biogeography (IBRA 7) (DSEWPaC, 2012), soil-landscape systems (land systems) (DPIRD, 2016), the Surface Geology of Australia 1:1M spatial dataset (Geoscience Australia, 2012), the Atlas of Australian Soils (Northcote et al., 1960-1968), and pre-European native vegetation of Western Australia (D. P. Shepherd, Beeston, & Hopkins, 2002).

Searches of the databases listed in Table 1 were undertaken to determine the significant species and ecological communities previously recorded within 50 km of the survey area. The Atlas of Living Australia (ALA) database was used in place of NatureMap for this desktop assessment due to current data quality issues. The criteria listed in Table 2 were then applied to determine the likelihood of occurrence of these species and communities within the survey area. To assist in the assessment, habitat preferences were sourced, where available, from relevant taxonomic literature, FloraBase records (Western Australian Herbarium, 1998–), Threatened Species Profiles (SPRATs), or specimen data from the Australasian Virtual Herbarium (AVH) database (CHAH, 2017).

Table 1: Databases queried for the desktop assessment.

Database	Search details	Access number/date
EPBC Act Protected Matters database	Records of matters of national significance under the EPBC Act within 50 km of the survey area.	29 May 2023
DBCA Threatened and Priority Ecological Communities	TECs and PECs within 50 km of the survey area.	36-0224EC, 22 February 2024
DBCA WAHERB and TPFL	Significant species records within 50 km of the survey area.	32-022FL, 15 February 2024
Atlas of Living Australia (ALA)	All vascular plant species records within 50 km of the survey area.	23 February 2024
Fortescue's significant flora database	Significant species records within 50 km of the survey area.	March 2023

Table 2: Criteria used to assess the likelihood of occurrence of significant species and communities.

Rating	Criterion
Recorded	The species/community has been recorded within the survey area.
Likely	Suitable habitat is almost certainly present and there are records immediately adjacent to survey area.
Possible	Suitable habitat is likely to be present and there are records within 50 km of the survey area, or there is insufficient information available to exclude the possibility of occurrence.
Unlikely	Suitable habitat is not likely to be present and/or there are no records within 50 km of the survey area.
Does not occur	The community is an existing regionally mapped vegetation association (e.g. Shepherd et al. 2002) or land system (e.g. DPIRD 2016) which does not occur within the survey area; or The species is recognised as being locally extinct or extinct in the wild and does not occur within the survey area.

2.2 RAINFALL AND TEMPERATURE

Rainfall data from the nearest long-term Bureau of Meteorology (BoM) weather station (since 1907) were obtained from Bonney Downs (Station No. 5006), located 2.0 km to the south of the survey area. Bonney Downs received a significant amount of rainfall in April 2023, two months prior to the primary survey in June 2023, but rainfall was slightly below the historical monthly median values in May 2023 (Figure 1). Bonney Downs also received well above average rainfall in January 2024, about a month prior to the primary survey in early March 2024, but below average rainfall in February 2024. Temperature data were obtained from Marble Bar (Station No. 7185) (BoM, 2024), which is located 83.9 km north of the survey area. Maximum daytime temperature at Marble Bar is frequently above 40°C between November and February and minimum temperatures can drop below 15°C between June and August (Figure 1).

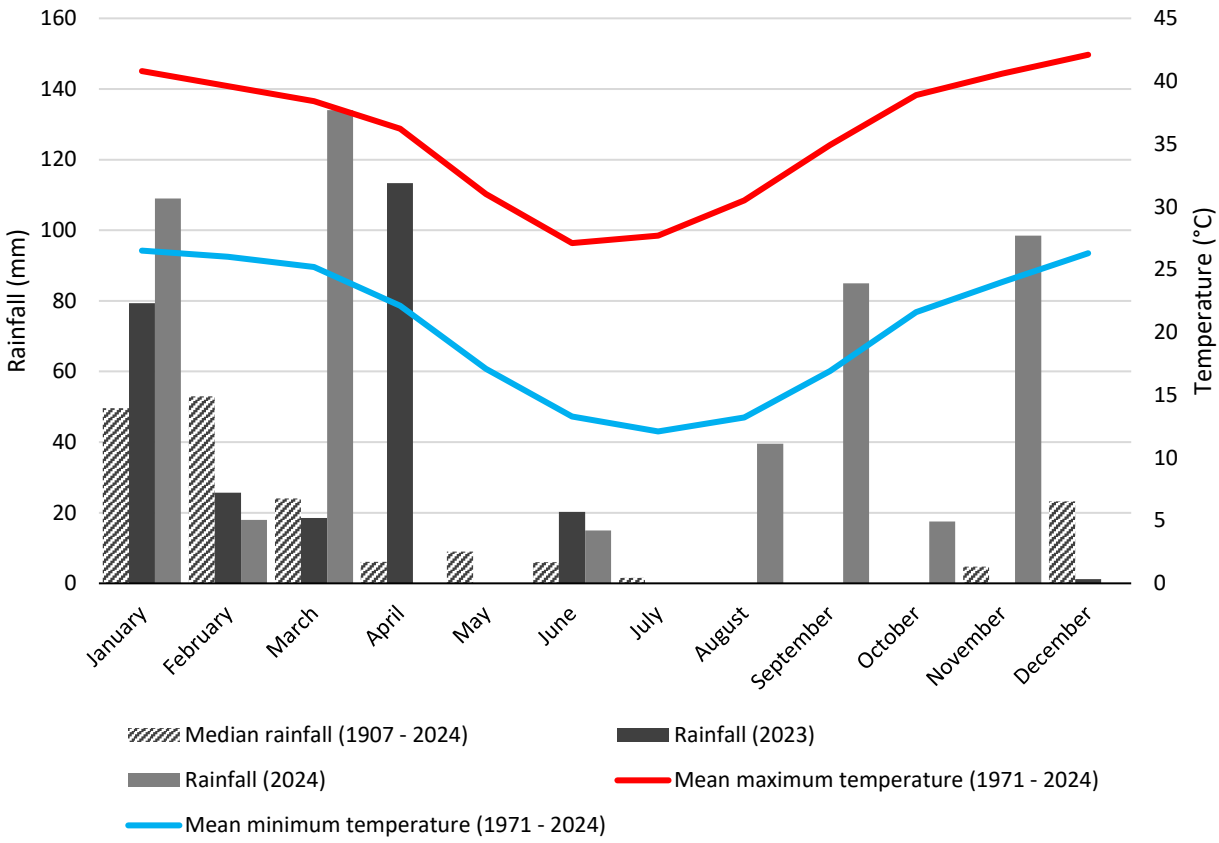


Figure 1: Monthly median rainfall and temperature for Bonney Downs (rainfall) and Marble Bar (temperature).

2.3 FIRE HISTORY

The fire history of the survey area was determined using the DBCA Fire History (DBCA-060) dataset (last updated 13 August 2024) (DBCA, 2024), which contains records of fire events (updated biannually), including information from completed projects including the Great Western Woodlands (GWW), Gnangara Sustainability Strategy (GSS), and remote sensing of Pilbara fire scars. The largest recorded recent fires occurred in 2019, with some scattered smaller fires occurring from 2020 to 2022 (Map 2). There were no fires recorded within the survey area from 2023 or 2024 according to this dataset.

2.4 INTERIM BIOGEOGRAPHIC REGIONALISATION FOR AUSTRALIA

The Interim Biogeographic Regionalisation for Australia (IBRA) classifies the Australian continent into bioregions based on similar geology, landform, vegetation, fauna and climate characteristics (DSEWPaC, 2012). The survey area is in the Pilbara bioregion according to IBRA 7. The Pilbara region is further divided into four subregions: Hamersley, Fortescue Plains, Chichester, and Roebourne. The survey area is in the Chichester subregion.

The Chichester subregion comprises the northern section of the Pilbara Craton (Kendrick & McKenzie, 2001). Undulating Archaean granite and basalt plains include significant areas of basaltic ranges. Plains support a shrub steppe characterised by *Acacia inaequilatera* over *Triodia wiseana* hummock grasslands, while *Euclayptus leucophloia* tree steppes occur on ranges. The climate is semi desert tropical and receives approximately 300 mm of rainfall annually. Drainage occurs to the north via numerous rivers (e.g., De Grey, Oakover, Nullagine, Shaw, Yule and Sherlock). The subregional area is 9,044,560 ha (Kendrick & McKenzie, 2001).

2.5 LAND SYSTEMS

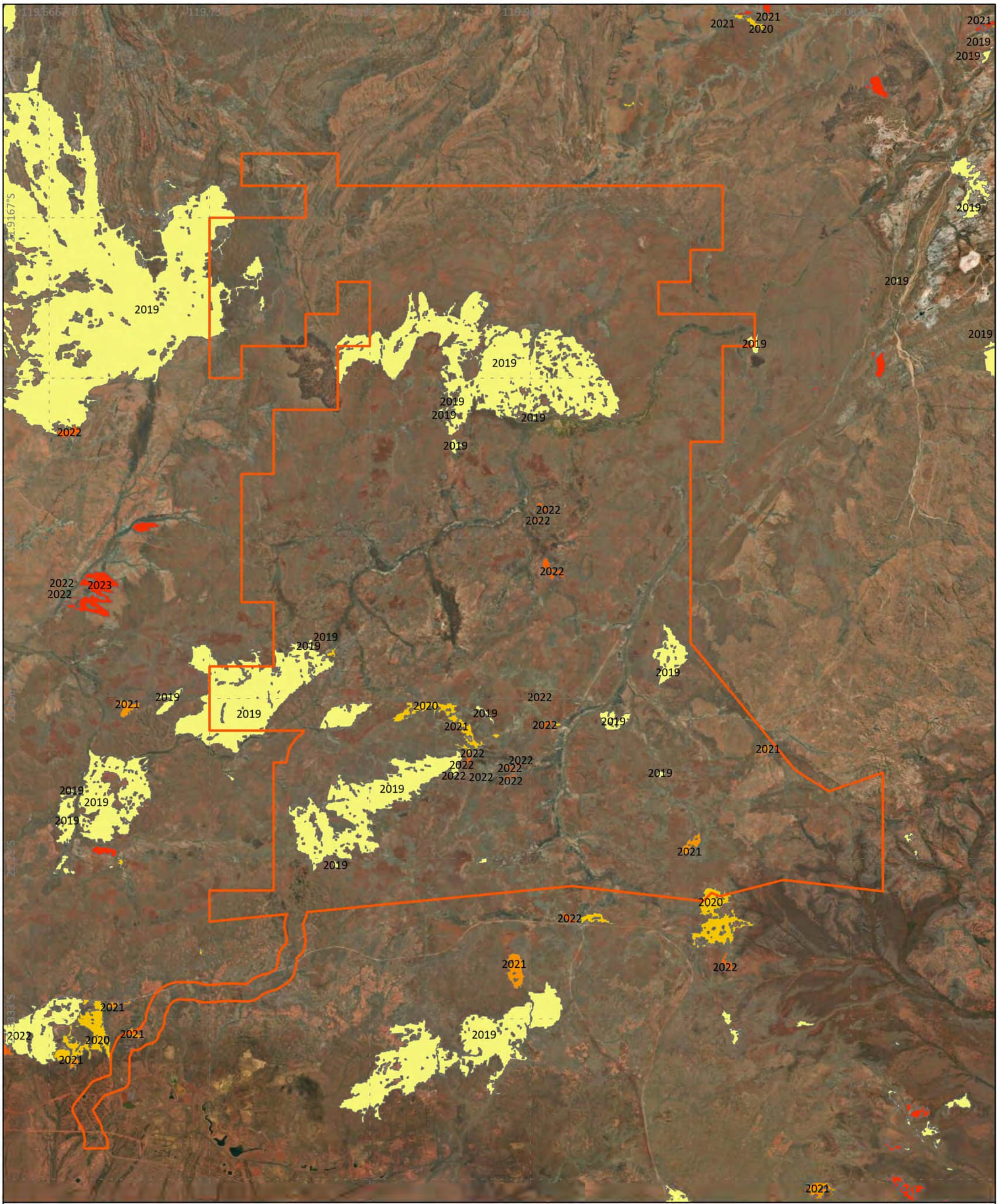
In 2016 the Department of Primary Industries and Regional Development (DPIRD) consolidated soil-landscape mapping of Western Australia from two technical reports created by the Department of Agriculture and Food (Department of Agriculture Resource Management Technical Reports RMTR No. 280 (Purdie, Tille, & Schoknecht, 2016) and RMTR No. 313 (Tille, 2006)). The resulting spatial dataset, Soil Landscape Mapping – Best Available (DPIRD-027) (DPIRD, 2022), is a compilation of various surveys at different scales varying between 1:20,000 and 1:3,000,000. Mapping conforms to a nested hierarchy established to deal with the varying levels of information resulting from the variety of scales in mapping to provide soil-landscape data for all of Western Australia. Seventeen soil-landscape systems (land systems) are associated with the survey area, with the Rocklea system being the most prominent (55.1%) (Table 3, Map 3).

2.6 DBCA MANAGED LANDS AND NATIONALLY IMPORTANT WETLANDS

Spatial datasets were queried for DWER Environmentally Sensitive Areas (ESAs) (DWER-046), Nationally Important Wetlands (DBCA-045), and DBCA managed lands and waters (DBCA-011), occurring in the vicinity of the survey area. One ESA occurs approximately 25 km south of the survey area: Fortescue Marsh (Nationally Important Wetland) (Map 4).

Table 3: Land systems associated with the survey area (DPIRD-027).

Land system	Description	Extent within survey area (ha)	Extent within survey area (%)
Bonney system	Low rounded hills and undulating stony plains supporting soft spinifex grasslands.	17,778	16.33
Capricorn system	Rugged sandstone hills, ridges, stony footslopes and interfluves supporting low acacia shrublands or hard spinifex grasslands with scattered shrubs.	6,296	5.78
Elimunna system	Stony plains on basalt supporting sparse acacia and cassia shrublands and patchy tussock grasslands.	430	0.40
Granitic system	Rugged granitic hills supporting shrubby hard and soft spinifex grasslands.	1,839	1.69
Jamindie system	Stony hardpan plains and rises supporting groved mulga shrublands, occasionally with spinifex understorey.	630	0.58
Laterite system	Low lateritic plateaux, mesas, buttes and gravelly rises and plains supporting sparse mulga shrublands.	1,762	1.62
Macroy system	Stony plains and occasional tor fields based on granite supporting hard and soft spinifex shrubby grasslands.	236	0.22
McKay system	Hills, ridges, plateaux remnants and breakaways of metasedimentary and sedimentary rocks supporting hard spinifex grasslands with acacias and occasional eucalypts.	5,728	5.26
Newman system	Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.	305	0.28
Pindering system	Gravelly hardpan plains supporting groved mulga shrublands with hard and soft spinifex.	4	<0.01
River system	Narrow, seasonally active floodplains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex.	499	0.46
Robe system	Low plateaux, mesas and buttes of limonite supporting soft spinifex and occasionally hard spinifex grasslands.	4,314	3.96
Rocklea system	Basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex and occasionally soft spinifex grasslands with scattered shrubs.	59,920	55.05
Spearhole system	Gently undulating gravelly hardpan plains and dissected slopes supporting groved mulga shrublands and hard spinifex	274	0.25
Talga system	Hills and ridges of greenstone and chert and stony plains supporting hard and soft spinifex grasslands	557	0.51
Turee system	Stony alluvial plains with gilgaied and non-gilgaied surfaces supporting tussock grasslands and grassy shrublands of mulga and snakewood	35	0.03
Wona system	Basalt upland gilgai plains supporting Roebourne Plains grass and Mitchell grass tussock grasslands, minor hard spinifex grasslands or annual grasslands/herbfields	8,235	7.57

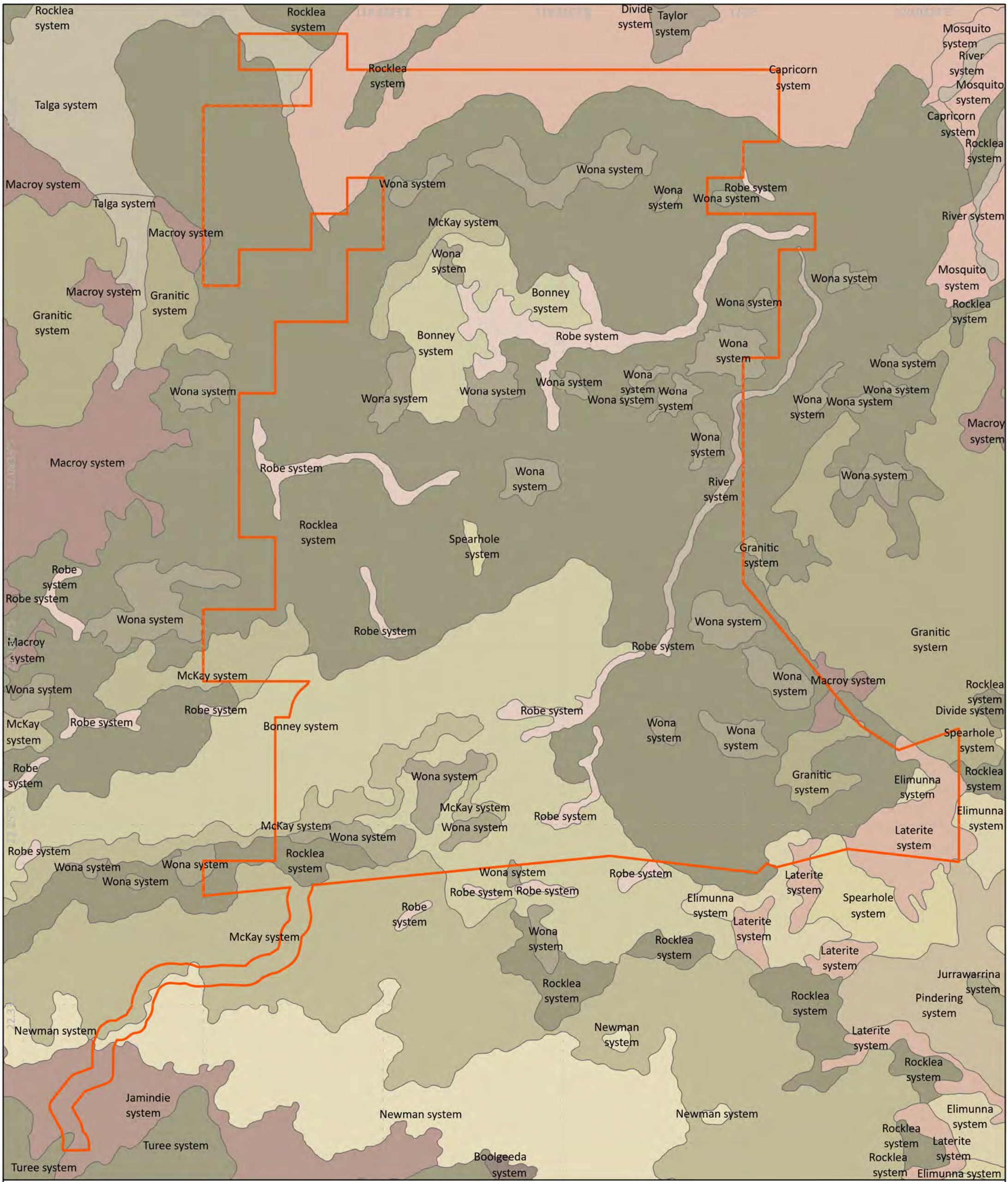


Project No.: 1991
Author: AC
Created Date: 11 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:200,000 @A3

Map 2: Recent fire history of the survey area (DBCA-060) (2019-2024).

0 2.5 5 10
Kilometers

Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS



Bonney Downs survey area

Land system

- Bonney system
- Boolgeeda system
- Capricorn system
- Divide system
- Elimunna system
- Granitic system
- Jamindie system
- Jurrawarrina system
- Laterite system
- Macroy system
- McKay system
- Mosquito system
- Newman system
- Pindering system
- River system
- Robe system
- Rocklea system
- Spearhole system
- Talga system
- Taylor system
- Turee system
- Wona system

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Scale: 1:180,000 @A3

Map 3: Land systems (DPIRD 2016).

0 2.5 5 10
Kilometers

Survey area

Environmentally Sensitive Area (DWER-046)

Nationally Important Wetlands (DBCA-045)

DBCA Managed Lands and Waters (DBCA-011)

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Project No.: 1991
Author: AS
Created Date: 8 October 2024
Coordinate System: GCS GDA 1994
Scale: 1:1,100,000 @A3

Map 4: DBCA Legislated Lands and Nationally Important Wetlands near the survey area.

0 12.5 25 50 Kilometers

Earthstar Geographics

2.7 FLORA

2.7.1 Floristic Diversity

A search of the Atlas of Living Australia (ALA) database (ALA, 2023) identified a total of 796 native vascular plant taxa, 15 naturalised vascular plant taxa, and one declared pest: *Parkinsonia aculeata* (including species, infraspecific taxa, and phrase name taxa), from 69 families and 258 genera, within 50 km of the survey area (Appendix A). The most diverse families were the Fabaceae (149 taxa), Poaceae (112), Malvaceae (64), Chenopodiaceae (61), Asteraceae (56), Amaranthaceae (38). The most diverse genera were *Acacia* (54 taxa), *Ptilotus* (23), *Goodenia* (16), *Sclerolaena* (15), *Eragrostis* (14), and *Eucalyptus* (13).

2.7.2 Significant Species

Database searches (WAHERB, TPFL, and Fortescue's Significant Flora database) identified 59 significant plant taxa occurring within 50 km of the survey area (Table 4), including one EPBC Act and BC Act listed Threatened species (*Quoya zonalis*) (Map 5, Table 4). Species identity has been anonymised on Map 5 in accordance with DBCA's Conditions of Supply, and the locations of *Quoya zonalis* (T) have been omitted. Several of these species are associated with the Fortescue Marsh to the south of the survey area. No EPBC Act listed plant species were identified by the PMST search (Appendix A). The likelihood for each taxon to occur within the survey area was assessed using the criteria outlined in section 2.1.

Seven significant taxa have previously been recorded from the survey area: *Atriplex flabelliformis* (P3), *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3), *Indigofera ixocarpa* (P2), *Iotasperma sessilifolium* (P3), *Ptilotus mollis* (P4), *Stemodia* sp. Battle Hill (A.L. Payne 1006) (P1), and *Swainsona thompsoniana* (P3). Based on the proximity of previous records and the potential presence of suitable habitat, 38 significant taxa were identified as having potential to occur within the survey area (i.e., Likely and Possible likelihood of occurrence ratings) (Table 4). Fourteen taxa were assessed as Unlikely to occur due to the probable absence of suitable habitat within the survey area or because they are known to have very restricted distributions that are not in close vicinity of the survey area (Table 4). Several taxa identified by the database searches and assessed as Unlikely are associated with the Fortescue Marsh, which is ca. 25 km south of the survey area, and therefore suitable habitat is unlikely to be present.

2.7.3 Introduced Species

A search of the Atlas of Living Australia database (ALA, 2023) identified 16 introduced plant species within 50 km of the survey area (Table 5). One species is listed as a Weed of National Significance (WONS) (DAWR, 2017): **Parkinsonia aculeata*. Eight species have a high ecological impact rating and a rapid invasiveness rating according to the Weed Prioritisation Process for the region (**Aerva javanica, *Cenchrus ciliaris, *Cenchrus setiger, *Echinochloa colona, *Malvastrum americanum, *Parkinsonia aculeata, *Setaria verticillata*, and **Vachellia farnesiana*).

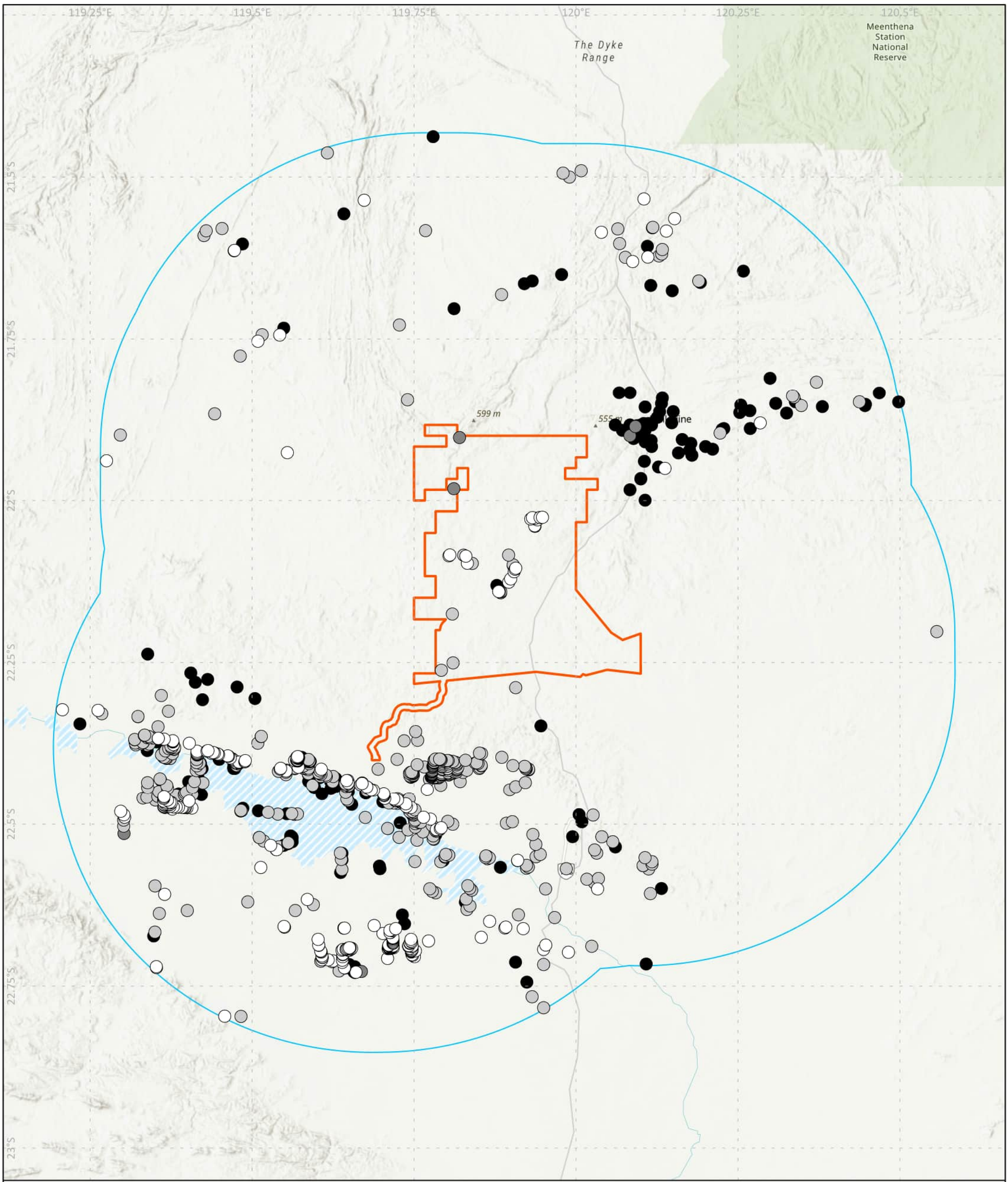
Table 4: Significant plant species recorded within 50 km of the survey area.

Taxon	Status (DBCA)	Habitat	Known flowering period	Approx. distance to nearest record	Likelihood of suitable habitat within the survey area	Post-survey likelihood of occurrence
Pre-survey likelihood: Recorded						
Atriplex flabelliformis	P3	Recorded from saline and swampy soils or seasonally inundated lateritic soils.	–	NA	NA	Recorded
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	P3	Cracking clays, clay plains, floodplains, flat and low in landscape. Red to brown loamy clays. Surface pebbles and cobbles.	May to July, September	NA	NA	Recorded
Indigofera ixocarpa	P2	Skeletal red soils over massive ironstone.	May	NA	NA	Recorded
Iotasperma sessilifolium	P3	Gilgai, cracking clays & crab hole country in periodically flooded areas.	–	NA	NA	Recorded
Ptilotus mollis	P4	Steep rocky slopes, massive ironstone formations.	May to September	NA	NA	Recorded
Stemodia sp. Battle Hill (A.L. Payne 1006)	P1	Cracking clay. Floodplain.	July to September	NA	NA	Recorded
Swainsona thompsoniana	P3	Open flood plains on heavy clay soils.	August to September	NA	NA	Recorded
Pre-survey likelihood: Likely						
Acacia cyperophylla var. *omearana*	P1	Stony & gritty alluvium. Along drainage lines.	March to April	5 km	Likely	Recorded
Acacia levata	P3	Sand or sandy loam over granite. Low rocky hills.	May	5 km	Likely	Unlikely
Ipomoea racemigera	P3	Sandy soils along watercourses.	March to August	0.6 km	Likely	Recorded
Quoya zonalis	T	Hills, hilltops, rocky slopes. Clay loam. Granite.	August	3 km	Likely	Recorded
Rostellularia adscendens var. *latifolia*	P3	Ironstone soils. Near creeks, rocky hills.	April to May	4 km	Likely	Recorded
Rhagodia sp. Hamersley (M. Trudgen 17794)	P3	Mulga woodlands on cracking clays.	–	1.5 km	Likely	Unlikely
Solanum sp. Mosquito Creek (A.A. Mitchell et al. AAM 10795)	P1	Plains, flats, depressions. Light brown & grey clay	June to October	5 km	Likely	Unlikely
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	P3	Clay pan, grass plain.	August	3 km	Likely	Unlikely
Pre-survey likelihood: Possible						
Atriplex spinulosa	P1	Drainage floor with quartz.	–	10 km	Possible	Unlikely
Acacia aphanoclada	P1	Skeletal stony soils. Rocky hills, ridges & rises.	August to October	7 km	Likely	Unlikely
Bulbostylis burbidgeae	P4	Granitic soils. Granite outcrops, cliff bases.	March to August	21 km	Likely	Recorded
Euphorbia inappendiculata var. *inappendiculata*	P3	Clay soils. Among broken rocky screes.	August	41 km	Likely	Recorded
Goodenia pedicellata	P1	Rocky clayey soils. Rocky slopes and crests of small hills.	–	10 km	Likely	Unlikely
Nicotiana umbratica	P3	Shallow soils. Rocky outcrops.	April to June	47 km	Likely	Recorded
Ptilotus wilsonii	P1	Stony gravelly soils. Rocky hills.	October	9 km	Likely	Unlikely
Lepidium catapycnon	P4	Skeletal soils. Hillsides.	October	28 km	Likely	Unlikely
Rhynchosia bungarensis	P4	Rock piles, gorges, riverbeds and alluvial soils.	–	28 km	Likely	Unlikely
Rorippa sp. Fortescue Valley (M.N. Lyons & R.A. Coppen FV 0760)	P1	Riparian slope at water's edge.	–	36 km	Possible	Unlikely
Acacia fecunda	P1	Quartzite gibbers over grey-red skeletal soil. Along shallow creeks and drainage lines, hills.	May to August	22 km	Possible	Unlikely
Acacia sp. Nullagine (B.R. Maslin 4955)	P1	Low-lying area between rocky hills on rocky clay.	May to July	27 km	Possible	Unlikely
Acacia subtiliformis	P3	On rocky calcrete plateaus.	June to October	39 km	Possible	Unlikely
Amaranthus centralis	P3	Red sand in ephemeral watercourses, sandy to clayey loam on riverbanks and edges of permanent pools in eucalypt lined channels.	January to December	24 km	Possible	Unlikely
Calotis squamigera	P1	Pebbly red-brown loam.	–	11 km	Possible	Unlikely
Cochlospermum macnamarae	P1	Upper slopes of low hills. Shallow stony soil over granite.	–	26 km	Possible	Unlikely
Eleocharis papillosa	P3	Red clay over granite, open clay flats. Claypans.	November	7 km	Possible	Unlikely
Eragrostis sp. erect spikelets (P.K. Latz 2122)	P3	Gravelly creekline, sandy calcrete rises & platforms.	–	30 km	Possible	Unlikely
Eremophila pilosa	P1	Red-brown clay loam and sandy plains.	August to September	41 km	Possible	Unlikely
Eucalyptus rowleyi	P3	Creeks, drainage lines. Seasonal inundation. Red, grey loam, sand.	June	23 km	Possible	Unlikely
Euphorbia australis var. *glabra*	P3	Various habitats.	April to November	26 km	Possible	Unlikely
Fimbristylis sp. Shay Gap (K.R. Newbey 10293)	P1	Sandy soil along drainage lines.	June to July	38 km	Possible	Unlikely
Gompholobium sp. Roy Hill (G. Buller ATF08 AQ14)	P1	Clay loam, hills.	April	24 km	Possible	Unlikely
Gymnanthera cunninghamii	P3	Permanent or semi-permanent water courses on sandy soils.	January to December	48 km	Possible	Unlikely
Isotropis parviflora	P3	Valley slopes of ironstone plateaus.	March	36 km	Possible	Unlikely
Phyllanthus hebecarpus	P3	Sandy areas, granite domes.	April to August	42 km	Possible	Unlikely
Stackhousia clementii	P3	Skeletal soils. Sandstone hills.	–	35 km	Possible	Unlikely
Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3	Cracking clay plains, floodplains and fans, flat to gentle incline. Red-brown cracking clay, sandy clay, red clay loam. Ironstone, calcrete, sodic and saline alluvium, pebbles and cobbles.	June to September	33 km	Possible	Unlikely
Themeda sp. Panorama (J. Nelson et al. NS 102)	P1	Gullies, gorges, slopes or rocky creeks.	–	49 km	Possible	Unlikely
Triodia veniciae	P1	Low shale hill, crest, slopes.	–	9 km	Possible	Unlikely
Pre-survey likelihood: Unlikely						
Dysphania congestiflora	P3	Fortescue Marsh. Saline, deep, light-medium to heavy clay soils.	June to August	18 km	Unlikely	Unlikely
Eremophila spongiocarpa	P3	Sub-saline red clay loams in the Fortescue Marsh.	May or September	4 km	Unlikely	Unlikely
Eremophila youngii subsp. *lepidota*	P4	Stony red sandy loam. Flats plains, floodplains, sometimes semi-saline, clay flats.	January to September	4 km	Unlikely	Unlikely

Taxon	Status (DBCA)	Habitat	Known flowering period	Approx. distance to nearest record	Likelihood of suitable habitat within the survey area	Post-survey likelihood of occurrence
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	P3	Known with certainly only in the vicinity of Mulga Downs Homestead, in a swamp on a major river system.	–	48 km	Unlikely	Unlikely
Helichrysum oligochaetum	P1	Depressions and floodplains in clay soils. Associated with the Fortescue and Ashburton River systems.	August to November	29 km	Unlikely	Unlikely
Heliotropium murinum	P3	Red sand plains, gibber plains, near granite and in *Triodia* hummock grasslands.	May to September	17 km	Unlikely	Unlikely
Lindernia sp. Pilbara (M.N. Lyons & L. Lewis FV 1069)	P1	Claypans, wetlands, riparian slopes.	–	36 km	Unlikely	Unlikely
Myriocephalus scalpellus	P1	Clay. Depression on flood plain.	July to September	27 km	Unlikely	Unlikely
Rothia indica subsp. *australis*	P3	Sandy soils. Sandhills and sandy flats.	April to August.	32 km	Unlikely	Unlikely
Samolus sp. Fortescue Marsh (A. Markey & R. Coppen FM 9702)	P1	Fortescue Marsh.	–	5 km	Unlikely	Unlikely
Tecticornia globulifera	P1	Moderately saline flats on red-brown gritty clay.	August to November	7 km	Unlikely	Unlikely
Tecticornia medusa	P3	Fortescue Marsh. Red-brown gritty clay on a saline alluvial plain and is found in dense populations some distance from the shoreline.	July to November	8 km	Unlikely	Unlikely
Tecticornia sp. Christmas Creek (K.A. Shepherd & T. Colmer et al. KS 1063)	P1	Saline flats of Fortescue marsh on red-brown clay.	August to November	5 km	Unlikely	Unlikely
Stylidium weeliwolli	P3	Permanent watercourses and springs.	Ausust to September	40 km	Unlikely	Unlikely

Table 5: Introduced plant species recorded within 50 km of the survey area including BAM Act status and Weed Prioritisation Process rating.

Species	Common name	BAM Act status and WONS	Ecological impact	Invasiveness
Aerva javanica	Kapok bush	Permitted - s11	High	Rapid
Asphodelus fistulosus	Onion weed	Permitted - s11	Unknown	Rapid
Bidens bipinnata	Bipinnate beggar's tick	Permitted - s11	Unknown	Rapid
Cenchrus ciliaris	Buffel grass	Permitted - s11	High	Rapid
Cenchrus setiger	Birdwood grass	Permitted - s11	High	Rapid
Citrullus colocynthis	Colocynth	Permitted - s11	Unknown	Moderate
Cucumis melo	Bush cucumber	Permitted - s11	Unknown	Moderate
Datura leichhardtii	Leichhardt's thornapple	Permitted - s11	Unknown	Unknown
Echinochloa colona	Awnless barnyard grass	Permitted - s11	High	Rapid
Malvastrum americanum	Spiked malvastrum	Permitted - s11	High	Rapid
Parkinsonia aculeata	Parkinsonia	Declared Pest - s22(2) (WONS)	High	Rapid
Portulaca oleracea	Purslane	Permitted - s11	Unknown	Unknown
Setaria verticillata	Whorled pigeon grass	Permitted - s11	High	Rapid
Sonchus oleraceus	Common sowthistle	Permitted - s11	Low	Rapid
Tribulus terrestris	Caltrop	Permitted - s11	Unknown	Moderate
Vachellia farnesiana	Mimosa bush	Permitted - s11	High	Rapid



Bonney Downs Survey area

Study area (50 km)

Priority 1 (DBCA)

Priority 2 (DBCA)

Priority 3 (DBCA)

Priority 4 (DBCA)

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Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:600,000 @A3

Map 5: Significant plant species records within 50 km of the survey area..

0 6.7 13.3 20 40 Kilometers

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR

2.8 VEGETATION

2.8.1 Pre-European Vegetation

The Western Australian Land Use and Vegetation Data Project produced a 1:250,000 scale digital spatial dataset of the pre-European native vegetation of Western Australia, compiled from previous vegetation mapping exercises, primarily by J.S. Beard from 1964 to 1981, with updates reflecting the National Vegetation Information System (NVIS) standards (D. P. Shepherd et al., 2002). Six vegetation associations are mapped within the survey area, which consists almost entirely of association 173 (96.8%) (Table 6, Map 6).

The pre-European and current extent of each vegetation association is available from the Statewide Vegetation Statistics dataset (Government of Western Australia, 2018). The National Objectives and Targets for Biodiversity Conservation 2001-2005 (DEH, 2001) recognise that the retention of 30% or more of the pre-clearing extent of an ecological community is necessary if Australia's biological diversity is to be protected, as this is the threshold below which species loss appears to accelerate exponentially (EPA, 2000). Vegetation associations occurring outside of constrained areas (i.e., Perth Metropolitan, Peel and Greater Bunbury Region Schemes) at less than 30% of their pre-European extent are classified as either 'Vulnerable' (10-30%) or 'Endangered' (< 10 %) and should not be cleared according to Principle (e) of the native vegetation clearing guidelines (DER, 2014). The current extent of all six vegetation associations in the Pilbara bioregion is greater than 99%, well above the 30% threshold (Table 6), and are classified as 'least concern' (DER, 2014).

Table 6: Pre-European vegetation associations mapped with the survey area (D. P. Shepherd et al., 2002).

Vegetation association	Description	Pre-European extent within Pilbara IBRA (ha)	Percentage remaining within Pilbara IBRA	Current percentage protected for conservation within Pilbara IBRA	Extent within survey area (ha)
18	Low woodland; mulga (*Acacia aneura*).	676,556.72	99.30	16.76	708.42
29	Sparse low woodland; mulga, discontinuous in scattered groups.	1,133,219.76	99.87	1.91	736.86
82	Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.	2,563,583.23	99.50	10.26	884.52
93	Hummock grasslands, shrub steppe; kanji over soft spinifex.	3,042,114.27	99.88	0.44	181.51
173	Hummock grasslands, shrub steppe; kanji over soft spinifex & *Triodia wiseana* on basalt.	1,752,520.89	99.72	7.49	105347.51
562	Mosaic: Low woodland; mulga in valleys / Hummock grasslands, open low tree-steppe; snappy gum over *Triodia wiseana*.	103,606.82	100.00	nil	970.59

2.8.2 Threatened and Priority Ecological Communities

DBCA database searches (Appendix A) and the EPBC Act Protected Matters Report (Appendix B) indicate that no EPBC Act or BC Act listed TECs occur within 50 km of the survey area. DBCA database searches identified five PECs within 50 km of the survey area (Table 7, Map 7).

The 'Four plant assemblages of the Wona Land System' PEC includes four grassland communities occurring on cracking clay soils. The Wona land system, including an administrative buffer, is present within the survey area, occupying an extent of 19,435 ha (17% of the survey area). The remaining communities are either specific land systems that are not present within the survey area (Marsh land

system, Narbung land system), specific to a land system that is not present within the survey area (Stony saline plains of the Mosquito Land System) or are restricted to a specific habitat type that is not present within the survey area (Freshwater claypans of the Fortescue Valley).

2.8.3 Groundwater Dependent Vegetation

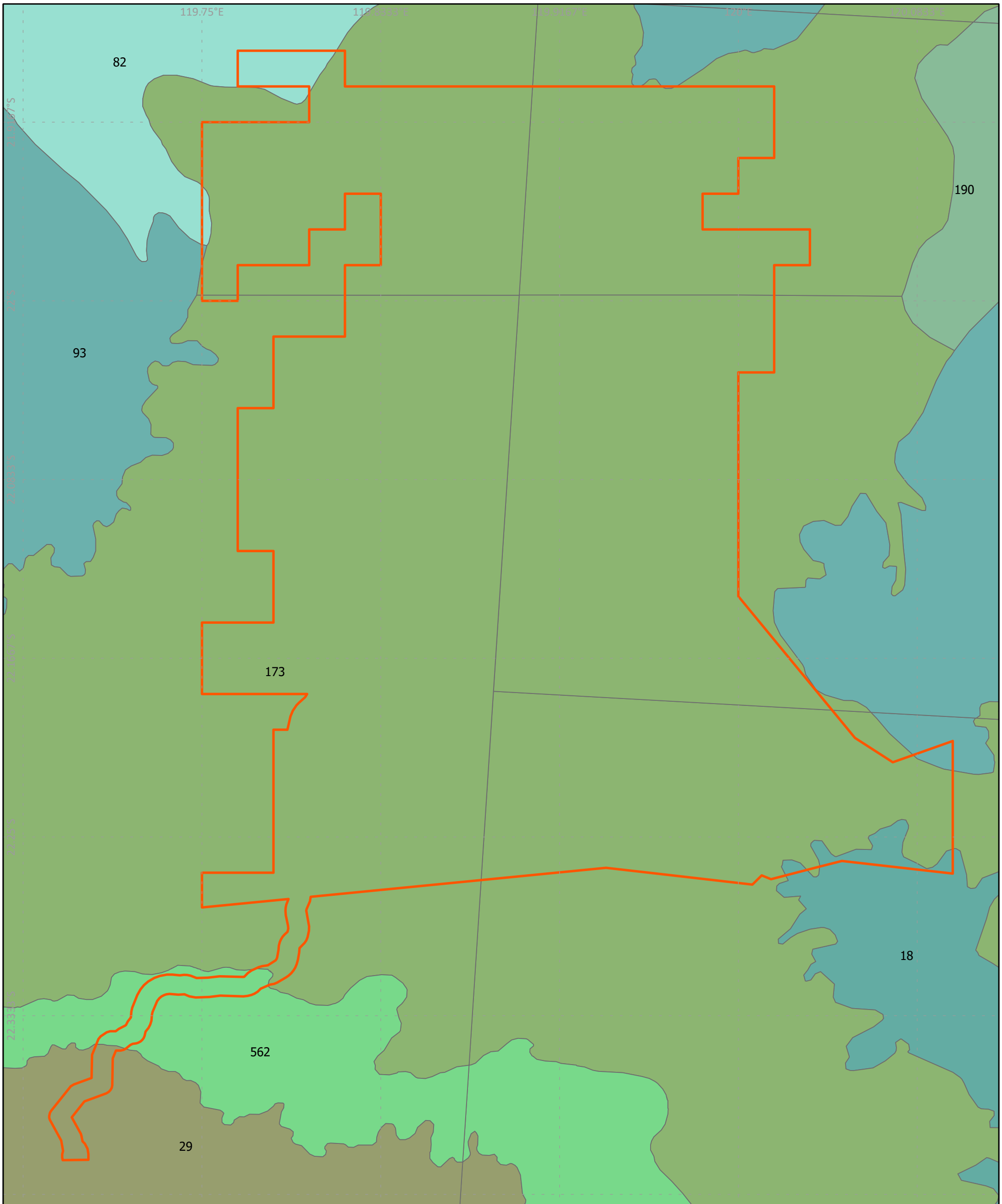
Three tree species commonly associated with riparian habitats in the Pilbara are considered potentially groundwater dependent: *Eucalyptus camaldulensis* (river red gum), *Eucalyptus victrix* (coolabah), and *Melaleuca argentea* (silver cadjeput). *Eucalyptus camaldulensis* and *E. victrix* are facultative phreatophytes, which are species that may be dependent on groundwater or water from the capillary fringe in environments that have otherwise low available surface derived water, particularly in the arid zone and during extended dry periods (Batini, 2009; Froend, 2009). This is particularly relevant during the Pilbara dry season (April to November) when recharge of the groundwater table is likely to be minimal and alternative water sources are limited (Eamus & Froend, 2006), although they appear to be resilient to fluctuating water table levels as well as to drought (Batini, 2009; Pfautsch, Dodson, Madden, & Adams, 2014). *Melaleuca argentea* is considered an obligate phreatophyte that is reliant on groundwater for its survival. Plant communities in which these species are dominant may be considered groundwater dependent vegetation (GDV) in some situations, and may potentially be impacted by groundwater abstraction, but they do not generally have any specific conservation significance. Previous surveys indicated that the drainage systems (creeks and major drainage channels) within the survey area commonly support *Eucalyptus camaldulensis* and/or *E. victrix*, and in some areas *Melaleuca argentea* (*ecologia*, 2024; SLR, 2024), and therefore GDV according to these criteria is present within the survey area. For this assessment, vegetation containing *Melaleuca argentea* or *Eucalyptus camaldulensis* are treated as groundwater dependent vegetation (GDV) and vegetation containing only *Eucalyptus victrix* is treated as potentially groundwater dependent vegetation (PGDV).

2.8.4 Sheet-flow Dependent Mulga

Mulga communities cover over 20% of mainland Australian (Johnson & Burrows 1981) and are largely confined to areas south of the Tropic of Capricorn in semi-arid and arid areas not exceeding 250–300 mm annual rainfall (Maslin & Reid 2012). Mulgas are shallow-rooted (typically < 5 m) perennial trees or shrubs and are dependent on surface water recharge during rainfall events, although available data suggest they are resilient to prolonged periods of low water availability in the rooting zone (Page & Grierson, 2010). Mulga intercept rain falling on the canopy, redirecting water to surface soils at the base of the trunk. There is also some evidence that mulga groves intercept water runoff from higher elevations, especially in banded communities. Consequently, it has been suggested that mulga groves play an important role as water and nutrient sinks, creating fertile patches in generally water and nutrient poor landscapes (Dunkerley 2002; Johnson & Burrows 1981; Ludwig *et al*. 1997; Tongway & Ludwig 1990), and are characterised by significant biodiversity (Maslin & Reid 2012). Based on an evaluation of vegetation patterning on aerial imagery, sheet-flow dependent mulga communities (i.e., grove-intergrove mulga) are likely to be present at the southern end of the transmission corridor.

Table 7: Threatened and Priority Ecological Communities within 50 km of the survey area.

Community	Description	Likelihood of occurrence
Fortescue Marsh (Marsh Land System) (Priority 1)	Fortescue Marsh is an extensive, episodically inundated samphire marsh at the upper terminus of the Fortescue River and the western end of Goodiadarrie Hills. It is regarded as the largest ephemeral wetland in the Pilbara. It is a highly diverse ecosystem with fringing mulga woodlands (on the northern side), samphire shrublands and groundwater dependent riparian ecosystems. It is an arid wetland utilised by waterbirds and supports a rich diversity of restricted aquatic and terrestrial invertebrates. Recorded locality for night parrot and bilby and several other threatened vertebrate fauna. Endemic *Eremophila* species, populations of priority flora and several near-endemic and novel samphires.	Does not occur (only administrative buffer present)
Four plant assemblages of the Wona Land System (Priority 1, Priority 3)	Community: 1. Cracking clays of the Chichester and Mungaroona Range. This shrubless plain of stony gibber community occurs on the tablelands with very little vegetative cover during the dry season, however during the wet a suite of ephemerals/annuals and short-lived perennials emerge, many of which are poorly known and range-end taxa. (Priority 1) 2. Annual *Sorghum* grasslands on self-mulching clays with a moderate-dense overlay of rocks. This community appears very rare and restricted to the Pannawonica-Robe valley end of Chichester Range. Naturally species poor when dry. (Priority 1) 3. Mitchell grass plains (*Astrebla* spp.) on gilgai. (Priority 3) 4. Mitchell grass and Roebourne Plain grass (*Eragrostis xerophila*) plain on gilgai. *Astrebla pectinata, A. elymoides*, *E. xerophila, Aristida latifolia, Eriachne* and *Sida fibulifera* (Priority 3)	Present within the survey area (19,435 ha, including buffer)
Freshwater claypans of the Fortescue Valley (Priority 1)	Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station. Larger claypans contain the highest number of invertebrate species and most of the restricted elements of the Pilbara riparian flora. Important for waterbirds, invertebrates and some poorly collected plants. *Eriachne* spp., *Eragrostis* spp. grasslands. Unique community, has few Coolibah.	Does not occur
Narbung Land System (Priority 3)	Alluvial washplains with prominent internal drainage foci supporting snakewood and mulga shrublands with halophytic low shrubs.	Does not occur
Stony saline plains of the Mosquito Land System (Priority 3)	*Triodia longiceps* grassland with scattered *Maireana melanocoma* and *Sclerolaena spp.* and includes Priority flora taxa *Atriplex spinulosa* (P1) and *Ptilotus wilsonii* (P1). Dissected by drainage lines. Dominated by (but not limited to) *Melaleuca eleuterostachya* and *Acacia bivenosa* occurring on saline red brown non-cracking clays with a mantle of quartz gravel and neutral subsurface soil material on level to undulating plains. Largely restricted to an area east of Nullagine.	Does not occur



Survey area

Pre-European vegetation association

- 18: Low woodland; mulga (Acacia aneura)
- 29: Sparse low woodland; mulga, discontinuous in scattered groups
- 82: Hummock grasslands, low tree steppe; snappy gum over Triodia wiseana
- 93: Hummock grasslands, shrub steppe; kanji over soft spinifex
- 111: Hummock grasslands, shrub steppe; Eucalyptus gamophylla over hard spinifex
- 173: Hummock grasslands, shrub steppe; kanji over soft spinifex & Triodia wiseana on basalt
- 190: Hummock grasslands, sparse shrub steppe; Acacia bivenosa & A. trachycarpa over hard spinifex, Triodia wiseana, Very poor rocky country on gneiss
- 562: Mosaic: Low woodland; mulga in valleys / Hummock grasslands, open low tree-steppe; snappy gum over Triodia wiseana

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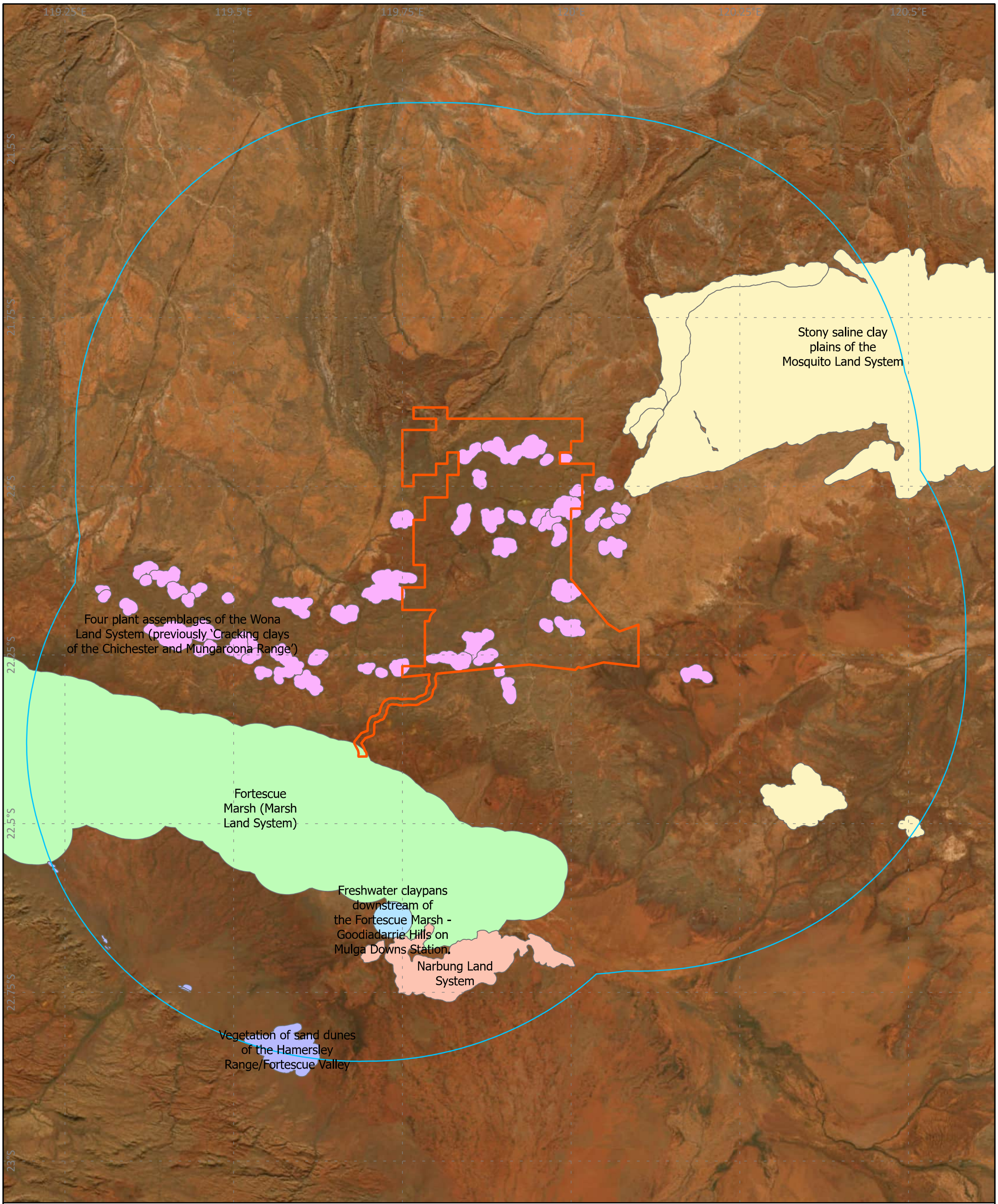
Project No.: 1991
Author: AS
Created Date: 09 OCTOBER 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 6: Pre-European vegetation associations (Shepherd et al. 2002).

0 2.5 5 10
Kilometers

Esri, TomTom, Garmin, FAO, NOAA, USGS, Earthstar Geographics, Esri, USGS



Survey area

Study area (50 km)

Community name

- Fortescue Marsh (Marsh Land System)
- Four plant assemblages of the Wona Land System (previously 'Cracking clays of the Chichester and Mungaroona Range')
- Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station.
- Narbung Land System
- Stony saline clay plains of the Mosquito Land System
- Vegetation of sand dunes of the Hamersley Range/Fortescue Valley

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Project No.: 1991
Author: AS
Created Date: 10 OCTOBER 2024
Coordinate System: GCS GDA 1994
Scale: 1:570,000 @A3

Map 7: Significant ecological communities within 50 km of the survey area.

0 8 16 32
Kilometers

Esri, TomTom, Garmin, FAO, NOAA, USGS, Earthstar Geographics, Esri, USGS

3 METHODOLOGY

3.1 FLORA AND VEGETATION ASSESSMENT

3.1.1 Field Survey

The Bonney Downs North area (Map 1) was surveyed by four botanists over two phases during 2023 (19 – 26 June and 13 – 20 September). The remainder of the survey area (excluding Bonney Downs East, Map 1) was surveyed by four botanists over two phases in 2024 (5 – 13 March and 15 – 21 July). The surveys were conducted in accordance with the *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b), primarily by sampling vascular plant species within quadrats. To provide a more comprehensive species inventory for the survey area, quadrat sampling was supplemented by additional opportunistic sampling along traverses.

3.1.2 Quadrat Sampling

Sampling site locations were selected using a combination of aerial photography, topographic features, land system mapping, pre-European vegetation mapping, and field observations, to represent the geomorphological and floristic variation found within the survey area. At least three sites were selected to represent each potentially distinct plant community in accordance with EPA (2016b). However, as vegetation types are classified according to total floristic composition and cannot be determined until data analysis has been completed, final vegetation types may in some cases be represented by fewer than three sites. Sites were positioned to avoid obvious transition zones between plant communities and were preferentially placed in areas of intact mature vegetation and minimal disturbance.

Two-hundred and ninety-one sampling sites (275 quadrats and 16 relevés) were assessed and sampled by *ecologia* within the survey area (Map 8). All quadrats were 50 m x 50 m in dimension or of an equivalent area, and in most cases had a north-south orientation. The location of each corner was recorded with a handheld GPS. Relevés were sampled in cases where installation of suitably sized quadrats was not feasible (e.g., narrow creeks, edges of water bodies). In this report a relevé is defined as an irregularly shaped sampling plot in which comprehensive floristic data are recorded within an area approximating a 50 m x 50 m quadrat. Site access was restricted within western portion of the survey area in 2024, so no quadrats were installed here (Map 8).

The following attributes were recorded from each quadrat and relevé:

- Site code.
- GPS coordinate of all corners (central location for relevé).
- Photograph from the north-west corner (central location for relevé).
- A comprehensive species list (including introduced species).
- The dominant heigh class (ESCAVI, 2017) and estimated percentage foliage cover (using a variant of the Domin scale) of each species (< 1%, 1-4%, 5-9%, 10-24%, 25-32%, 33-49%, 50-74%, 95-100%). Where isolated tall shrub and tree species are present in the surrounding landscape and do not occur within a quadrat, then the species may be recorded as an 'associated species' (Assoc.) if it is considered important to the overall description of the community.
- Vegetation condition according to EPA (2016b) (adapted from Trudgen 1988) (Table 8) and description of disturbance.
- Additional information to assist vegetation characterisation, including landform, slope, soil type, surface geology, and fire history.

Table 8: Vegetation condition scale.

Vegetation condition	Criterion
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	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	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.

3.1.3 Significant Species

Targeted searches for significant plant species identified from desktop assessment were made along traverses in areas of potential suitable habitat, and within representative areas of each of the major landforms and plant communities present within the survey area. Where significant species were observed, the following parameters were recorded:

- Location (for individual or localised plants) or population boundary (for more extensive populations, time permitting).
- Number of plants (count, for individual or localised plants) or estimated number of plants for more extensive populations.
- Reproductive state.
- Vegetation type.
- Landform.

The initial likelihood of occurrence assessment for each species was reviewed following the field survey based on the level of survey effort, seasonal conditions, vegetation condition, and the presence of suitable habitat.

3.1.4 Specimen Identification

Specimen identification was undertaken with reference to current taxonomic literature and herbarium reference specimens. Scientific names used in this report follow the species concepts currently adopted by the Western Australian Herbarium. Specimens that could not be adequately identified to genus or species level due to the absence of reproductive material required for positive identification were indicated with a query but were not considered to be otherwise anomalous.

3.1.5 Asymptotic Species Richness and Rarefaction

Estimators of asymptotic species richness use abundance or incidence data as a means of estimating the number of undetected species in an assemblage (Gotelli & Colwell, 2012). Asymptotic species richness was estimated for the survey area using the Chao 2 non-parametric sample-based estimator in EstimateS v9.1 with the default settings (Colwell, 2013) and 9,999 randomisations. To provide some indication of survey completeness, a sample-based rarefaction curve, which displays the rate at which new species are found within a sample in relation to increasing sampling effort, was also calculated in EstimateS and plotted against the Chao 2 species richness estimator and its 95% confidence intervals.

Rarefaction curves and estimates of species richness may provide some measure of survey completeness relating specifically to the proportion of species recorded, at least for the season in which the survey was conducted. Should the curve reach an asymptote, few additional species would be expected to have been recorded should additional samples have been taken in similar areas during the same season.

3.1.6 Data Consolidation and Vegetation Classification

The consolidated vegetation dataset consisted of 400 quadrats and relevé sampled by Ecologia (291 sites sampled in 2023 and 2024) and SLR (109 sites sampled in 2023 within the Bonney Downs East area) (Map 8). Twenty-five sites were excluded as they were too degraded or fire history was too recent. Some taxa were amalgamated prior to analysis if was reasonable to do so rather than excluding records (Appendix B). All indeterminate records were presumed to be the nominated taxon (e.g., all records of *Abutilon* ?*fraseri* were assumed to be *Abutilon fraseri*). Singletons (taxa recorded from only one site) were excluded. Species names were checked against the current Western Australian Plant Census to ensure taxonomic consistency across datasets. The final dataset used for classification included 375 sites and 398 taxa.

Hierarchical agglomerative clustering was used together with similarity profile analysis (SIMPROF) as a hypothesis testing-based approach for assessing multivariate group structure and to inform the classification of groups of floristically similar sites into vegetation types. All analyses were conducted in R 4.1.2 (R Core Team, 2021). Percentage cover scores recorded using the Domin scale were converted to percentage cover using the 'Domin 2.6' transformation (Currall, 1987). Pair-wise site dissimilarity was calculated from square root transformed percentage cover data using Bray-Curtis dissimilarity, and subsequent hierarchical agglomerative clustering used the unweighted pair-groups method using arithmetic averages (UPGMA). The site dissimilarity matrix and dendrogram were generated using the 'simprof' function of *clustsig* (Whitaker & Christman, 2014) and statistically different clusters of sites were determined with 999 permuted similarity profiles and $\alpha = 0.001$ as suggested by Clarke, Somerfield, and Gorley (2008).

Within a dendrogram, SIMPROF detects groups of homogenous objects (sampling sites) with respect to a set of descriptors (species) and provides a means of stopping unwarranted over-interpretation of group substructure. When no significant group structure is detected by the test there is no justification for further interpretation of substructure, and sites at this point may be considered essentially homogenous (i.e., vegetation types). Some groups identified by SIMPROF can be too fine to meaningfully interpret in an ecological context and, in such cases, it is appropriate to define coarser groupings as vegetation types provided they are supersets of the SIMPROF groups (Clarke et al., 2008).

Non-metric multidimensional scaling (NMDS) ordination was used as an independent clustering method to assess relationships among clusters and to visually validate the SIMPROF classification by assessing cluster compactness and dissimilarity from neighbouring clusters. The aim was not to define only highly discrete and compact groups as vegetation types as doing so would likely obscure much of the community diversity present within the survey area. Rather, groups classified here as vegetation types should at least form reasonably distinct clusters with minimal overlap with neighbouring clusters. NMDS using Bray-Curtis dissimilarity was conducted using the 'MetaMDS' function of *vegan* (Oksanen et al., 2017). A stress value for the ordination was calculated to determine if the 2-dimentional configuration of points is a good representation of the actual similarity between sites, where stress < 0.2 is considered acceptable.

Indicator species for each vegetation type were determined with the IndVal statistic (M De Cáceres & Legendre, 2009) using the 'multipatt' function of indicspecies (M. De Cáceres, Jansen, & Dell, 2017). Species with high indicator values (closer to 1.00) are those that occur in all (or most) sites within a group but also occur in no (or few) sites outside of that group and provide an additional means of cluster validation.

3.1.7 Vegetation Characterisation

The groups identified as vegetation types using the procedures described above were characterised by the constancy of shared species, shared dominant species, diagnostic (indicator) species, and other abiotic attributes (e.g., soil, landform).

Vegetation types were given descriptive names consistent with NVIS Level V – Association (ESCAVI, 2017), which include structural features and dominant or diagnostic species. Plant communities are naturally variable across wide geographic areas and vegetation types here are delineated based on the overall floristic similarity of sites. Species included in descriptive names are therefore those that are most characteristic of the vegetation type but were not necessarily present at all sites. Species that are dominant in some examples of a community but present in ≤50% of sites representing that community are indicated with '±' in the description.

3.1.8 Vegetation Mapping

Preliminary vegetation mapping of survey area was undertaken prior to the surveys and in the field using aerial imagery and data from ground-truthed sites. Vegetation types were then determined post-survey using the floristic classification methods described above and applied to these ground-truthed areas. Vegetation type boundaries were refined using aerial imagery in ESRI ArcGIS Pro. Extrapolative mapping was undertaken in areas that could not be ground-truthed and was based on observed similarities in spectral and structural features between ground-truthed sites and unvisited areas.

Existing mapping for Bonney Downs East (SLR, 2024) was consolidated with *ecologia's* mapping of the remainder of the survey area. SLR's mapping boundaries were maintained wherever possible, but some slight changes were made when they did not align with the results of the consolidated vegetation classification.

Vegetation condition mapping was undertaken in a similar manner, with reference to the condition recorded at sampled sites using the EPA scale (EPA, 2016b), opportunistic observations, and aerial imagery. In some cases, small changes in vegetation condition over large areas could not be perceived from aerial imagery or feasibly mapped in the field; in these cases, the most common vegetation condition for the area was applied since a range of conditions is not permitted by Fortescue's spatial data standards.

3.1.9 Assessment of Vegetation Significance

The significance of each vegetation type was assessed against 11 criteria (Table 9) to assist the environmental impact assessment (EIA) process.

Table 9: Criteria for assessment of potential vegetation significance.

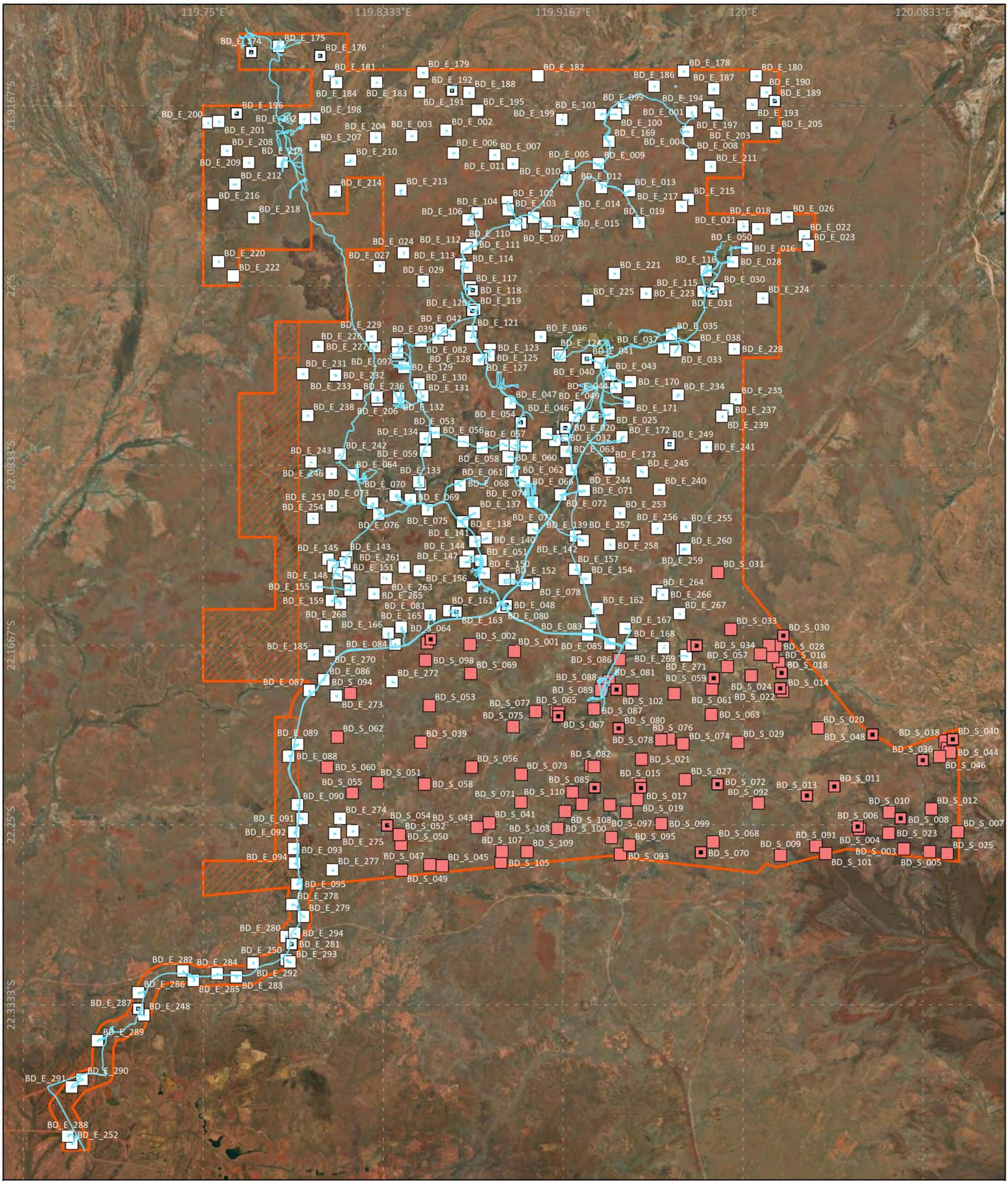
Level	Criterion
National	1. Vegetation supporting/surrounding populations of Threatened (EPBC Act listed) plant species. 2. Vegetation corresponding to a nationally (EPBC Act) listed Threatened Ecological Community. 3. Vegetation which includes Ramsar wetlands and Nationally Important (DIWA) wetlands.
State	4. Vegetation supporting/surroundingpopulations of Threatened (BC Act) plant species. 5. Vegetation which corresponds to a BC Act listed Threatened Ecological Community. 6. Vegetation corresponding to a state (DBCA) listed Priority Ecological Community. 7. Vegetation occurring within a state-managed conservation estate (areas protected under the *Conservation and Land Management Act 1984*) or areas that have been formally recommended by DBCA for inclusion in the state conservation estate.
Regional	8. Vegetation that is represented by less than 30% of its pre-European extent within the relevant bioregion. This criterion was assessed using the vegetation association mapping of D. P. Shepherd et al. (2002). 9. Habitats that play a role as a refuge: habitats that have a restricted regional distribution (e.g., isolated hills which are remnants of an ancient eroding surface, islands, mound springs, sheltered gorges, or permanent wetlands in arid areas) that support vegetation or plant species that are restricted to these specific biotic or abiotic conditions.
Other	10. Vegetation that has locally restricted distribution: vegetation types with a mapped extent < 5% of total survey area. 11. Vegetation representing groundwater dependent vegetation or sheet-flow dependent mulga (banded mulga).

3.2 STUDY TEAM AND LICENCES

The project was undertaken by those summarised in Table 10.

Table 10: Project staff and licences.

Project staff				
Name	**Qualification**	**Role**	Project role	Experience
Shaun Grein	B.App. Sc (Biol.); Grad. Dip. Nat. Resources; MBA	Managing Director/Senior Principal Scientist	Project management, QA	30+
Andrew Craigie	B.Sc. (Hons.) (Botany); PhD (Botany)	Principal Botanist and Taxonomist	Field survey (2023, 2024), specimen identification, data analysis	15+
Sandra Ng	B.Sc. (Marine Biol. and Cons. & Wildlife Biol.)	Botanist	Field survey (2024), desktop assessment	1+
Amelia Shepherdson	B.Sc. (Botany)	Botanist	Field survey (2024), desktop assessment	1+
Rob Sellers	B.Sc. (Cons. Biol. and Mngment)	Senior Botanist	Field survey (2023)	5+
Sam Hall	B.Sc. (Hons.) (Botany and Cons. Biol.)	Botanist	Field survey (2023)	5+
Lydia Ellwood	B.Sc. (Env. Mgmt. & Sust. & Cons. & WildlifeBiol.)	Botanist	Field survey (2023)	2+
Brett Neasham	B.Sc. (Hons.) (Biol. Sci.)	Senior Botanist	Field survey (2024)	5+
Licences				
Andrew Craigie	Flora Taking (Biological Assessment) Licence: FB62000135-2 (exp. 30/04/2025) Authorisation to Take Threatened Flora: TFL 54-1920 (exp. 30/4/2026)			
Rob Sellers	Flora Taking (Biological Assessment) Licence: FB2000198-2 (exp. 30/03/2026)			
Lydia Ellwood	Flora Taking (Biological Assessment) Licence: FB62000392 (exp. 06/02/2025)			
Sam Hall	Flora Taking (Biological Assessment) Licence: FB62000450 (exp. 3/07/2025)			
Sandra Ng	Flora Taking (Biological Assessment) Licence: FB62000543 (exp. 23/03/2026)			
Amelia Shepherdson	Flora Taking (Biological Assessment) Licence: FB62000723 (exp. 28/08/2025)			
Brett Neasham	Flora Taking (Biological Assessment) Licence: FB62000483 (exp. 07/11/2025)			



Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 8: Locations of sampling sites within the survey area.

Earthstar Geographics

0 2.5 5 10 Kilometers

3.3 LIMITATIONS AND CONSTRAINTS

An assessment of survey-specific issues and limitations is detailed in Table 11 for ecologia's surveys. Except for recent fires preventing surveying some parts of the area in 2024, there were no significant limitations identified for either survey.

Table 11: Flora and vegetation survey limitations.

Aspect	Assessment	Constraint
Availability of contextual information at a regional and local scale	Broad vegetation, land system, soil, and geology mapping data were available for the survey area, in addition to DBCA Threatened and Priority Ecological Community spatial data. This information was adequate to provide appropriate contextual information for the survey.	Nil
Competency/experience of the team carrying out the survey, including experience in the bioregion surveyed	The personnel undertaking field work and specimen identification were suitably qualified and have conducted numerous botanical surveys within the Eremaean botanical province. Key personnel leading the field survey and undertaking specimen identification, data analysis, vegetation mapping, and reporting have over 10 years' experience with flora and vegetation surveys in the Pilbara region.	Nil
Proportion of flora recorded and/or collected, any identification issues	All species encountered during the survey were recorded within sampling sites or opportunistically. Representative specimens of all taxa recorded in the field were collected for confirmation. Some specimens could not be identified to species level due to a lack of required reproductive material, but a small number of unidentified samples is unlikely to have any impact on the classification of plant communities at this scale.	Nil
Was the appropriate area fully surveyed (effort and extent)	Two-hundred and ninety-one sampling sites (275 quadrats and 16 relevés) were assessed within the survey area as well as additional targeted searches and opportunistic collections. The appropriate area was sufficiently surveyed.	Nil
Access restrictions within the survey area	There were no access restrictions. A helicopter was used to access more remote parts of the survey area.	Nil
Survey timing, rainfall, season of survey	The surveys were conducted within the recommended timing for primary and supplementary flora and vegetation surveys in the Eremaean Botanical Province (EPA 2016). Seasonal conditions were adequate to describe the floristic values of the survey area.	Nil
Disturbance that may have affected the results of survey such as fire, flood or clearing	Parts of the survey area, particularly in the northwest, were affected by recent fires just prior to the 2024 surveys. In most cases, however, patches of adjacent unburned vegetation, which presumably also represented the same vegetation as the surrounding burned areas, were able to be surveyed.	Minor

4 RESULTS

4.1 FLORA

4.1.1 Floristic Diversity and Estimated Species Richness

A total of 552 vascular plant taxa (species, infraspecific taxa, and phrase names) from 61 families and 204 genera were recorded within 400 sampling sites (quadrats and relevés) and opportunistically (Appendix B). Of these species, 235 (ca. 42%) were annuals or short-lived perennials, and 25 (ca. 4.5%) were introduced. The most dominant families in terms of species richness were the Fabaceae (106 taxa), Poaceae (79), Malvaceae (59), Amaranthaceae (31), Asteraceae (27), and Cyperaceae (20). The most dominant genera were *Acacia* (35 taxa), *Ptilotus* (18), *Sida* (18), *Senna* (17), *Euphorbia* (12), and *Solanum* (11) (Appendix B). Most genera (115) were represented by only one taxon. Eighty-eight taxa were recorded from only a single sampling site (singletons), and 74 taxa were recorded from only two sample sites (doubletons) (Table 12).

The estimated species richness for the survey area using the Chao2 estimator was approximately 569 species (Table 12). Observed species richness (S) after sampling 400 sites and including opportunistic records was 552, suggesting that only 3.1% of the total estimated species were undetected. The rarefaction curve showed accumulation of new species tending towards zero (asymptote) by 400 sites (Figure 2) suggesting that additional site-based survey effort would probably not result in any notable increase in the number of taxa recorded at sites.

Table 12: Species richness summary and estimates for the survey area.

N (number of reference samples)	400
S (observed number of taxa within quadrats)	519
No. of singletons	88
No. of doubletons	74
No. taxa not observed in quadrats	33
Total taxa observed (including opportunistic records)	552
Estimated species richness (Chao2)	569.91 ± 14.29
Percent of species undetected	3.1%

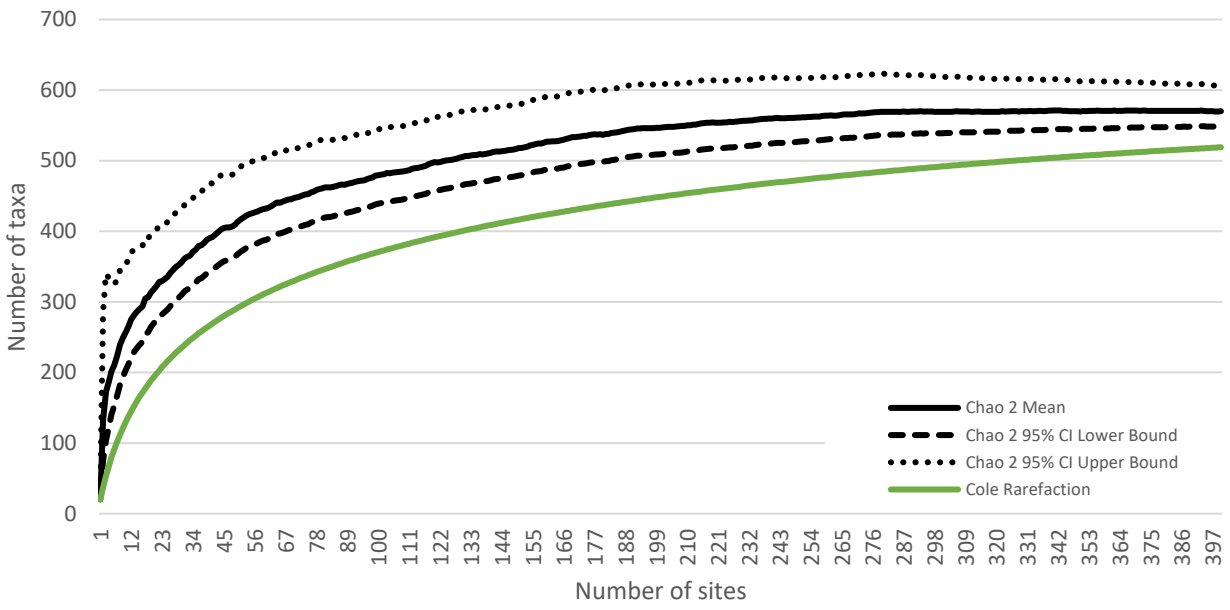


Figure 2: Asymptotic species richness estimated by the Chao2 non-parametric richness estimator and rarefaction curve (species observed) for the survey area after 400 sampling sites.

4.1.2 Significant Species

Threatened and Priority listed species

Representative areas of each of the major landforms and plant communities were included in the quadrat survey and also traversed on foot to record significant plant species. The EPBC Act and BC Act listed Threatened species *Quoya zonalis* was recorded from a single ridge in the northwest of the survey area (Table 13, Map 9). A further 18 DBCA listed Priority species were recorded (Table 13, Map 9, Map 10):

- *Acacia cyperophylla* var. *omearana* (P1)
- *Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05) (P1)
- *Stemodia* sp. Battle Hill (A.L. Payne 1006) (P1)
- *Euphorbia inappendiculata* var. *inappendiculata* (P3)
- *Euphorbia inappendiculata* var. *queenslandica* (P3)
- *Indigofera ixocarpa* (P2)
- *Ipomoea racemigera* (P3)
- *Neptunia longipila* (P2)
- *Paspalidium retiglume* (P2)
- *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)
- *Euphorbia stevenii* (P3)
- *Iotasperma sessilifolium* (P3)
- *Nicotiana umbratica* (P3)
- *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)
- *Rostellularia adscendens* var. *latifolia* (P3)
- *Swainsona thompsoniana* (P3)
- *Bulbostylis burbidgeae* (P4)
- *Ptilotus mollis* (P4)

The number of individuals of each taxon recorded and associated landforms and vegetation types (section 4.2.1) are summarised in Table 13. Except for 30 individuals of *Acacia cyperophylla* var.

omearana recorded immediately outside of the survey are, all significant species records were within the survey area.

Four collections identified as ?*Glycine falcata* were recorded within clay habitats but were never observed with flowers or fruit. These have been tentatively identified as the Priority 3 species *Glycine falcata* but could potentially belong to another *Glycine* species or to a similar genus.

Atypical specimens

Several specimens collected were unable to be identified to species level due to a lack of reproductive material required for positive identification but were not considered to be otherwise anomalous. Three taxa recorded by SLR within the Bonney Downs East survey area were believed to be atypical (*Olearia* aff. *fluvialis*, *Solanum* aff. *esuriale*, and *Solanum* aff. *horridum*) (SLR, 2024).

Range extensions

Based on current Atlas of Living Australia records (accessed on 2/12/2024), 10 taxa recorded within the survey area occurred more than 100 km from the nearest known locations. Five of the records extend the known range of the species (at edge of range), and five records occurred within the known range of the species (gap filler):

- *Brachyscome rudallensis* – edge of range
- *Calandrinia balonensis* – edge of range
- **Chenopodium murale* – edge of range
- *Crotalaria cunninghamii* subsp. *cunninghamii* – edge of range
- **Cynodon dactylon* – gap filler
- *Eragrostis exigua* – gap filler
- **Euphorbia hirta* – gap filler
- **Phoenix dactylifera* – gap filler
- *Stenopetalum velutinum* – edge of range
- *Tephrosia* sp. clay soils (S. van Leeuwen et al. PBS 0273) – gap filler

4.1.3 Introduced Species

Twenty-five introduced plant species were recorded within the survey area (Table 14). One is listed as a 'Declared Pest – s22 (2)' on the WAOL (DPIRD, 2007–) (**Calotropis procera*), 21 are listed as 'Permitted - s11', and three are not listed. There were no WONS recorded. Ecological impact and invasiveness ratings have been determined for introduced species in the Pilbara region using the Weed Prioritisation Process (DPaW, 2013), which are listed for these species in Table 14. **Calotropis procera* was recorded from twenty-three locations (approx. 113 individuals), mostly within and near to disturbed areas associated with the BC Iron Nullagine mine (Map 11).

Table 13: Summary of significant plant species recorded within the survey area.

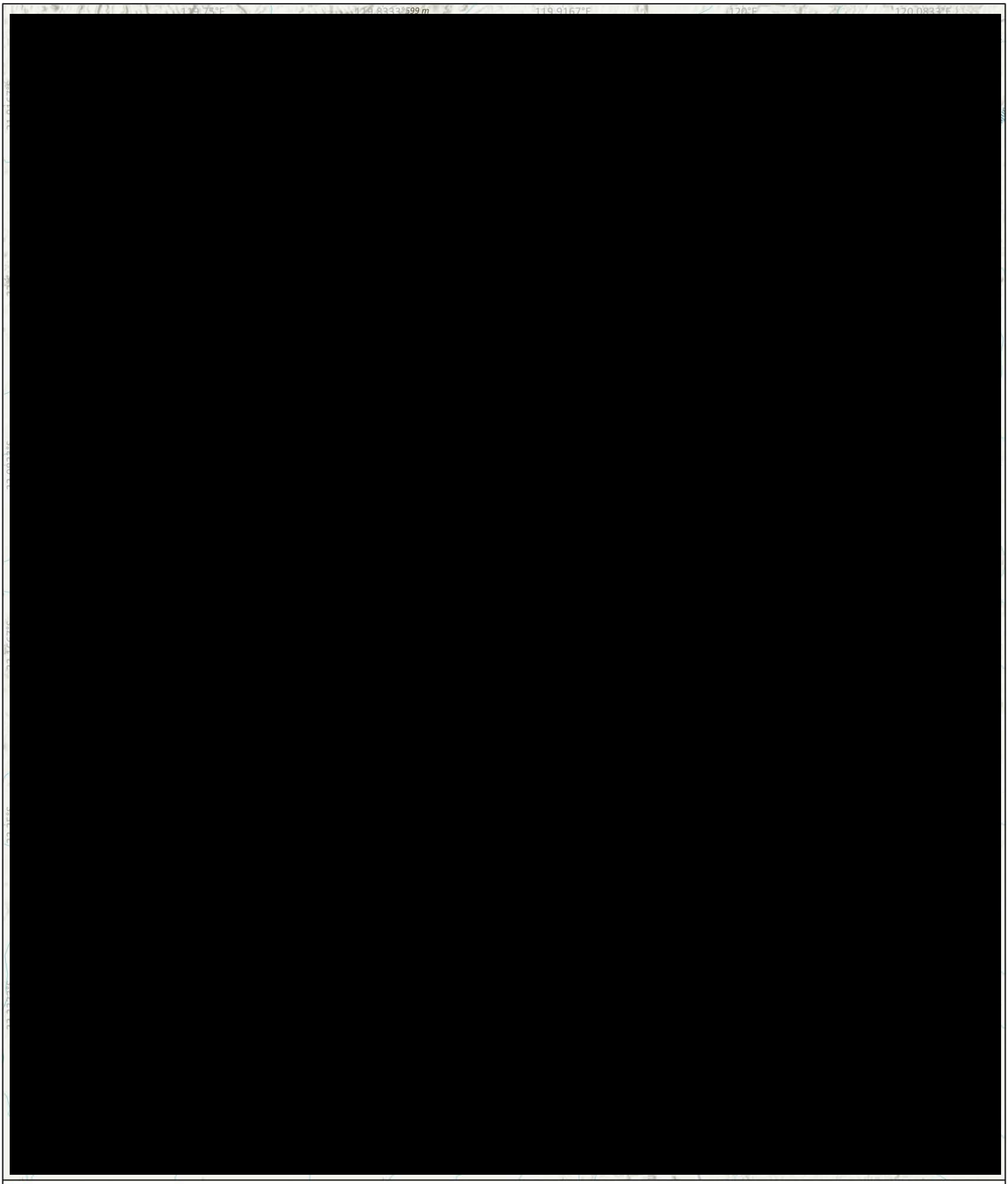
Name	Land system	Landform	Vegetation type/s (number of individuals)	Total estimated individuals recorded within 50 km of the survey area[1]	Total individuals recorded within survey area (% of total)
Threatened					
Quoya zonalis	Capricorn	Rocky ridgetops	ElGwTe (21)	23	21 (91.3%)
Priority 1					
Acacia cyperophylla var. *omearana*	Capricorn, Rocklea	Stony creeks	AcTe (1,143)	2,179	1,143 (52.5%)
Corchorus sp. Yarrie (J. Bull & D. Roberts CAL 01.05)	Granitic, Rocklea	Granite outcrops	AhCspYTe (145), EcAcCs (2)	147	147 (100%)
Stemodia sp. Battle Hill (A.L. Payne 1006)	Elimunna, Rocklea, Wona	Low stony hills and plains with clay soils.	VfAl (370)	375	373 (99.5%)
Priority 2					
Indigofera ixocarpa	Rocklea	Rocky hills	ElAbTl (40)	45	40 (88.9%)
Neptunia longipila	Bonney, Robe, Rocklea, Wona	Low stony hills and plains with clay soils.	VfAl (189)	189	189 (100%)
Paspalidium retiglume	Bonney, Wona	Low stony hills and plains with clay soils.	VfAl (260)	260	260 (100%)
Priority 3					
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	Bonney, Elimunna, Rocklea, Wona	Plains with clay soils.	ElAbTl (110), VfAl (640)	751	750 (99.9%)
Euphorbia inappendiculata var. *inappendiculata*	Elimunna	Low stony hills and plains with clay soils.	ElAbTl (1)	53	1 (1.9%)
Euphorbia inappendiculata var. *queenslandica*	Rocklea, Wona	Low stony hills and plains with clay soils.	VfAl (1,977)	1,977	1,977 (100%)
Euphorbia stevenii	Rocklea	Low stony hills and plains with clay soils.	VfAl (80)	80	80 (100%)
Iotasperma sessilifolium	Bonney	Low stony hills and undulating plains.	Mosaic: AiCpTe1 + AiCpTe2 + AiSgTb (1)	6	1 (16.7%)
Ipomoea racemigera	Bonney, Laterite, Robe, Rocklea	Creeks	AeEp (2), EcAcCs (2), EvAcCc (7)	14	11 (78.6%)
Rhagodia sp. Hamersley (M. Trudgen 17794)	Laterite	Plains	AaEp (15), AaTs (20)	241	35 (15%)
Nicotiana umbratica	Granitic, Robe, Rocklea	Various	AeTe (25), AhCspYTe (373), ElAbTl (20), Mosaic: AiCpTe1 + AiCpTe2 + AiSgTb (130)	554	548 (98.9%)
Rostellularia adscendens var. *latifolia*	Granitic, Rocklea	Various	AeTe (30), AhCspYTe (77), Mosaic: AiCpTe1 + AiCpTe2 + AiSgTb (20)	165	127 (77%)
Swainsona thompsoniana	Bonney, Elimunna, Rocklea, Wona	Low stony hills and plains with clay soils.	VfAl (997)	1,006	997 (99.1%)
Priority 4					
Bulbostylis burbidgeae	Granitic	Granite outcrops	AeTe (120), AhCspYTe (1,505)	2,032	1,625 (80%)
Ptilotus mollis	Robe, Rocklea	Rocky slopes	ElAbTl (166), ElGwTe (1,008)	2,277	1,174 (51.6%)

[1]Includes records from spatial data provided by Fortescue, DBCA (WAHERB and TPFL), and records from the current Ecologia and SLR surveys. In cases where abundance data were not provided (e.g., WAHERB data), abundance was assumed to be 1.

Table 14: Summary of introduced species recorded within the survey area.

Family	Name	Common name	BAM Act status	Ecological impact[1]	Invasiveness[1]
Aizoaceae	*Trianthema portulacastrum*	Giant pigweed	Permitted - s11	Not listed	Not listed
Amaranthaceae	*Aerva javanica*	Kapok bush	Permitted - s11	High	Rapid
Amaranthaceae	*Alternanthera pungens*	Khaki weed	Permitted - s11	Low	Slow
Apocynaceae	*Calotropis procera*	Calotrope	Declared Pest - s22(2)	Not listed	Not listed
Arecaceae	*Phoenix dactylifera*	Date palm	Permitted - s11	High	Rapid
Asteraceae	*Bidens bipinnata*	Bipinnate begger's tick	Permitted - s11	Unknown	Rapid
Asteraceae	*Flaveria trinervia*	Speedy weed	Not listed	Not listed	Not listed
Asteraceae	*Sonchus oleraceus*	Common sowthistle	Permitted - s11	Low	Rapid
Chenopodiaceae	*Chenopodium murale*	Nettle-leaf goosefoot	Permitted - s11	Low	Unknown
Cucurbitaceae	*Citrullus amarus*	Bitter melon	Not listed	Not listed	Not listed
Cucurbitaceae	*Citrullus colocynthis*	Colocynth	Permitted - s11	Unknown	Moderate
Cucurbitaceae	*Cucumis myriocarpus* subsp. *myriocarpus*	Prickly paddy melon	Permitted - s11	Low	Rapid
Euphorbiaceae	*Euphorbia hirta*	Asthma plant	Not listed	Low	Slow
Fabaceae	*Senna occidentalis*	Coffee senna	Permitted - s11	Not listed	Not listed
Fabaceae	*Vachellia farnesiana*	Mimosa bush	Permitted - s11	High	Rapid
Malvaceae	*Malvastrum americanum*	Spiked malvastrum	Permitted - s11	High	Rapid
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca*	Mexican poppy	Permitted - s11	Unknown	Rapid
Poaceae	*Cenchrus ciliaris*	Buffel grass	Permitted - s11	High	Rapid
Poaceae	*Cenchrus setiger*	Birdwood grass	Permitted - s11	High	Rapid
Poaceae	*Cynodon dactylon*	Couch	Permitted - s11	High	Rapid
Poaceae	*Echinochloa colona*	Awnless barnyard grass	Permitted - s11	High	Rapid
Poaceae	*Setaria verticillata*	Whorled pigeon grass	Permitted - s11	High	Rapid
Solanaceae	*Physalis angulata*	Wild gooseberry	Permitted - s11	Unknown	Unknown
Solanaceae	*Solanum nigrum*	Black berry nightshade	Permitted - s11	Low	Rapid
Zygophyllaceae	*Tribulus terrestris*	Caltrop	Permitted - s11	Unknown	Moderate

[1]Rating based on the Western Australian Weed Prioritisation Process.



- Bonney Downs survey area
- Endangered (EN),Quoya zonalis
- Priority 1 (DBCA),Acacia cyperophylla var. omearana
- Priority 1 (DBCA),Corchorus sp. Yarrie (J. Bull & D. Roberts CAL 01.05)
- Priority 1 (DBCA),Stemodia sp. Battle Hill (A.L. Payne 1006)
- Priority 2 (DBCA),Euphorbia inappendiculata var. inappendiculata
- Priority 2 (DBCA),Euphorbia inappendiculata var. queenslandica
- Priority 2 (DBCA),Indigofera ixocarpa
- Priority 2 (DBCA),Ipomoea racemigera
- Priority 2 (DBCA),Neptunia longipila
- Priority 2 (DBCA),Paspalidium retiglume

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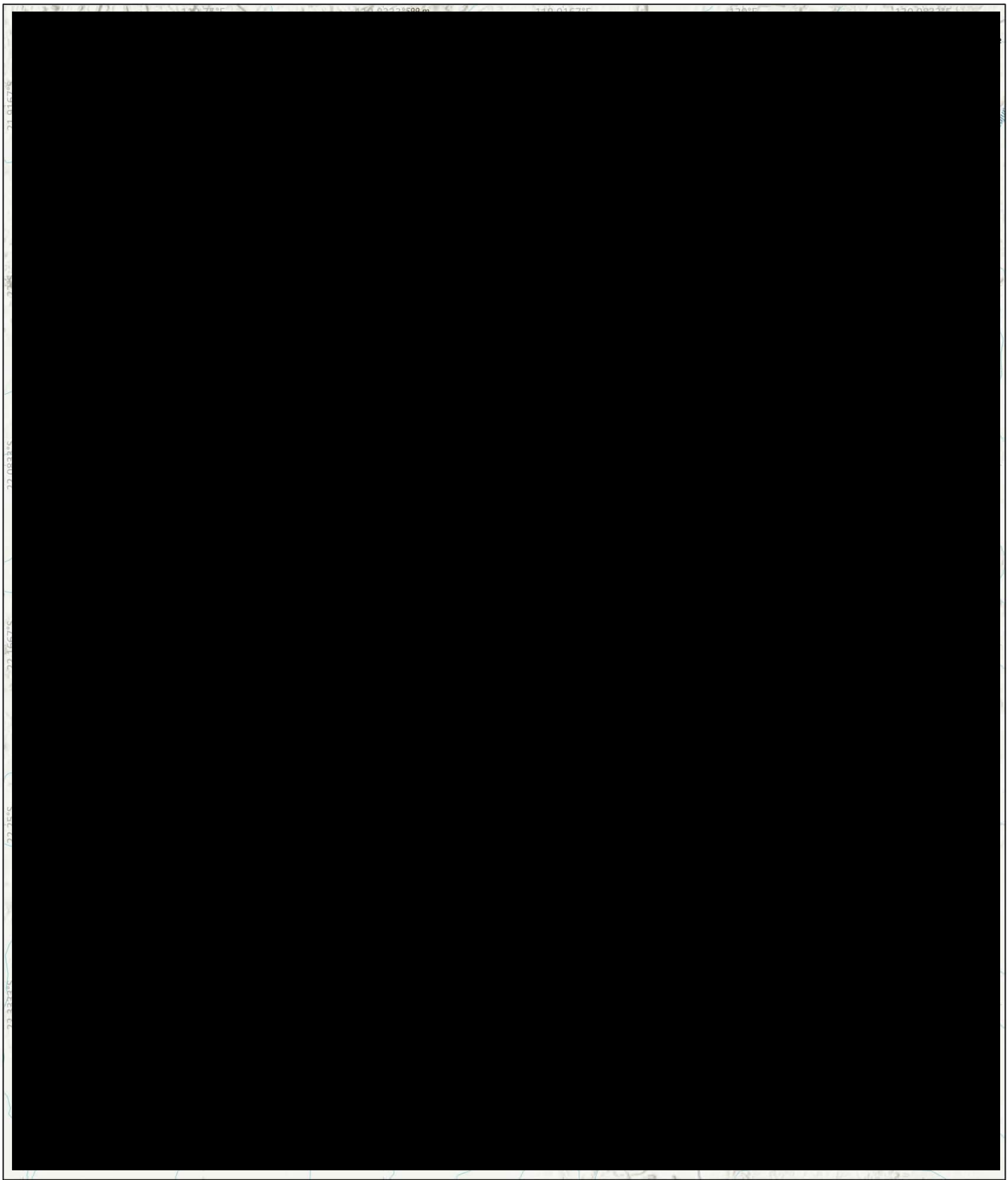
Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 9: Significant plant species recorded within the survey area (Threatened, Priority 1, Priority 2).

0 1.7 3.3 5 10 Kilometers

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, Geoscience Australia, NASA, NGA, USGS



- Bonney Downs survey area
- Priority 3 (DBCA),Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)
- Priority 3 (DBCA),Euphorbia stevenii
- Priority 3 (DBCA),Iotasperma sessilifolium
- Priority 3 (DBCA),Nicotiana umbratica
- Priority 3 (DBCA),Rostellularia adscendens var. latifolia
- Priority 3 (DBCA),Rhagodia sp. Hamersley (M.Trudgen 17794)
- Priority 3 (DBCA),Swainsona thompsoniana
- Priority 4 (DBCA),Bulbostylis burbidgeae
- Priority 4 (DBCA),Ptilotus mollis

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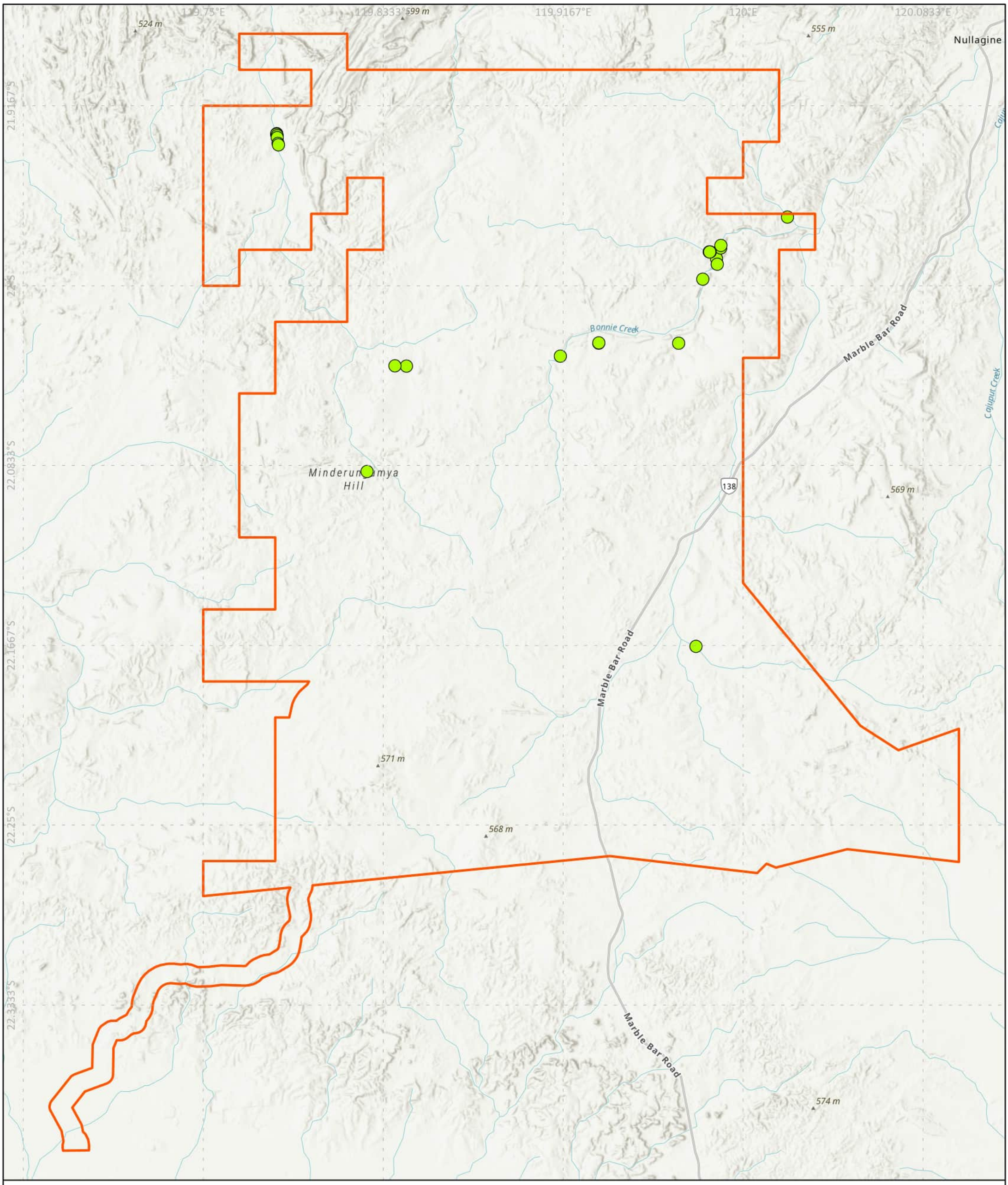
Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 10: Significant plant species recorded within the survey area (Priority 3, Priority 4).

0 1.7 3.3 5 10 Kilometers

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR



Bonney Downs survey area

Calotropis procera (Declared Pest)

ecologia ENVIRONMENT

Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 11: Locations of *Calotropis procera* (Declared Pest) recorded within the survey area.

0 1.7 3.3 5 10 Kilometers

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, Geoscience Australia, NASA, NGA, USGS

Figure 3: Photographs of significant species recorded by *ecologia* within the survey area.

Top left to right: *Quoya zonalis* (T), *Acacia cyperophylla* var. *omearana* (P1), *Euphorbia inappendiculata* subsp. *queenslandica* (P2).
Middle left to right: *Indigofera ixocarpa* (P2), *Ipomoea racemigera* (P2), *Neptunia longipila* (P2).
Bottom left to right: *Paspalidium retiglume* (P2), *Ptilotus mollis* (P4), *Swainsona thompsoniana* (P3)

4.2 VEGETATION

4.2.1 Vegetation Type Classification and Characterisation

Hierarchical agglomerative clustering was conducted using floristic data from 375 sampling sites within the survey area (Figure 4). Similarity profile analysis (SIMPROF) identified 33 clusters (excluding solitary and paired sites) within which there was no meaningful sub-structure (Appendix C). Several of these groups were too fine to meaningfully interpret as distinct vegetation types at a scale appropriate for this assessment, so some neighbouring groups were amalgamated. These supersets were selected as vegetation types primarily on the basis of the consistency of shared dominant species. Seventeen vegetation types were described based on this classification (Table 15, Table 16).

There were no significant disagreements between the NMDS ordination (Figure 5) and the hierarchical clustering, lending support to the validity of the groups identified as vegetation types. Eight of the 17 vegetation types were further supported by one or more indicator species (IndVal > 0.70) (Table 15). Eleven of the vegetation types described from the hierarchical clustering were resolved as moderately distinct clusters of sites in the two-dimensional ordinations of four data subsets (Figure 5). Six vegetation types (AaTe, AiCpTe1, AiSgTb, AmTe, AoTe, and ElGwTe), which included sites from broadly similar landforms (mostly stony plains and hills), could not be resolved as distinct clusters. Although there was evidence for internal group structure within this group (Appendix C), the clustering was weak in some cases and the floristic differences not always clearly defined.

The floristic features used to characterise each vegetation type (i.e., dominant species, indicator species, and frequently occurring species) are summarised in Table 15, and other relevant attributes (i.e., landform, soils, vegetation condition, and species richness) are summarised in Table 16. The full species assemblage associated with each vegetation type is shown in a constancy-importance table in Appendix D. Representative site photographs are shown in Figure 6 – Figure 11(excluding vegetation types which were only represented by SLR sites for which suitable photographs were not available at the time of writing). Vegetation type boundaries were mapped within the survey area by extrapolation from aerial imagery and ground-truthed sites (Map 12 - Map 16). Three similar *Acacia inaequilatera* dominated vegetation types (AiCpTe1, AiCpTe2, and AiSgTb) were mapped as a mosaic unit as they could not be consistently distinguished using aerial imagery. Individual sampling site data are shown in Appendix E.

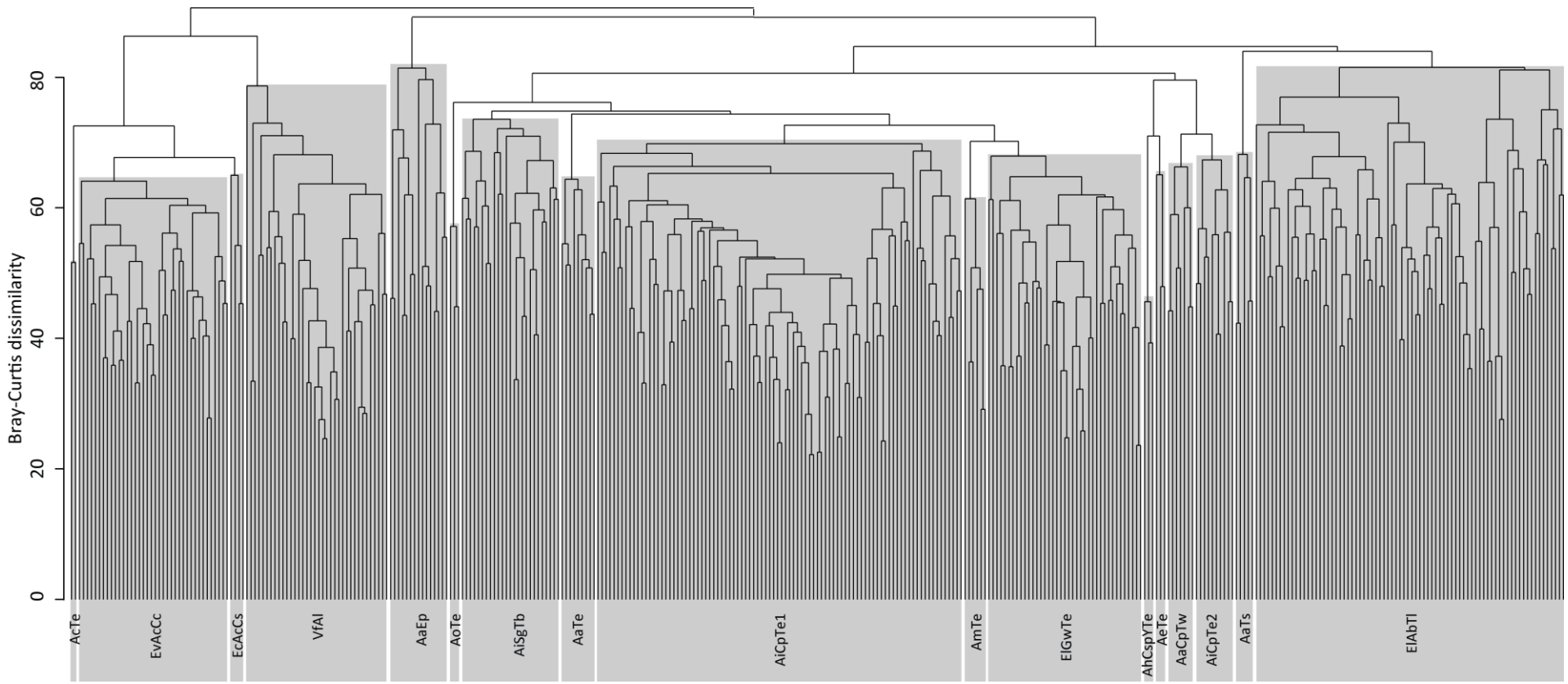


Figure 4: UPGMA hierarchical agglomerative clustering dendrogram showing floristic relationships among 375 sites.

Shaded areas indicate the groups of sites recognised as vegetation types. The significant group structure identified by similarity profile analysis and site names are shown in Appendix C.

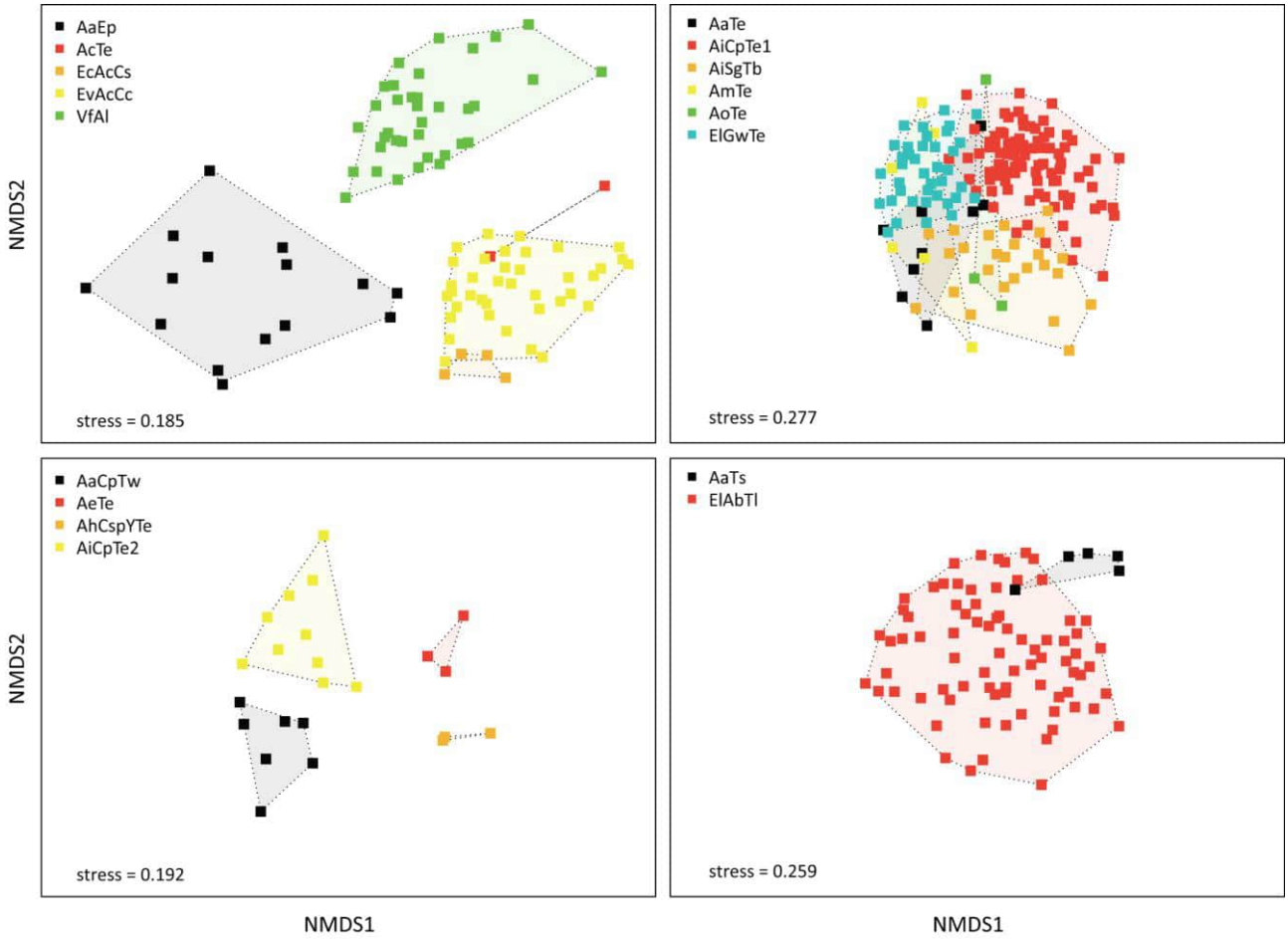


Figure 5: Non-metric multidimensional scaling (NMDS) plots showing relationships among sites and vegetation types.

Table 15: Summary of vegetation types within the survey area – group characterisation.

Map code	Broad floristic formation (NVIS III)	Vegetation type name (NVIS V compatible)	Frequently occurring species (occurrence in > 50% of quadrats within vegetation type)[1]	Indicator species (IndVal > 0.70, p < 0.05)	Significant species
AaCpTw	*Acacia* tall open shrubland	*Acacia aptaneura*, *Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana*, *Enneapogon polyphyllus*, *Aristida contorta* low open tussock grassland.	*Abutilon macrum*, *Acacia aptaneura*, *Acacia tetragonophylla*, *Aristida contorta*, *Bonamia pilbarensis*, *Cheilanthes sieberi* subsp. *sieberi*, *Corchorus parviflorus*, *Enneapogon polyphyllus*, *Eriachne mucronata*, *Evolvulus alsinoides* var. *villosicalyx*, *Gomphrena cunninghamii*, *Goodenia muelleriana*, *Hibiscus sturtii* var. *campylochlamys*, *Rhagodia eremaea*, *Sclerolaena cornishiana*, *Solanum horridum*, *Solanum lasiophyllum*, *Triodia wiseana*	–	–
AaEp	*Acacia* tall open shrubland	*Acacia aptaneura*, *Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus*, ±*Triodia brizoides*, ±*Triodia longiceps* low open tussock/hummock grassland.	*Acacia aptaneura*, *Acacia pruinocarpa*, *Enneapogon polyphyllus*, *Evolvulus alsinoides* var. *villosicalyx*	–	*Ipomoea racemigera* (P3)
AaTe	*Acacia* tall open shrubland	*Acacia aptaneura*, *Acacia pruinocarpa*, *Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.	*Acacia aptaneura*, *Acacia bivenosa*, *Acacia pruinocarpa*, *Duperreya commixta*, *Indigofera monophylla*, *Senna glutinosa* subsp. ×*luerssenii*, *Triodia epactia*	–	–
AaTs	*Acacia* tall open shrubland	*Acacia ancistrocarpa*, *Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.	*Acacia ancistrocarpa*, *Acacia aptaneura*, *Acacia bivenosa*, *Acacia tetragonophylla*, *Dampiera candicans*, *Goodenia stobbsiana*, *Goodenia triodiophila*, *Hakea lorea* subsp. *lorea*, *Hibiscus sturtii* var. *campylochlamys*, *Indigofera monophylla*, *Neurachne muelleri*, *Senna artemisioides* subsp. *helmsii*, *Triodia epactia*, *Triodia longiceps*, *Triodia scintillans*, *Waltheria virgata*	*Triodia scintillans* (0.84)	–
AcTe	*Acacia* tall sparse shrubland	*Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia*, *Triodia longiceps* mid sparse hummock grassland.	*Acacia cyperophylla* var. *omearana*, *Acacia tumida* var. *pilbarensis*, *Afrohybanthus aurantiacus*, *Arivela viscosa*, *Cathetus exilis*, *Eriachne tenuiculmis*, *Eucalyptus victrix*, *Euphorbia trigonosperma*, *Grevillea wickhamii* subsp. *aprica*, *Sesbania cannabina*, *Triodia epactia*, *Triodia longiceps*	*Acacia cyperophylla* var. *omearana* (0.90), *Cathetus exilis* (0.71)	*Acacia cyperophylla* var. *omearana* (P1)
AeTe	*Triodia* low hummock grassland	*Acacia eriopoda* tall sparse shrubland; *Triodia epactia*, *Triodia longiceps* low hummock grassland.	*Acacia bivenosa*, *Acacia eriopoda*, *Afrohybanthus aurantiacus*, *Aristida holathera* var. *holathera*, *Bulbostylis barbata*, *Corchorus parviflorus*, *Dampiera candicans*, *Enneapogon polyphyllus*, *Evolvulus alsinoides* var. *villosicalyx*, *Fimbristylis dichotoma*, *Hibiscus sturtii* var. *campylochlamys*, *Indigofera monophylla*, *Pluchea dentex*, *Ptilotus fusiformis*, *Schizachyrium fragile*, *Trigastrotheca molluginea*, *Triodia epactia*, *Triodia longiceps*, *Tripogonella loliiformis*, *Triumfetta chaetocarpa*	–	*Bulbostylis burbidgeae* (P4), *Rostellularia adscendens* var. *latifolia* (P3), *Nicotiana umbratica* (P3)
AhCspYTe	*Atalaya* tall sparse shrubland	*Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05) (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.	*Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618), *Acacia eriopoda*, *Arivela viscosa*, *Atalaya hemiglauca*, *Bulbostylis burbidgeae*, *Cheilanthes brownii*, *Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05), *Cucumis variabilis*, *Cymbopogon ambiguus*, *Enneapogon lindleyanus*, *Eriachne mucronata*, *Euphorbia australis* var. *subtomentosa*, *Evolvulus alsinoides* var. *villosicalyx*, *Gomphrena cunninghamii*, *Gossypium robinsonii*, *Grevillea wickhamii* subsp. *hispidula*, *Indigofera monophylla*, *Leiocarpa semicalva* subsp. *semicalva*, *Nicotiana umbratica*, *Pterocaulon sphacelatum*, *Senna venusta*, *Sida rohlenae* subsp. *rohlenae*, *Solanum chippendalei*, *Solanum cleistogamum*, *Solanum gabrielae*, *Trigastrotheca molluginea*, *Triodia epactia*, *Tripogonella loliiformis*, *Triumfetta chaetocarpa*, *Triumfetta maconochieana*	*Bulbostylis burbidgeae* (1.00), *Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 1.5) (1.00), *Nicotiana umbratica* (0.78), *Senna venusta* (0.84), *Solanum gabrielae* (1.00)	*Bulbostylis burbidgeae* (P4), *Rostellularia adscendens* var. *latifolia* (P3), *Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05) (P1), *Nicotiana umbratica* (P3)
AiCpTe1	*Triodia* low hummock grassland	*Acacia inaequilatera* tall sparse shrubland; ±*Corchorus parviflorus* low sparse shrubland; *Triodia epactia*, ±*Triodia brizoides* low hummock grassland.	*Acacia inaequilatera*, *Bonamia pilbarensis*, *Triodia epactia*	–	*Iotasperma sessilifolium* (P3), *Nicotiana umbratica* (P3), *Rostellularia adscendens* var. *latifolia* (P3)
AiCpTe2	*Triodia* low hummock grassland	*Acacia inaequilatera* tall sparse shrubland; *Corchorus parviflorus* low sparse shrubland; *Triodia epactia* low hummock grassland.	*Acacia inaequilatera*, *Aristida contorta*, *Bonamia pilbarensis*, *Corchorus parviflorus*, *Enneapogon caerulescens*, *Enneapogon polyphyllus*, *Evolvulus alsinoides* var. *villosicalyx*, *Gomphrena cunninghamii*, *Rhynchosia minima*, *Senna notabilis*, *Solanum horridum*, *Triodia epactia*	–	
AiSgTb	*Triodia* low hummock grassland	*Acacia inaequilatera*, *Hakea lorea* subsp. *lorea* tall open shrubland; *Senna glutinosa* mid open shrubland; *Triodia brizoides*, *Triodia epactia*, *Cymbopogon ambiguus* low hummock/tussock grassland.	*Acacia inaequilatera*, *Bonamia pilbarensis*, *Cymbopogon ambiguus*, *Senna glutinosa* subsp. *glutinosa*, *Triodia brizoides*, *Triodia epactia*	–	
AmTe	*Acacia* tall closed shrubland	*Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.	*Acacia monticola*, *Goodenia stobbsiana*, *Grevillea wickhamii* subsp. *hispidula*, *Indigofera monophylla*, *Senna glutinosa* subsp. *glutinosa*, *Triodia epactia*	*Acacia monticola* (0.91)	–
AoTe	*Acacia* tall open shrubland	*Acacia orthocarpa*, *Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.	*Acacia adoxa* var. *adoxa*, *Acacia maitlandii*, *Acacia orthocarpa*, *Corymbia hamersleyana*, *Grevillea wickhamii* subsp. *aprica*, *Triodia brizoides*, *Triodia epactia*, *Triodia longiceps*	*Acacia adoxa* var. *adoxa* (0.73), *Acacia orthocarpa* (0.90)	–
EcAcCs	*Eucalyptus* mid open woodland	*Eucalyptus camaldulensis* subsp. *refulgens*, ±*Melaleuca argentea* mid open woodland; *Acacia coriacea* subsp. *pendens*, *Acacia trachycarpa* tall open shrubland; **Cenchrus setiger*, *Triodia longiceps* low tussock/hummock grassland.	*Acacia ampliceps*, *Acacia coriacea* subsp. *pendens*, *Acacia pyrifolia* var. *pyrifolia*, *Acacia trachycarpa*, *Arivela viscosa*, *Atalaya hemiglauca*, *Bulbostylis barbata*, **Cenchrus setiger*, *Crotalaria cunninghamii* subsp. *cunninghamii*, *Cucumis variabilis*, *Cyperus vaginatus*, *Eucalyptus camaldulensis* subsp. *refulgens*, *Euphorbia australis* var. *subtomentosa*, *Evolvulus alsinoides* var. *decumbens*, *Ipomoea muelleri*, *Polymeria ambigua*, *Sida rohlenae* subsp. *rohlenae*, *Solanum diversiflorum*, *Triodia longiceps*, *Vigna lanceolata* var. *lanceolata*, *Wahlenbergia tumidifructa*	*Crotalaria cunninghamii* subsp. *cunninghamii* (0.87), *Vigna lanceolata* var. *lanceolata* (0.82), *Wahlenbergia tumidifructa* (0.75)	*Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05) (P1) (2 records), *Ipomoea racemigera* (P3)

Map code	Broad floristic formation (NVIS III)	Vegetation type name (NVIS V compatible)	Frequently occurring species (occurrence in > 50% of quadrats within vegetation type)[1]	Indicator species (IndVal > 0.70, p < 0.05)	Significant species
ElAbTl	*Eucalyptus* low open woodland	*Eucalyptus leucophloia* subsp. *leucophloia*, ±*Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps*, *Triodia wiseana*, ±*Triodia brizoides* low hummock grassland.	*Acacia bivenosa*, *Eucalyptus leucophloia* subsp. *leucophloia*, *Senna symonii*, *Triodia longiceps*, *Triodia wiseana*	–	*Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3), *Euphorbia inappendiculata* var. *inappendiculata* (P3), *Indigofera ixocarpa* (P2), *Nicotiana umbratica* (P3), *Ptilotus mollis* (P4)
ElGwTe	*Triodia* low hummock grassland	*Eucalyptus leucophloia* subsp. *leucophloia*, ±*Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia*, *Eriachne lanata*, *Eriachne mucronata* low hummock/tussock grassland.	*Eriachne lanata*, *Eucalyptus leucophloia* subsp. *leucophloia*, *Grevillea wickhamii*, *Ptilotus calostachyus*, *Triodia epactia*	–	*Ptilotus mollis* (P4), *Quoya zonalis* (T)
EvAcCc	*Eucalyptus* mid open woodland	*Eucalyptus victrix*, ±*Eucalyptus camaldulensis* subsp. *refulgens* mid open woodland; *Acacia coriacea* subsp. *pendens*, *Acacia pyrifolia* var. *pyrifolia*, *Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris*, *Triodia longiceps*, *Triodia epactia* low tussock/hummock grassland.	*Acacia coriacea* subsp. *pendens*, *Acacia pyrifolia* var. *pyrifolia*, *Alternanthera nana*, *Atalaya hemiglauca*, **Cenchrus ciliaris*, **Cenchrus setiger*, *Cyperus vaginatus*, *Eucalyptus camaldulensis* subsp. *refulgens*, *Eucalyptus victrix*, *Euphorbia australis* var. *subtomentosa*, *Ipomoea muelleri*, *Melaleuca glomerata*, *Nellica maderaspatensis*, *Rhynchosia minima*, *Triodia epactia*, *Triodia longiceps*, **Vachellia farnesiana*	*Cenchrus ciliaris* (0.89)	*Ipomoea racemigera* (P3)
VfAl	*Aristida* low tussock grassland	**Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia*, *Cynodon convergens*, *Eriachne mucronata* low tussock grassland.	*Aristida latifolia*, *Arivela viscosa*, *Crotalaria medicaginea* var. *neglecta*, *Cynodon convergens*, *Dolichocarpa crouchiana*, *Eriachne mucronata*, *Grona muelleri*, *Heliotropium crispatum*, *Hibiscus brachysiphonius*, *Nellica maderaspatensis*, *Operculina aequisepala*, *Portulaca oleracea*, *Ptilotus gomphrenoides*, *Rhynchosia minima*, *Senna notabilis*, *Solanum lasiophyllum*, *Tephrosia* sp. clay soils (S. van Leeuwen et al. PBS 0273), **Vachellia farnesiana*	*Aristida latifolia* (0.84), *Cynodon convergens* (0.79), *Grona muelleri* (0.75), *Heliotropium crispatum* (0.80), *Hibiscus brachysiphonius* (0.75), *Operculina aequisepala* (0.76), *Ptilotus gomphrenoides* (0.73), *Tephrosia* sp. clay soils (S. van Leeuwen et al. PBS 273) (0.77)	*Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3), *Euphorbia inappendiculata* var. *queenslandica* (P3), *Euphorbia stevenii* (P3), *Neptunia longipila* (P2), *Paspalidium retiglume* (P2), *Stemodia* sp. Battle Hill (A.L. Payne 1006) (P1), *Swainsona thompsoniana* (P3)

[1] See Appendix D (constancy-importance table) for a full list of species associated with each vegetation type.

Table 16: Summary of vegetation types within the survey area – landforms, condition, significance, species richness, and extent.

Map code	Landform and soils	Vegetation condition	Median site species richness (range)	Environmental Significance (WA)	Environmental Significance (Other)	Extent within survey area (ha) (% of total area)	Sites
AaCpTw	Gravelly plains and undulating plains with reddish-brown clay-loam soils.	Excellent	38 (29 – 44)	None	Locally restricted	355.9 (0.3%)	BD_E_066, BD_E_105, BD_E_109, BD_S_021, BD_S_027, BD_S_074, BD_S_078
AaEp	Gravelly plains and undulating plains with reddish-brown clay-loam soils.	Degraded to Excellent	19 (11 – 58)	None	Part of AaEp near Christmas Creek (413.7 ha) is banded mulga (potentially sheet-flow dependant); locally restricted	1,214 (1.1%)	BD_E_252, BD_E_284, BD_E_288, BD_E_290, BD_E_291, BD_S_005, BD_S_008, BD_S_010, BD_S_012, BD_S_023, BD_S_025, BD_S_030, BD_S_036, BD_S_093, BD_S_101
AaTe	Primarily stony plains with red-brown clay-loam soils.	Excellent	21 (11 – 33)	None	Locally restricted	588.5 (0.5%)	BD_E_034, BD_E_036, BD_E_051, BD_E_138, BD_E_141, BD_E_146, BD_E_277, BD_E_283, BD_E_294
AaTs	Plains and undulating plains	Excellent	30 (25 – 46)	None	Locally restricted	701.1 (0.6%)	BD_S_003, BD_S_007, BD_S_038, BD_S_042, BD_S_044
AcTe	Rocky creeks and minor gullies	Very Good to Excellent	27.5 (24 – 31)	None	Locally restricted	164.5 (0.2%)	BD_E_189, BD_E_197
AeTe	Plains and undulating plains	Excellent	29 (25 – 41)	None	Locally restricted	1,266.4 (1.2%)	BD_S_011, BD_S_014, BD_S_034
AhCspYTe	Plains and undulating plains	Excellent	38 (24 – 42)	None	Locally restricted	48 (0%)	BD_S_018, BD_S_022, BD_S_024
AiCpTe1	Low stony hills and undulating plains. Mostly ironstone and basalt with some quartz and calcrete. Reddish brown clay-loam soils.	Very Good to Excellent	12 (5 – 38)	None	None	Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb: 64,130.8 (58.9%)	BD_E_014, BD_E_015, BD_E_016, BD_E_018, BD_E_020, BD_E_023, BD_E_024, BD_E_027, BD_E_028, BD_E_030, BD_E_037, BD_E_038, BD_E_040, BD_E_047, BD_E_053, BD_E_057, BD_E_059, BD_E_061, BD_E_064, BD_E_078, BD_E_079, BD_E_080, BD_E_083, BD_E_088, BD_E_090, BD_E_092, BD_E_093, BD_E_094, BD_E_095, BD_E_096, BD_E_098, BD_E_099, BD_E_101, BD_E_106, BD_E_108, BD_E_110, BD_E_111, BD_E_113, BD_E_114, BD_E_117, BD_E_119, BD_E_121, BD_E_123, BD_E_125, BD_E_130, BD_E_142, BD_E_148, BD_E_152, BD_E_154, BD_E_155, BD_E_157, BD_E_162, BD_E_164, BD_E_167, BD_E_169, BD_E_176, BD_E_183, BD_E_195, BD_E_205, BD_E_208, BD_E_209, BD_E_215, BD_E_216, BD_E_217, BD_E_221, BD_E_222, BD_E_226, BD_E_229, BD_E_231, BD_E_233, BD_E_236, BD_E_238, BD_E_240, BD_E_254, BD_E_258, BD_E_266, BD_E_267, BD_E_270, BD_E_272, BD_E_274, BD_E_278, BD_S_001, BD_S_028, BD_S_031, BD_S_053, BD_S_055, BD_S_062, BD_S_065, BD_S_066, BD_S_069, BD_S_071, BD_S_073, BD_S_075, BD_S_097, BD_S_098, BD_S_099, BD_S_105, BD_S_107, BD_S_109, BD_S_110
AiCpTe2	Primarily associated with minor drainage lines intersecting low stony hills and undulating plains. Reddish brown clay-loam soils.	Poor to Excellent	33.5 (23 – 42)	None	None		BD_E_001, BD_E_002, BD_E_008, BD_E_046, BD_E_085, BD_E_087, BD_E_112, BD_E_131, BD_S_061, BD_S_063
AiSgTb	Primarily associated with rocky ridges and outcrops. Reddish brown clay-loam soils.	Excellent	22 (6 – 41)	None	None		BD_E_012, BD_E_013, BD_E_039, BD_E_075, BD_E_102, BD_E_103, BD_E_104, BD_E_122, BD_E_134, BD_E_153, BD_E_173, BD_E_201, BD_E_211, BD_E_251, BD_E_273, BD_E_275, BD_E_280, BD_S_004, BD_S_013, BD_S_020, BD_S_039, BD_S_048, BD_S_051, BD_S_064, BD_S_096
AmTe	Drainage lines and floodplains	Excellent	18.5 (6 – 24)	None	Locally restricted	100.1 (0.1%)	BD_S_070, BD_S_077, BD_S_079, BD_S_080, BD_S_084, BD_S_102
AoTe	Rocky hills and outcrops with sandy clay loam soils.	Excellent	11 (7 – 16)	None	Locally restricted	136.2 (0.1%)	BD_E_003, BD_E_182, BD_E_198
EcAcCs	Sandy creek	Degraded to Excellent	39 (33 – 69)	None	Groundwater dependent vegetation; locally restricted	137.4 (0.1%)	BD_S_016, BD_S_035, BD_S_037, BD_S_057
ElAbTl	Low stony hills, plains, and undulating plains sometimes with dissecting drainage lines. Often with quartz and calcrete. Reddish brown clay-loam.	Very Good to Excellent	17 (5 – 40)	None	None	18,229.8 (16.7%)	BD_E_004, BD_E_019, BD_E_032, BD_E_045, BD_E_055, BD_E_056, BD_E_058, BD_E_060, BD_E_063, BD_E_068, BD_E_069, BD_E_081, BD_E_082, BD_E_124, BD_E_127, BD_E_135, BD_E_136, BD_E_137, BD_E_139, BD_E_140, BD_E_144, BD_E_145, BD_E_147, BD_E_149, BD_E_150, BD_E_158, BD_E_159, BD_E_163, BD_E_165, BD_E_168, BD_E_175, BD_E_178, BD_E_180, BD_E_184, BD_E_186, BD_E_187, BD_E_190, BD_E_193, BD_E_194, BD_E_196, BD_E_199, BD_E_200, BD_E_218, BD_E_220, BD_E_223, BD_E_237, BD_E_239, BD_E_244, BD_E_245, BD_E_247, BD_E_248, BD_E_256, BD_E_257, BD_E_259, BD_E_262, BD_E_263,

Map code	Landform and soils	Vegetation condition	Median site species richness (range)	Environmental Significance (WA)	Environmental Significance (Other)	Extent within survey area (ha) (% of total area)	Sites
							BD_E_264, BD_E_268, BD_E_269, BD_E_271, BD_E_282, BD_E_289, BD_E_292, BD_E_293, BD_S_009, BD_S_015, BD_S_026, BD_S_040, BD_S_046, BD_S_082, BD_S_086, BD_S_087, BD_S_088, BD_S_089, BD_S_091, BD_S_092, BD_S_095, BD_S_104, BD_S_108
ElGwTe	Low rocky hills and ridges with red-brown clay-loam soil	Excellent	14 (6 – 21)	None	The EPBC Act listed species *Quoya zonalis* is present within this vegetation type in the north-west corner of the survey area.	8,122.4 (7.5%)	BD_E_021, BD_E_025, BD_E_043, BD_E_044, BD_E_049, BD_E_050, BD_E_062, BD_E_065, BD_E_071, BD_E_072, BD_E_073, BD_E_077, BD_E_084, BD_E_115, BD_E_118, BD_E_120, BD_E_128, BD_E_143, BD_E_151, BD_E_156, BD_E_161, BD_E_166, BD_E_172, BD_E_174, BD_E_179, BD_E_181, BD_E_188, BD_E_191, BD_E_202, BD_E_203, BD_E_204, BD_E_207, BD_E_210, BD_E_214, BD_E_225, BD_E_243, BD_E_255, BD_E_261, BD_E_265, BD_E_279, BD_E_285, BD_E_286, BD_E_287, BD_S_045, BD_S_047, BD_S_049, BD_S_085, BD_S_100, BD_S_103, BD_S_106
EvAcCc	Minor and major creeks and minor gullies.	Degraded to Excellent	36 (15 – 66)	None	Potential groundwater dependent vegetation; locally restricted	5,128.5 (4.7%)	BD_E_006, BD_E_017, BD_E_022, BD_E_026, BD_E_031, BD_E_033, BD_E_035, BD_E_041, BD_E_042, BD_E_048, BD_E_052, BD_E_054, BD_E_086, BD_E_089, BD_E_091, BD_E_107, BD_E_116, BD_E_126, BD_E_133, BD_E_160, BD_E_185, BD_E_192, BD_E_212, BD_E_219, BD_E_227, BD_E_232, BD_E_235, BD_E_242, BD_E_249, BD_E_250, BD_E_253, BD_E_260, BD_E_281, BD_S_002, BD_S_017, BD_S_019, BD_S_032, BD_S_054, BD_S_060, BD_S_067, BD_S_072, BD_S_081, BD_S_083, BD_S_094
VfAl	Low hills and plains with clay soils, often stony.	Poor to Excellent	37 (10 – 78)	Priority 1 PEC (Four plant assemblages of the Wona Land System)	Potential role as a refuge (a relatively uncommon habitat type in the Pilbara which supports numerous species restricted to clay soils)	7,425.5 (6.8%)	BD_E_005, BD_E_007, BD_E_009, BD_E_010, BD_E_011, BD_E_029, BD_E_067, BD_E_070, BD_E_074, BD_E_076, BD_E_097, BD_E_100, BD_E_129, BD_E_132, BD_E_170, BD_E_171, BD_E_206, BD_E_213, BD_E_224, BD_E_228, BD_E_234, BD_E_241, BD_E_246, BD_E_276, BD_S_006, BD_S_029, BD_S_033, BD_S_041, BD_S_043, BD_S_050, BD_S_052, BD_S_056, BD_S_058, BD_S_059, BD_S_068, BD_S_076
Cleared	NA	NA	NA	NA	NA	1,091.9 (1%)	NA

4.2.2 Vegetation Condition

Vegetation condition according to the EPA (2016) scale was recorded at each sampling site and was assessed periodically along traverses and ranged from Degraded to Excellent (Table 17, Map 17). Vegetation across most of the survey area was in Excellent condition (98,760.22 ha, 90.74%Table 17), having no obvious disturbance or only negligible disturbance (e.g., the presence of few non-aggressive weeds). The most significant infestations of introduced species were within creeks and associated floodplains, in which dense **Cenchrus ciliaris* (buffel grass) and **Cenchrus setiger* (Birdwood grass) infestations were sometimes present, and parts of the Wona land system which were sometimes heavily grazed and with infestations of introduced species including **Vachellia farnesiana* (mimosa bush). These areas were assessed as Very Good, Good, Poor, or Degraded. Cleared areas including the BC Iron mine area and vehicle tracks accounted for approximately 530 ha.

Table 17: Vegetation condition of the survey area.

Condition category	Area (ha)	Percentage of survey area
Excellent	98,760.22	90.74
Very Good	3,366.34	3.09
Good	949.65	0.87
Poor	2,924.18	2.69
Degraded	1,748.71	1.61
NA (cleared)	1,091.91	1.00

4.2.3 Significant Vegetation

Vegetation types were assessed against the criteria in Table 9 (section 3.1.9) to determine vegetation significance. Thirteen vegetation types were significant according to one or more of these criteria (Table 16, Map 18).

Threatened and Priority Ecological Communities

Vegetation type VfAl, which was a species rich community occurring on clay soils associated with stony gibber plains and low hills, was consistent with the DBCA listed community 'Four plant assemblages of the Wona Land System' and more specifically to the Priority 1 community 'Cracking clays of the Chichester and Mungaroona Range' (Table 7). This vegetation type accounted for 6.8% (7,375.9 ha) of the survey area.

Vegetation supporting populations of Threatened species

Vegetation type ElGwTe supported a population of the Threatened species *Quoya zonalis* in the northwest of the survey area (Map 18). The area in which additional populations of *Quoya zonalis* potentially occur would likely be restricted to areas in the northwest surrounding the known population, even though this vegetation type occurs somewhat more extensively across the survey area. This section of ElGwTe surrounding the population of *Q. zonalis* accounted for approximately 4,016 ha.

Vegetation that plays a potential role as a refuge

The Wona land system has a relatively restricted and patchy regional distribution and supports many plant species restricted to clay soils. This habitat is potentially a refuge for species restricted to clay soils in the Pilbara. The Wona land system was represented by vegetation type vegetation type VfAl and therefore had a total extent of 7,425.5ha (6.8%) within the survey area.

Locally restricted vegetation types

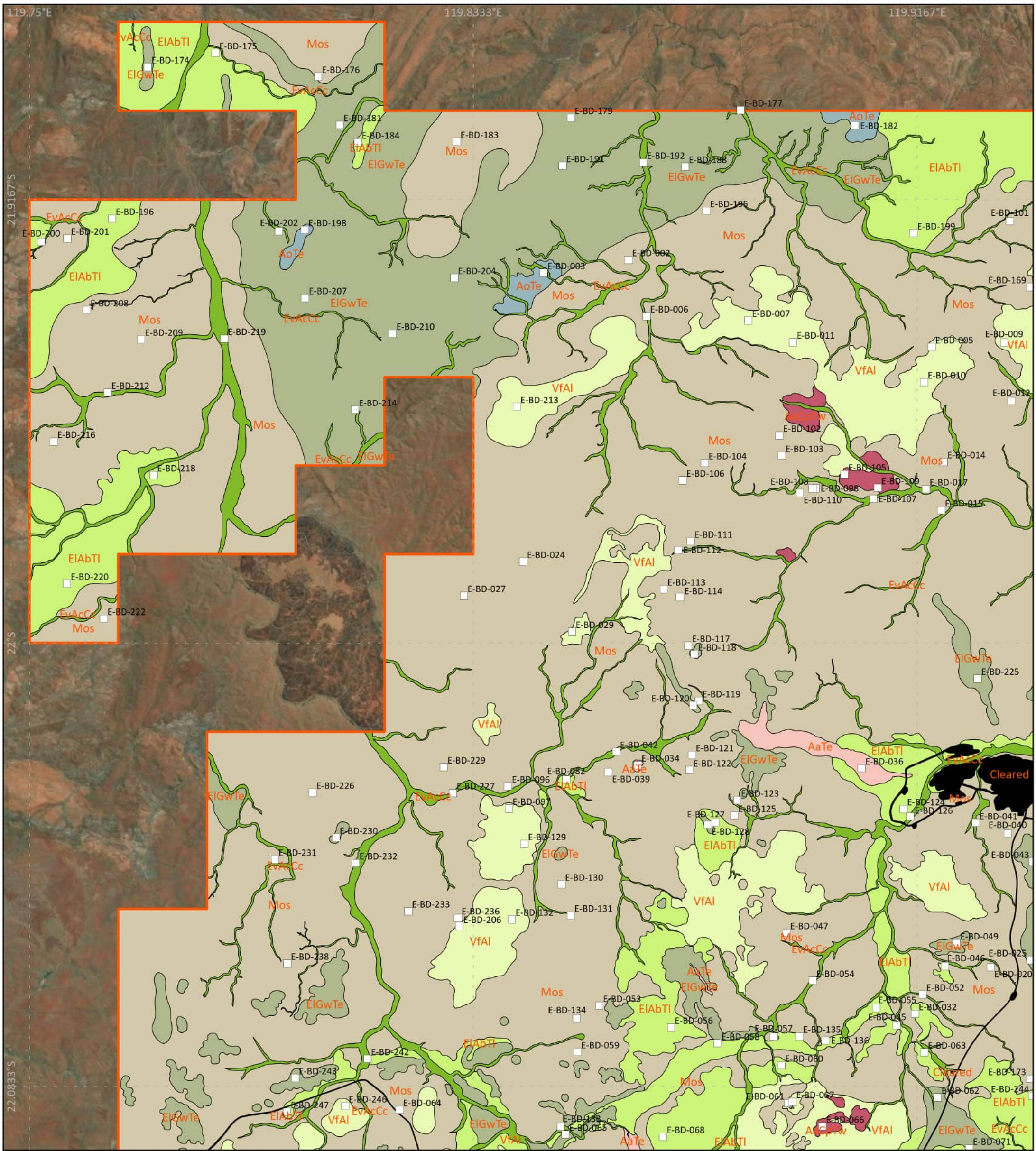
Nine vegetation types (AaCpTw, AaEp, AaTe, AaTs, AcTe, AeTe, AhCspYTe, AmTe, AoTe) each accounted for less than 5% of the total survey area (Table 16) and are potentially restricted in a local context. These collectively accounted for 4.2% (4,574.6 ha) of the survey area.

Groundwater dependent vegetation

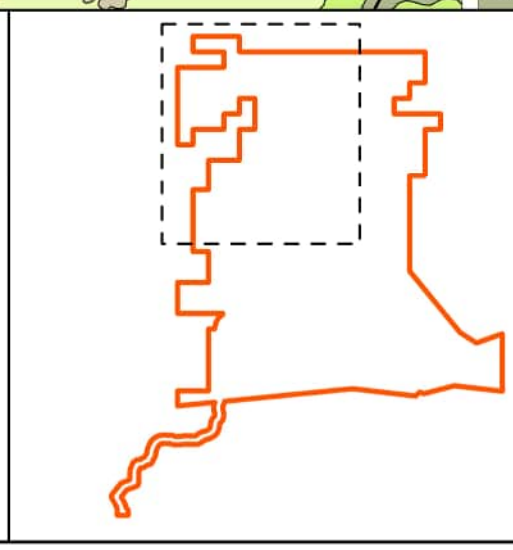
Groundwater dependent vegetation was determined by the presence of the obligate phreatophyte *Melaleuca argentea* (GDV) or the facultative phreatophytes *Eucalyptus camaldulensis* and *Eucalyptus victrix* (potential GDV). Vegetation type EcAcCs supported *Melaleuca argentea* and *Eucalyptus camaldulensis* and parts of EvAcCc that supported *E. camaldulensis* was therefore considered to be GDV accounting for 3,384 ha (3.1%) of the survey area. Parts of vegetation type EvAcCc supporting only *Eucalyptus victrix* is potential GDV and accounted for 1,881.8 (1.7%) of the survey area.

Sheet-flow dependent mulga

Approximately 34% (413.7 ha) of vegetation type AaEp (*Acacia aptaneura*, *Acacia pruinocarpa* tall open shrubland) which had characteristic grove-intergrove patterning (i.e., potentially sheet-flow dependent mulga) was present at the southern end of the transmission corridor near Christmas Creek.



- Bonney Downs survey area
- Sampling site
- AaCpTw, *Acacia aptaneura, Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana, Enneapogon polyphyllus, Aristida contorta* low open tussock grassland.
- AaEp, *Acacia aptaneura, Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus, ±Triodia brizoides, ±Triodia longiceps* low open tussock/hummock grassland.
- AaTe, *Acacia aptaneura, Acacia pruinocarpa, Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.
- AaTs, *Acacia ancistrocarpa, Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.
- AcTe, *Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia, Triodia longiceps* mid sparse hummock grassland.
- AeTe, *Acacia eriopoda* tall sparse shrubland; *Triodia epactia, Triodia longiceps* low hummock grassland.
- AhCspYTe, *Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.
- AmTe, *Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.
- AoTe, *Acacia orthocarpa, Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.
- EcAcCs, *Eucalyptus camaldulensis, ±Melaleuca argentea* mid open woodland; *Acacia coriacea, Acacia trachycarpa* tall open shrubland; **Cenchrus setiger, Triodia longiceps* low tussock/hummock grassland.
- ElAbTl, *Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps, Triodia wiseana, ±Triodia brizoides* low hummock grassland.
- ElGwTe, *Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia, Eriachne lanata, Eriachne mucronata* low hummock/tussock grassland.
- EvAcCc, *Eucalyptus victrix, ±Eucalyptus camaldulensis* mid open woodland; *Acacia coriacea, Acacia pyrifolia, Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris, Triodia longiceps, Triodia epactia* low grassland.
- VfAl, **Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia, Cynodon convergens, Eriachne mucronata* low tussock grassland.
- Mos, Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb
- Cleared



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Map 12: Vegetation types recorded within the survey area (north-west).

0 0.5 1 1.5 3 Kilometers

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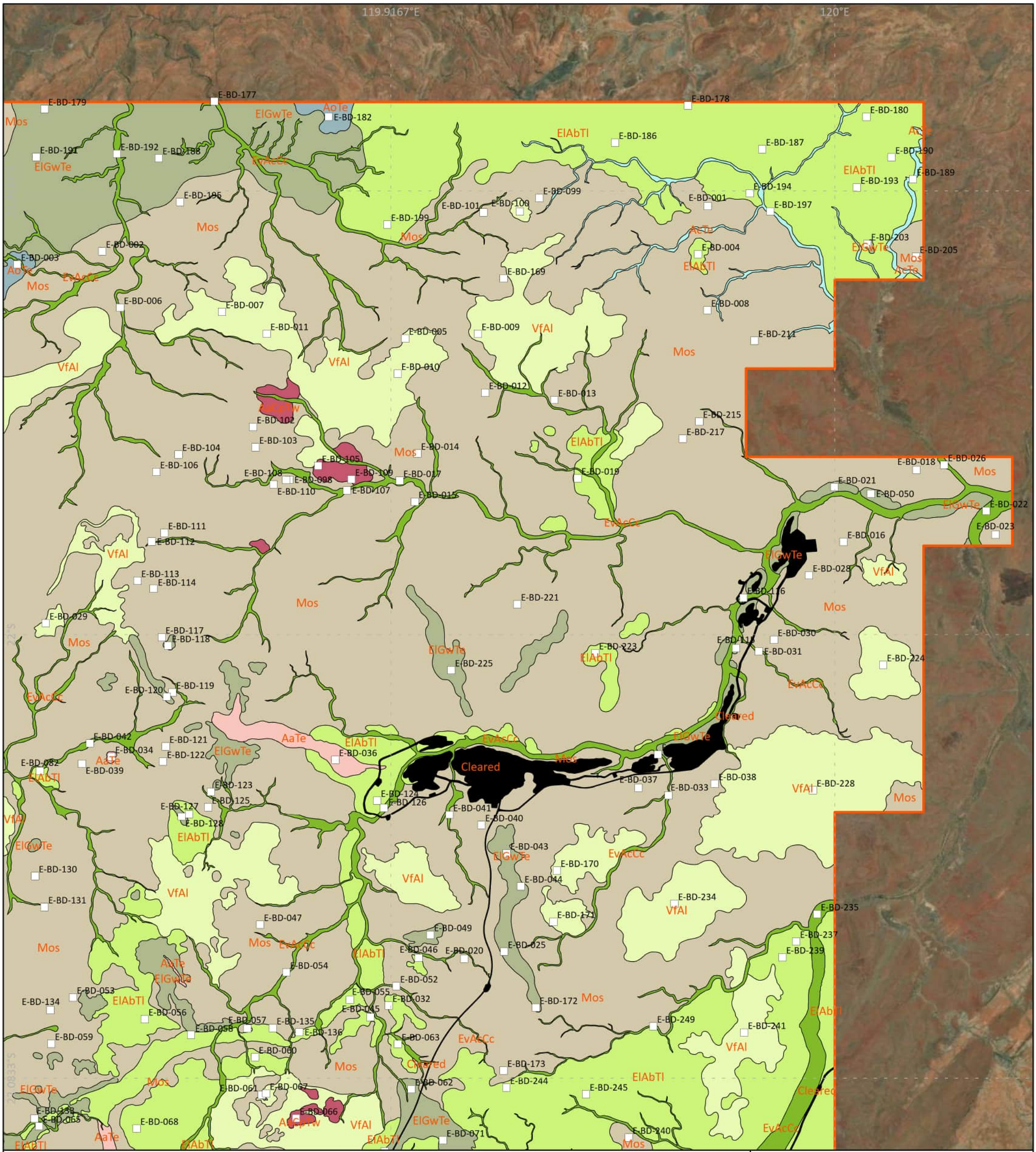
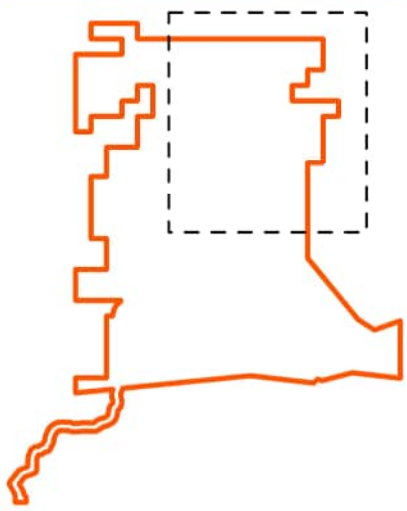


- Bonney Downs survey area
- Sampling site
- AaCpTw, *Acacia aptaneura, Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana, Enneapogon polyphyllus, Aristida contorta* low open tussock grassland.
- AaEp, *Acacia aptaneura, Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus, ±Triodia brizoides, ±Triodia longiceps* low open tussock/hummock grassland.
- AaTe, *Acacia aptaneura, Acacia pruinocarpa, Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.
- AaTs, *Acacia ancistrocarpa, Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.
- AcTe, *Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia, Triodia longiceps* mid sparse hummock grassland.
- AeTe, *Acacia eriopoda* tall sparse shrubland; *Triodia epactia, Triodia longiceps* low hummock grassland.
- AhCspYTe, *Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.
- AmTe, *Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.
- AoTe, *Acacia orthocarpa, Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.
- EcAcCs, *Eucalyptus camaldulensis, ±Melaleuca argentea* mid open woodland; *Acacia coriacea, Acacia trachycarpa* tall open shrubland; **Cenchrus setiger, Triodia longiceps* low tussock/hummock grassland.
- ElAbTl, *Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps, Triodia wiseana, ±Triodia brizoides* low hummock grassland.
- ElGwTe, *Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia, Eriachne lanata, Eriachne mucronata* low hummock/tussock grassland.
- EvAcCc, *Eucalyptus victrix, ±Eucalyptus camaldulensis* mid open woodland; *Acacia coriacea, Acacia pyrifolia, Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris, Triodia longiceps, Triodia epactia* low grassland.
- VfAl, **Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia, Cynodon convergens, Eriachne mucronata* low tussock grassland.
- Mos, Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb
- Cleared



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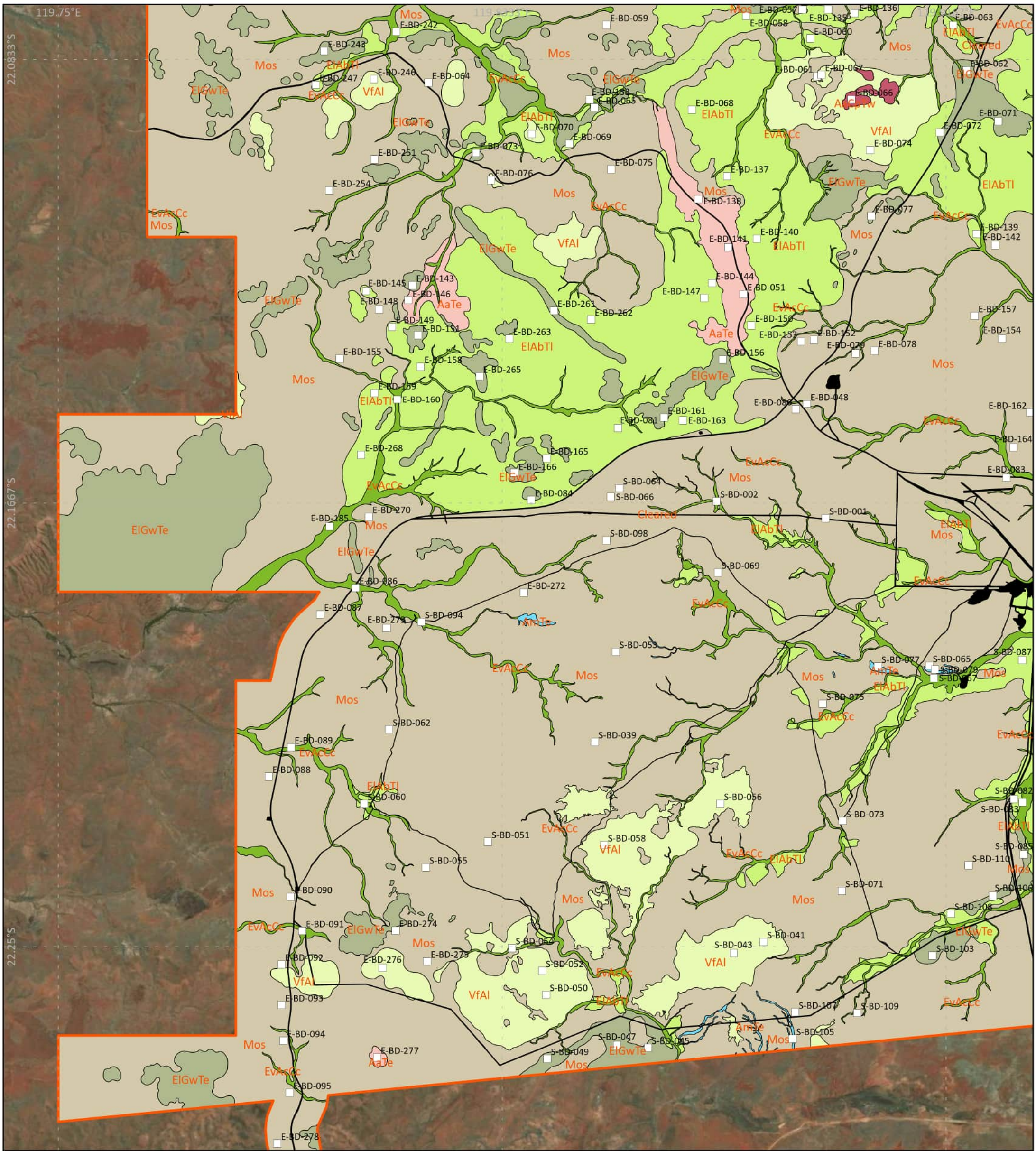
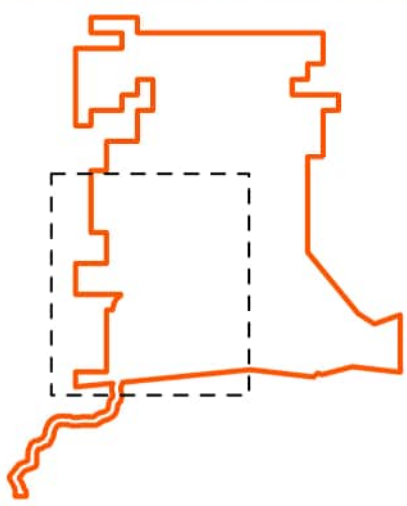
Map 13: Vegetation types recorded within the survey area (north-east).

0 0.5 1 1.5 3 Kilometers

Earthstar Geographics



- Bonney Downs survey area
- Sampling site
- AaCpTw,*Acacia aptaneura, Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana, Enneapogon polyphyllus, Aristida contorta* low open tussock grassland.
- AaEp,*Acacia aptaneura, Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus, ±Triodia brizoides, ±Triodia longiceps* low open tussock/hummock grassland.
- AaTe,*Acacia aptaneura, Acacia pruinocarpa, Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.
- AaTs,*Acacia ancistrocarpa, Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.
- AcTe,*Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia, Triodia longiceps* mid sparse hummock grassland.
- AeTe,*Acacia eriopoda* tall sparse shrubland; *Triodia epactia, Triodia longiceps* low hummock grassland.
- AhCspYTe,*Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.
- AmTe,*Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.
- AoTe,*Acacia orthocarpa, Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.
- EcAcCs,*Eucalyptus camaldulensis, ±Melaleuca argentea* mid open woodland; *Acacia coriacea, Acacia trachycarpa* tall open shrubland; **Cenchrus setiger, Triodia longiceps* low tussock/hummock grassland.
- ElAbTl,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps, Triodia wiseana, ±Triodia brizoides* low hummock grassland.
- ElGwTe,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia, Eriachne lanata, Eriachne mucronata* low hummock/tussock grassland.
- EvAcCc,*Eucalyptus victrix, ±Eucalyptus camaldulensis* mid open woodland; *Acacia coriacea, Acacia pyrifolia, Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris, Triodia longiceps, Triodia epactia* low grassland.
- VfAl,**Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia, Cynodon convergens, Eriachne mucronata* low tussock grassland.
- Mos,Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb
- Cleared



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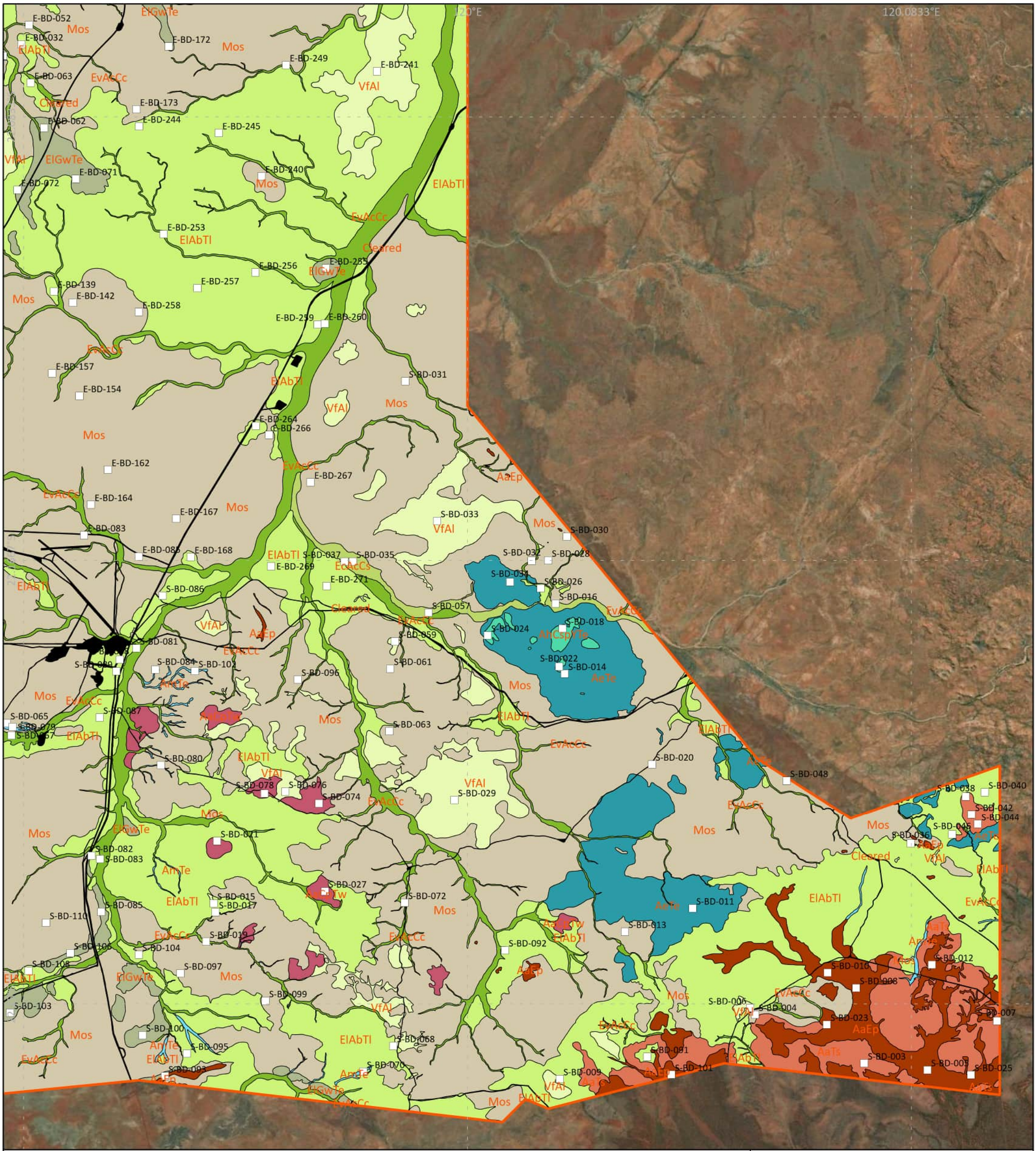
Project No.: 1991
Author: AC
Created Date: 17 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:75,000 @A3

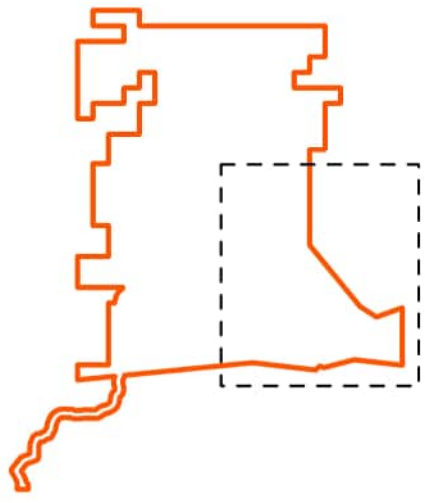
Map 14: Vegetation types recorded within the survey area (south-west).

Earthstar Geographics

0 0.5 1 1.5 3 Kilometers



- Bonney Downs survey area
- Sampling site
- AaCpTw,*Acacia aptaneura, Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana, Enneapogon polyphyllus, Aristida contorta* low open tussock grassland.
- AaEp,*Acacia aptaneura, Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus, ±Triodia brizoides, ±Triodia longiceps* low open tussock/hummock grassland.
- AaTe,*Acacia aptaneura, Acacia pruinocarpa, Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.
- AaTs,*Acacia ancistrocarpa, Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.
- AcTe,*Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia, Triodia longiceps* mid sparse hummock grassland.
- AeTe,*Acacia eriopoda* tall sparse shrubland; *Triodia epactia, Triodia longiceps* low hummock grassland.
- AhCspYTe,*Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.
- AmTe,*Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.
- AoTe,*Acacia orthocarpa, Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.
- EcAcCs,*Eucalyptus camaldulensis, ±Melaleuca argentea* mid open woodland; *Acacia coriacea, Acacia trachycarpa* tall open shrubland; **Cenchrus setiger, Triodia longiceps* low tussock/hummock grassland.
- ElAbTl,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps, Triodia wiseana, ±Triodia brizoides* low hummock grassland.
- ElGwTe,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia, Eriachne lanata, Eriachne mucronata* low hummock/tussock grassland.
- EvAcCc,*Eucalyptus victrix, ±Eucalyptus camaldulensis* mid open woodland; *Acacia coriacea, Acacia pyrifolia, Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris, Triodia longiceps, Triodia epactia* low grassland.
- VfAl,**Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia, Cynodon convergens, Eriachne mucronata* low tussock grassland.
- Mos,Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb
- Cleared



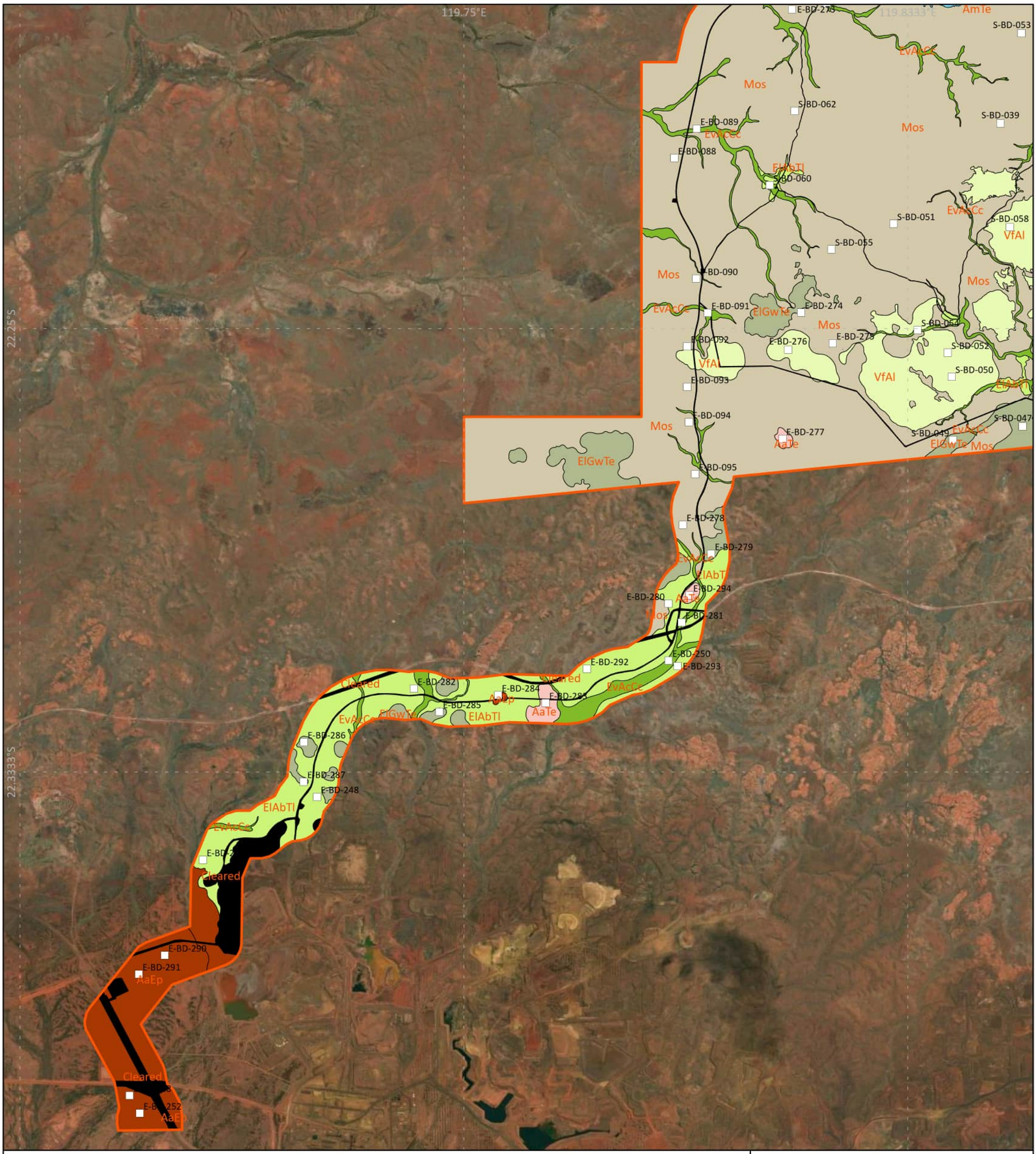
ecologia ENVIRONMENT

Project No.: 1991
Author: AC
Created Date: 17 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:75,000 @A3

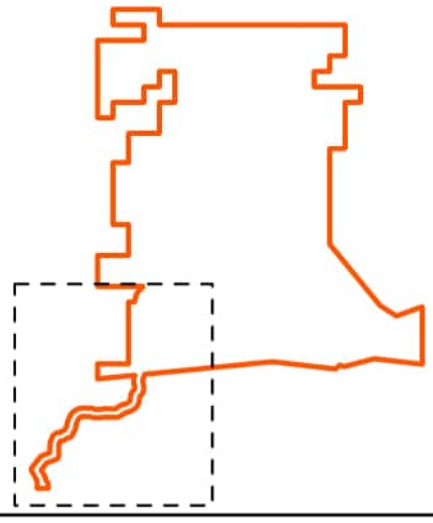
Map 15: Vegetation types recorded within the survey area (south-east).

Earthstar Geographics

0 0.5 1 1.5 3 Kilometers



- Bonney Downs survey area
- Sampling site
- AaCpTw,*Acacia aptaneura, Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana, Enneapogon polyphyllus, Aristida contorta* low open tussock grassland.
- AaEp,*Acacia aptaneura, Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus, ±Triodia brizoides, ±Triodia longiceps* low open tussock/hummock grassland.
- AaTe,*Acacia aptaneura, Acacia pruinocarpa, Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.
- AaTs,*Acacia ancistrocarpa, Acacia aptaneura* tall open shrubland; *Triodia scintillans* low hummock grassland.
- AcTe,*Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia, Triodia longiceps* mid sparse hummock grassland.
- AeTe,*Acacia eriopoda* tall sparse shrubland; *Triodia epactia, Triodia longiceps* low hummock grassland.
- AhCspYTe,*Atalaya hemiglauca* tall sparse shrubland; *Corchorus* sp. Yarrie (P1) mid open shrubland; *Triodia epactia* low sparse hummock grassland.
- AmTe,*Acacia monticola* tall closed shrubland; *Triodia epactia* low open hummock grassland.
- AoTe,*Acacia orthocarpa, Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.
- EcAcCs,*Eucalyptus camaldulensis, ±Melaleuca argentea* mid open woodland; *Acacia coriacea, Acacia trachycarpa* tall open shrubland; **Cenchrus setiger, Triodia longiceps* low tussock/hummock grassland.
- ElAbTl,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps, Triodia wiseana, ±Triodia brizoides* low hummock grassland.
- ElGwTe,*Eucalyptus leucophloia, ±Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia, Eriachne lanata, Eriachne mucronata* low hummock/tussock grassland.
- EvAcCc,*Eucalyptus victrix, ±Eucalyptus camaldulensis* mid open woodland; *Acacia coriacea, Acacia pyrifolia, Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris, Triodia longiceps, Triodia epactia* low grassland.
- VfAl,**Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia, Cynodon convergens, Eriachne mucronata* low tussock grassland.
- Mos,Mosaic of AiCpTe1 + AiCpTe2 + AiSgTb
- Cleared



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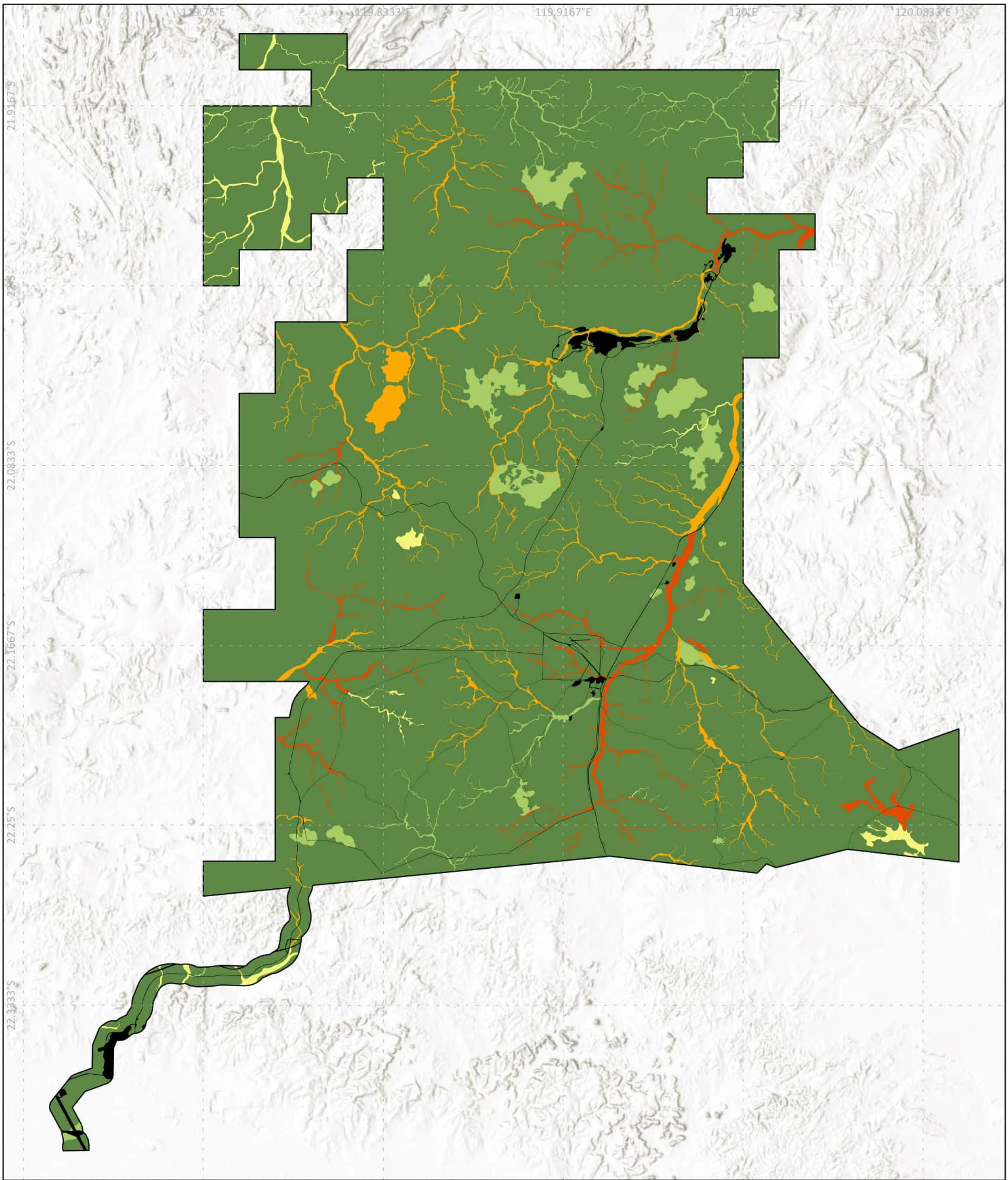
Project No.: 1991
Author: AC
Created Date: 17 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:75,000 @A3

Map 16: Vegetation types recorded within the survey area (transmission corridor).

0 0.5 1 1.5 3 Kilometers

Earthstar Geographics



Bonney Downs survey area

Vegetation condition

- Excellent
- Very Good
- Good
- Poor
- Degraded
- NA (cleared)

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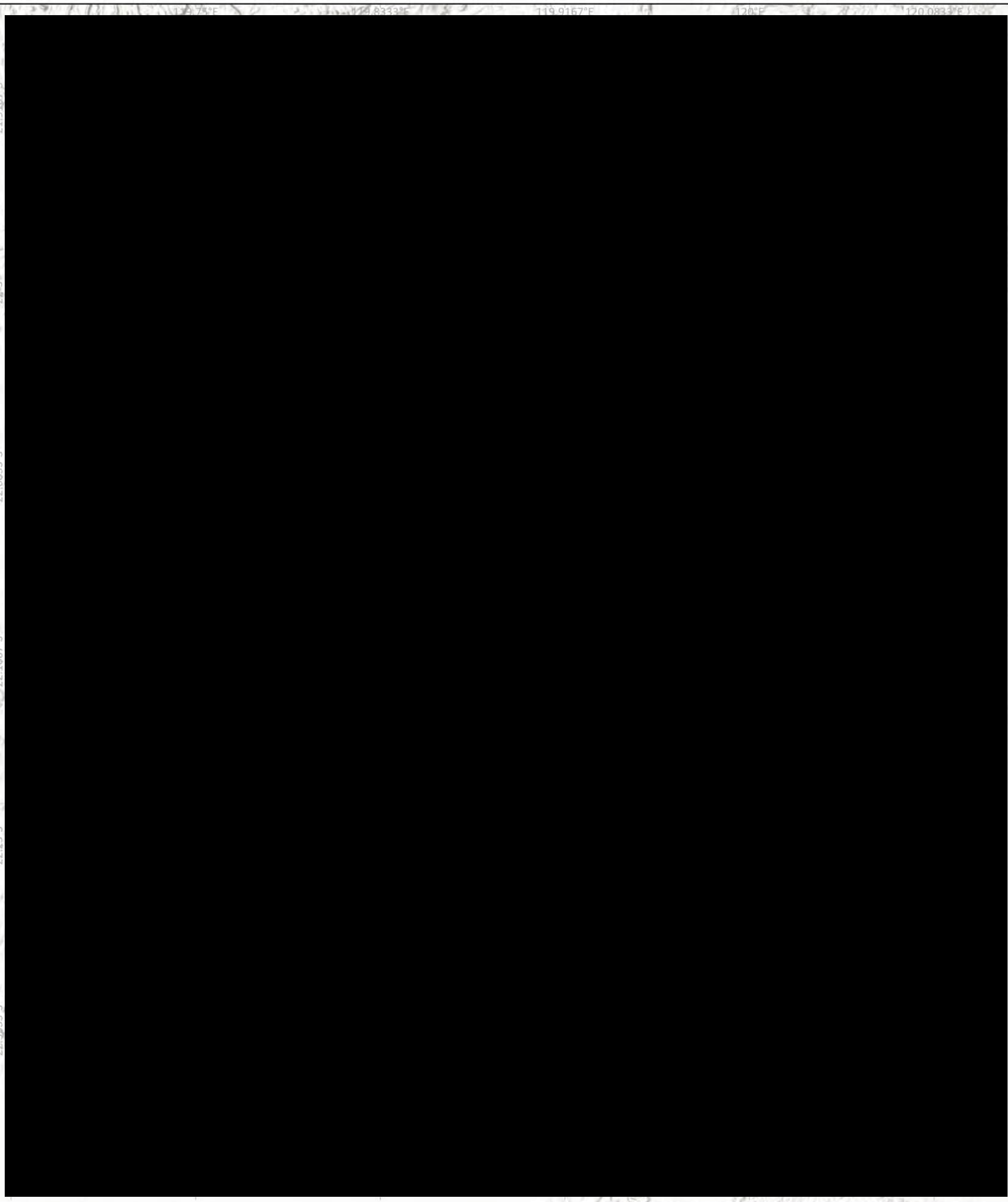
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 17: Vegetation condition within the survey area.

0 1.7 3.3 5 10 Kilometers

Esri, Geoscience Australia, NASA, NGA, USGS



- Bonney Downs survey area
- Priority 3 PEC: Four plant assemblages of the Wona Land System
- Other: Potentially supports EPBC Act listed Threatened species (*Quoya zonalis*)
- Other: Groundwater dependent vegetation
- Other: Potential groundwater dependent vegetation
- Other: Sheetflow dependent mulga
- Other: Locally restricted vegetation (if not otherwise significant)

ecologia ENVIRONMENT

Project No.: 1991
Author: AC
Created Date: 16 December 2024
Coordinate System: GCS GDA 1994
Scale: 1:180,000 @A3

Map 18: Significant and potentially significant vegetation within the survey area.

0 1.7 3.3 5 10 Kilometers

Esri, CGIAR

AaCpTw: *Acacia aptaneura*, *Acacia tetragonophylla* tall open shrubland; *Corchorus parviflorus* low open shrubland; *Triodia wiseana*, *Enneapogon polyphyllus*, *Aristida contorta* low open tussock grassland.

AaEp: *Acacia aptaneura*, *Acacia pruinocarpa* tall open shrubland; *Enneapogon polyphyllus*, ±*Triodia brizoides*, ±*Triodia longiceps* low open tussock/hummock grassland.

Figure 6: Representative photographs of vegetation types - 1.

AaTe: *Acacia aptaneura*, *Acacia pruinocarpa*, *Acacia bivenosa* tall open shrubland; *Triodia epactia* low open hummock grassland.

AcTe: *Acacia cyperophylla* var. *omearana* (P1), *Acacia tumida* var. *pilbarensis* tall sparse shrubland; *Triodia epactia*, *Triodia longiceps* mid sparse hummock grassland.

Figure 7: Representative photographs of vegetation types - 2.

AiCpTe1: *Acacia inaequilatera* tall sparse shrubland; ±*Corchorus parviflorus* low sparse shrubland; *Triodia epactia*, ±*Triodia brizoides* low hummock grassland.

AiCpTe2: *Acacia inaequilatera* tall sparse shrubland; *Corchorus parviflorus* low sparse shrubland; *Triodia epactia* low hummock grassland.

Figure 8: Representative photographs of vegetation types - 3.

AiSgTb: *Acacia inaequilatera*, *Hakea lorea* subsp. *lorea* tall open shrubland; *Senna glutinosa* mid open shrubland; *Triodia brizoides*, *Triodia epactia*, *Cymbopogon ambiguus* low hummock/tussock grassland.

AoTe: *Acacia orthocarpa*, *Acacia maitlandii* tall open shrubland; *Triodia epactia* low open hummock grassland.

Figure 9: Representative photographs of vegetation types - 4.

ElAbTl: *Eucalyptus leucophloia* subsp. *leucophloia*, ±*Corymbia hamersleyana* low open woodland; *Acacia bivenosa* mid sparse shrubland; *Triodia longiceps*, *Triodia wiseana*, ±*Triodia brizoides* low hummock grassland.

ElGwTe: *Eucalyptus leucophloia* subsp. *leucophloia*, ±*Corymbia hamersleyana* low open woodland; *Grevillea wickhamii* mid sparse shrubland; *Triodia epactia*, *Eriachne lanata*, *Eriachne mucronata* low hummock/tussock grassland.

Figure 10: Representative photographs of vegetation types - 5.

EvAcCc: *Eucalyptus victrix*, ±*Eucalyptus camaldulensis* subsp. *refulgens* mid open woodland; *Acacia coriacea* subsp. *pendens*, *Acacia pyrifolia* var. *pyrifolia*, *Atalaya hemiglauca* tall open shrubland; **Cenchrus ciliaris*, *Triodia longiceps*, *Triodia epactia* low tussock/hummock grassland.

VfAl: **Vachellia farnesiana* mid sparse shrubland; *Aristida latifolia*, *Cynodon convergens*, *Eriachne mucronata* low tussock grassland.

Figure 11: Representative photographs of vegetation types - 6.

5 DISCUSSION

5.1 FLORA

5.1.1 Floristic Diversity

A total of 552 vascular plant taxa were recorded within the survey area, representing approximately 97% of the estimated species richness (Chao2) for the area at the time of the survey, and approximately 69% of the 796 taxa that have been recorded within 50 km of the survey area (ALA, 2023). The most dominant families were the Fabaceae, Poaceae, Malvaceae, Amaranthaceae, Asteraceae, and Cyperaceae; the most dominant genera were *Acacia*, *Ptilotus*, *Sida*, *Senna*, *Euphorbia*, and *Solanum*. These dominant groups are consistent with those identified for the area during the desktop assessment, and the overall species diversity and floristic composition of the survey area is typical of the landforms present and for the Chichester IBRA subregion more generally.

5.1.2 Significant Species

Threatened species

The EPBC Act listed Threatened species *Quoya zonalis* was recording from a single small population in the northeast of the survey area on the crest of a granite ridge associated with the Capricorn land system. Twenty-one plants were recorded, most of which were juvenile (i.e., < ca. 20 cm tall), and were not flowering or fruiting at the time of the survey. The dominant vegetation at the site was *Acacia monticola* and *Grevillea wickhamii* subsp. *aprica* mid open shrubland over *Triodia epactia* hummock grassland. It is expected to occur more extensively within the survey area in surrounding hills in similar vegetation.

Quoya zonalis is only known to occur within the Chichester IBRA subregion of the Pilbara IBRA region, where it is primarily restricted to a small area approximately 50 km west of Marble Bar. However, according to Western Australian Herbarium records, there is a recently discovered (2022) outlying population occurring approximately 8 km north of the records from this survey, so these new records do not represent a range extension.

Quoya zonalis is typically found on 'steep, rocky, sandstone conglomerate and granite slopes in skeletal, brown, sandy loam soils' (K. A. Shepherd & Hislop, 2020), and less frequently on flatter hilltops. Early species distribution modelling (which included environmental variables for land system, geology, elevation, slope, and aspect) identified land system and geology as likely the best predictors of species presence (*ecologia*, 2014), and to date *Quoya zonalis* has been found to be almost exclusively restricted to the Capricorn land system, which is broadly characterised by 'hills and ridges of sandstone and dolomite supporting shrubby hard and soft spinifex grasslands' (Van Vreeswyk, Payne, Leighton, & Hennig, 2004). The presence of these most recent records on a rocky ridge within the Capricorn land system is consistent with these findings.

The most frequently cited associated species for *Quoya zonalis* based on available records are *Eucalyptus leucophloia*, *Acacia tumida* var. *pilbarensis*, *Grevillea wickhamii*, *Triodia epactia*, and *Triodia wiseana,* which are consistent with the species associated with the population in the survey area.

Priority species

Eighteen DBCA listed Priority species were recorded within the survey area, many of which are restricted to clay soils associated with the Wona land system (vegetation type VfAl). A summary of the local and regional distribution of the Priority species recorded is as follows:

- ***Acacia cyperophylla* var. *omearana* (P1)** has a restricted distribution in the Pilbara from just north of Marble Bar southeast to Newman where it is restricted primarily to stony alluvium along drainage lines. It was only present in the north of the survey area where 1,143 individuals were

recorded from stony creeks and associated with a distinctive vegetation type in which it was dominant (AcTe).

- ***Bulbostylis burbidgeae* (P4)** is relatively widespread in the northeast Pilbara, occurring from Port Hedland to just north of Fortescue Marsh, where it is typically associated with granite outcrops and cliff bases. Within the survey area, 1,625 individuals were recorded from granite outcrops and overhangs, almost exclusively within vegetation type AhCspYTe.
- ***Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05) (P1)** has a relatively restricted distribution in the northeast Pilbara and occurs primarily north of Marble Bar. Within the survey area, 147 individuals were recorded from granite outcrops, almost exclusively within vegetation type AhCspYTe in which it was dominant.
- ***Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3)** is widespread in the central Pilbara occurring from Karratha southeast to Newman where it grows mostly on inundated clays on gibber plains. Within the survey area, 750 individuals were recorded primarily from clay soils in vegetation type VfAl.
- ***Euphorbia inappendiculata* var. *inappendiculata* (P3)** is widespread across the Pilbara and it is typically associated with cracking clays. A single individual was recorded within the survey area from clay soils within vegetation type ElAbTl.
- ***Euphorbia inappendiculata* var. *queenslandica* (P3)** extends from near Tom Price in the west to the eastern edge of Karijini National Park, and it is typically associated with cracking clays. Over 1,900 individuals were recorded within the survey area on clay soils within vegetation type VfAl, where it is often locally abundant.
- ***Euphorbia stevenii* (P3)** extends from near Karratha southeast to near Newman in the Pilbara, with outlying records in the northern Kimberley. Eighty individuals were recorded within the survey area from clay soils within vegetation type VfAl.
- ***Indigofera ixocarpa* (P2)** has a relatively restricted distribution in the Pilbara with most records occurring near Tom Price and some outlying records near Nullagine. Forty individuals were recorded in the northwest of the survey area from rocky hillslopes in vegetation type ElAbTl.
- ***Iotasperma sessilifolium* (P3)** extends from just west of Tom Price to near Nullagine and grows mostly on the edges of waterholes and on cracking clays. One individual was recorded within the survey area from a minor drainage line.
- ***Ipomoea racemigera* (P3)** extends from near Karratha in the northwest of its distribution to near Newman in the southeast. It is widespread in northern Australia, occurring in southern and central Northern Territory, northern Queensland, and north-eastern South Australia. Fourteen individuals were recorded within the survey area primarily from creeks.
- ***Neptunia longipila* (P2)** is a recently described species that was split from *Neptunia dimorphantha*. It is a Pilbara endemic occurring from near Karratha in the northwest of its distribution to near Newman in the southeast. Within the survey area, 189 individuals were recorded on clay soils within vegetation type VfAl.
- ***Nicotiana umbratica* (P3)** is restricted primarily to the northeast of the Pilbara from just south of Port Hedland to near Nullagine where it mostly grows in shaded areas among rocky outcrops. Within the survey area, 554 individuals were recorded mostly from granite outcrops within vegetation type AhCspYTe.
- ***Paspalidium retiglume* (P2)** extends from near Karratha to near Wittenoom, where it is typically associated with clay soils. Within the survey area, 260 individuals were recorded on clay soils, mostly within vegetation type VfAl.
- ***Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3)** is relatively common in the southeast of the Pilbara where it extends from near Tom Price to east of Newman, usually in mulga woodlands on clay soils. Thirty-five individuals were recorded from mulga plains in the southeast of the survey area.
- ***Rostellularia adscendens* var. *latifolia* (P3)** is widespread in central and eastern Pilbara where it extends from near Tom Price to Meenthena Station, growing in a variety of habitats. Within the

survey area, 127 individuals were recorded mostly from granite outcrops within vegetation type AhCspYTe.

- ***Stemodia* sp. Battle Hill (A.L. Payne 1006) (P1)** is only known from two locations, southwest of Nullagine and east of Fortescue Marsh, where it has been found growing on cracking clay soils and floodplains. Within the survey area, 370 individuals were recorded on clay soils within vegetation type VfAl.
- ***Swainsona thompsoniana* (P3)** occurs from near Karratha in the north-west to near Newman in the southeast and is typically associated with heavy clay soils. Within the survey area, 997 individuals were recorded on clay soils within vegetation type VfAl.
- ***Ptilotus mollis* (P4)** is widespread in the Pilbara region, occurring from Cane River Conservation Park in the west to Meenthena Station in the east, and typically grows on steep rocky slopes. Within the survey area, 1,174 individuals were recorded from several existing known locations. It was not recorded from any new locations. It potentially occurs on additional rocky hills within the survey area, but it is not particularly common.

The likelihood of occurrence of the species identified during the desktop assessment was reassessed following the field survey based on survey effort, the presence of suitable habitat, and vegetation condition. Seasonal conditions were suitable for detecting the presence of most annual species, and vegetation within the survey area was mostly in 'Excellent' condition. A total of 400 sampling sites (quadrats and releves) were distributed across representative areas of all habitat types within the survey area, and additional targeted searches were undertaken along walked traverses. Given the size of the survey area, this level of survey effort is reasonable for determining the likely presence of significant species. Therefore, the remaining significant species that were not recorded during these surveys are unlikely to occur.

Range Extensions

Based on the Atlas of Living Australia, which includes records from all Australian herbaria, 10 species recorded within the survey area occur more than 100 km from their nearest known record. The records of *Brachyscome rudallensis, Calandrinia balonensis, *Chenopodium murale*, *Crotalaria cunninghamii* subsp. *cunninghamii*, and *Stenopetalum velutinum* were at the edge of their known range in WA. The remaining records fall within the main range of the species and do not represent significant extensions from the edge of the range. These distributional gaps may be due to paucity of data rather than representing true gaps in the range.

5.1.3 Introduced Species

Twenty-five introduced species were recorded, one of which (**Calotropis procera*) is listed as Declared Pest. **Calotropis procera* was recorded primarily in the northeast of the survey area within or near disturbed areas associated with the BC Iron Nullagine mine. Most of these species are widely naturalised across the Pilbara region and their presence within the survey area is not considered unusual, although the records of **Chenopodium murale*, **Cynodon dactylon*, **Euphorbia hirta*, and **Phoenix dactylifera* were range extensions. The most significant weed infestations occurred in major drainage channels where **Cenchrus ciliaris* and **C. setiger* were often a dominant component of the ground layer. There were also notable infestations of **Vachellia farnesiana* usually associated with the Wona land system.

5.2 VEGETATION

5.2.1 Vegetation Types and Condition

Vegetation within the survey area consists mostly of low stony hills and undulating plains supporting *Acacia inaequilatera* sparse shrubland over *Triodia epactia* or *Triodia brizoides* low hummock grasslands (AiCpTe1, AiCpTe2, AiSgTb). These vegetation types account for approximately 59% of the survey area and were mostly in 'Excellent' condition. This is consistent with the pre-European

vegetation mapping of Shepherd et al. (2002) in which vegetation association 173 (Hummock grasslands, shrub steppe; kanji [*Acacia inaequilatera*] over soft spinifex [including *Triodia epactia*] & *Triodia wiseana* on basalt) is mapped over most of the survey area. *Eucalyptus leucophloia* subsp. *leucophloia* low open woodlands (ElAbTl and ElGwTe), also occurring on low rocky hills, account for approximately 24% of the survey area and were also mostly in 'Excellent' condition. Major drainage channels supporting riparian vegetation dominated by *Eucalypts victrix* and *E. camaldulensis* account for approximately 5% of the survey area. These riparian habitats were generally in Degraded or Poor condition owing to weed infestation (primarily **Cenchrus ciliaris* and **C. setiger*) in some areas. Low hills and upland plains with clay soils supporting *Aristida latifolia* tussock grasslands (VfAl) account for approximately 7% of the survey area. Vegetation condition in these areas was variable, with some areas more heavily grazed and with **Vachellia farnesiana* infestations, resulting in most of it being assessed in Poor to Good condition. Mulga (*Acacia aptaneura*) woodlands (AaCpTw, AaEp, AaTe) occur only occasionally within the survey area (approx. 2%).

The most significant areas of impact are associated with the former BC Iron mine site where extensive areas have been cleared and infestations of **Calotropis procera*, **Aerva javanica*, and **Cenchrus ciliaris* are sometimes present. These areas of weed infestation tend to be restricted to historically disturbed sites and the surrounding undisturbed vegetation is usually in Very Good to Excellent condition.

5.2.2 Significant Vegetation

Spatial data from the DBCA Threatened and Priority Ecological Communities Database and community descriptions were compared to the vegetation types described here to assess the potential presence of TECs and PECs within the survey area. TECs listed under the EPBC Act are regarded as nationally significant. No EPBC Act listed TECs were recorded within the survey area. State listed TECs and PECs are regarded as being of state significance. No state listed TECs were recorded within the survey area, and one state listed Priority 1 PEC was recorded.

Vegetation type VfAl is broadly consistent with the description of one of the four communities that make up the 'Four plant assemblages of the Wona Land System', specifically the Priority 1 community 'Cracking clays of the Chichester and Mungaroona Range'. Vegetation type VfAl accounts for 7,375.9 ha (6.8%) of the survey area, compared to 19,435 ha (18%) when using DBCA's significant communities data for the 'Four plant assemblages of the Wona Land System' (which includes a 500 m administrative buffer), but only 8,235 ha (7.5%) when using the land system mapping (DPIRD, 2022). The estimated extent of vegetation type VfAl within the survey area is therefore comparable the land system mapping, although the vegetation here has been mapped at a finer scale. The Wona land system occurs extensively outside of the survey area, occupying an extent of approximately 20,000 ha within the desktop study area (50 km buffer). Vegetation associated with the Wona land system in the vicinity of the survey area likely represents the same or similar vegetation to VfAl; consequently, VfAl is likely to occur extensively outside of the survey area.

An assessment of vegetation significance within the survey area identified thirteen vegetation types that have some level of regional or local significance:

- Vegetation type ElGwTe supported a population of the Threatened species *Quoya zonalis* in the northwest of the survey area. The area in which additional populations of *Quoya zonalis* potentially occur would likely be restricted to areas in the northwest surrounding the known population. The area expected to potentially support additional populations of *Quoya zonalis* within the survey area is approximately 4,016 ha of the survey area.
- The Wona land system has a relatively restricted and patchy regional distribution and supports many plant species restricted to clay soils, and this this habitat is therefore potentially a refuge for species restricted to clay soils in the Pilbara. The Wona land system was represented by

vegetation type vegetation type VfAl and therefore had a total extent of 7,425.5 ha (6.8%) within the survey area.

- Nine vegetation types (AaCpTw, AaEp, AaTe, AaTs, AcTe, AeTe, AhCspYTe, AmTe, AoTe) each accounted for less than 5% of the total survey area and are potentially restricted in a local context. These collectively accounted for 4.2% (4,574.6 ha) of the survey area.
- Vegetation type EcAcCs (supporting *Melaleuca argentea* and *Eucalyptus camaldulensis*) and parts of EvAcCc that supported *E. camaldulensis* were considered to be GDV and accounted for 3,384 ha (3.1%) of the survey area. The remaining parts of vegetation type EvAcCc (supporting only *Eucalyptus victrix*) is potential GDV and accounted 1,881.8 (1.7%) of the survey area.
- Approximately 34% (413.7 ha) of vegetation type AaEp which had characteristic grove-intergrove patterning (i.e., potentially sheet-flow dependent mulga) was present at the southern end of the transmission corridor, and accounts for approximately 0.3% of the survey area.

6 CONCLUSIONS

The key findings of this consolidated assessment were:

- A total of 552 vascular plant taxa were recorded from the survey area, representing approximately 97% of the estimated species richness for the survey area.
- Twenty-five introduced species were recorded, one of which (**Calotropis procera*) is a Declared Pest.
- One EPBC Act and BC Act listed Threatened species (Q*uoya zonalis*) and 18 DBCA listed Priority species were recorded within the survey area.
- Hierarchical agglomerative clustering and ordination analyses were conducted using floristic data from 375 sampling sites, resulting in the classification of 17 vegetation types.
- Vegetation type VfAl is consistent with the DBCA listed PEC 'Four plant assemblages of the Wona Land System', specifically the Priority 1 community 'Cracking clays of the Chichester and Mungaroona Range'
- Thirteen vegetation types within the survey area have some level of regional or local significance including:
    - one vegetation types supporting a Threatened species (ElGwTe)
    - one vegetation type potentially playing a role as a refuge (VfAl)
    - nine vegetation types that are potentially locally restricted (AaCpTw, AaEp, AaTe, AaTs, AcTe, AeTe, AhCspYTe, AmTe, AoTe)
    - two vegetation types that are groundwater dependent (EcAcCs) or potentially groundwater dependent (EvAcCc)
    - one vegetation type that represents potentially sheet-flow dependent mulga in some parts (AaEp).

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8 APPENDICES

Appendix A Desktop assessment database search results.

Family	Taxon	Status	Introduced
Acanthaceae	*Rostellularia adscendens*		
	Dicladanthera forrestii		
Aizoaceae	*Trianthema cusackianum*		
	Trianthema triquetrum		
	Trianthema glossostigmum		
	Trianthema turgidifolium		
	Zaleya galericulata		
	Trianthema oxycalyptrum		
Amaranthaceae	*Aerva javanica*		*
	Ptilotus gomphrenoides	P3	
	Gomphrena cunninghamii		
	Ptilotus exaltatus	P3	
	Ptilotus obovatus	P3	
	Ptilotus mollis	P4	
	Ptilotus auriculifolius	P3	
	Ptilotus aervoides	P3	
	Ptilotus astrolasius	P3	
	Ptilotus calostachyus	P3	
	Ptilotus incanus	P3	
	Amaranthus undulatus		
	Amaranthus cuspidifolius		
	Ptilotus polystachyus	P3	
	Gomphrena affinis		
	Ptilotus carinatus	P3	
	Ptilotus fusiformis	P3	
	Ptilotus helipteroides	P3	
	Ptilotus schwartzii	P3	
	Gomphrena leptoclada		
	Ptilotus clementii	P3	
	Ptilotus gaudichaudii	P3	
	Ptilotus xerophilus	P3	
	Ptilotus rotundifolius	P3	
	Ptilotus axillaris	P3	
	Alternanthera nana		
	Ptilotus drummondii	P3	
	Alternanthera nodiflora		
	Gomphrena canescens		
	Gomphrena kanisii		
	Alternanthera angustifolia		
	Ptilotus wilsonii	P3	
	Amaranthus mitchellii		
	Achyranthes aspera		
	Alternanthera denticulata		
	Ptilotus latifolius	P3	
	Ptilotus indivisus	P3	
	Ptilotus macrocephalus	P3	

Apocynaceae	*Cynanchum floribundum*		
	Gymnema erectum		
	Gymnanthera cunninghamii	P3	
	Leichhardtia australis		
Araliaceae	*Trachymene oleracea*		
Asphodelaceae	*Asphodelus fistulosus*		*
Asteraceae	*Sonchus oleraceus*		*
	Bidens bipinnata		*
	Streptoglossa bubakii		
	Pterocaulon sphacelatum		
	Pluchea rubelliflora		
	Flaveria trinervia		
	Streptoglossa odora		
	Myriocephalus oldfieldii		
	Pluchea dentex		
	Pluchea ferdinandi-muelleri		
	Ixiochlamys cuneifolia		
	Minuria integerrima		
	Calotis plumulifera		
	Podolepis capillaris		
	Streptoglossa decurrens		
	Pentalepis trichodesmoides		
	Rhodanthe sterilescens		
	Pterocaulon serrulatum		
	Streptoglossa liatroides		
	Calocephalus pilbarensis		
	Centipeda minima		
	Pluchea dunlopii		
	Pterocaulon sphaeranthoides		
	Streptoglossa adscendens		
	Calocephalus beardii		
	Gnephosis brevifolia		
	Myriocephalus rudallii		
	Centipeda thespidioides		
	Calotis squamigera	P1	
	Streptoglossa cylindriceps		
	Vittadinia virgata		
	Rhodanthe margarethae		
	Myriocephalus scalpellus	P1	
	Centipeda crateriformis		
	Pluchea tetranthera		
	Angianthus cyathifer		
	Helichrysum oligochaetum	P1	
	Rhodanthe floribunda		
	Calotis porphyroglossa		
	Rhodanthe stricta		
	Senecio magnificus		

	Rhodanthe charsleyae		
	Calotis multicaulis		
	Roebuckiella similis		
	Iotasperma sessilifolium	P3	
	Streptoglossa sp. Cracking clays (S.van Leeuwen et al. PBS 7353)	P3	
	Isoetopsis graminifolia		
	Myriocephalus squamatus		
	Rhodanthe propinqua		
	Olearia xerophila	P1	
	Calotis latiuscula		
	Calocephalus francisii		
	Pseudognaphalium luteoalbum		
	Blumea tenella		
	Calocephalus knappii		
	Chrysocephalum apiculatum		
Bixaceae	*Cochlospermum macnamarae*	P1	
Boraginaceae	*Trichodesma zeylanicum*		
	Heliotropium heteranthum		
	Heliotropium murinum	P3	
	Heliotropium chrysocarpum		
	Heliotropium tenuifolium		
	Heliotropium curassavicum		
	Heliotropium inexplicitum		
	Ehretia saligna		
	Halgania solanacea		
	Heliotropium pachyphyllum		
	Heliotropium crispatum		
	Heliotropium ovalifolium		
	Heliotropium ammophilum		
	Heliotropium glanduliferum		
	Heliotropium cunninghamii		
Brassicaceae	*Lepidium pholidogynum*		
	Lepidium phlebopetalum		
	Lepidium pedicellosum		
	Lepidium echinatum		
	Lepidium platypetalum		
	Rorippa sp. Fortescue Valley (M.N.Lyons & R.A.Coppen FV 0760)	P1	
	Lepidium catapycnon	P4	
	Cardamine paucijuga	P2	
	Stenopetalum pedicellare		
	Lepidium oxytrichum		
	Stenopetalum nutans		
	Stenopetalum anfractum		
Byblidaceae	*Byblis pilbarana*		
Campanulaceae	*Lobelia arnhemiaca*		
	Wahlenbergia tumidifructa		
	Wahlenbergia queenslandica		

	Lobelia heterophylla		
Capparaceae	*Capparis lasiantha*		
	Capparis spinosa		
	Capparis umbonata		
Caryophyllaceae	*Polycarpaea longiflora*		
	Polycarpaea holtzei		
	Polycarpaea corymbosa		
Celastraceae	*Macgregoria racemigera*		
	Stackhousia muricata		
	Stackhousia clementii	P3	
Chenopodiaceae	*Tecticornia indica*		
	Atriplex spinulosa	P1	
	Tecticornia auriculata		
	Tecticornia medusa	P3	
	Tecticornia sp. Christmas Creek (K.A.Shepherd & T.Colmer et al. KS 1063)	P1	
	Maireana georgei		
	Sclerolaena hostilis		
	Sclerolaena cornishiana		
	Tecticornia sp. Dennys Crossing (K.A.Shepherd & J.English KS 552)		
	Rhagodia sp. Hamersley (M.Trudgen 17794)	P3	
	Atriplex amnicola		
	Sclerolaena cuneata		
	Sclerolaena densiflora		
	Maireana triptera		
	Atriplex codonocarpa		
	Tecticornia globulifera	P1	
	Sclerolaena costata		
	Atriplex flabelliformis	P3	
	Rhagodia eremaea		
	Sclerolaena lanicuspis		
	Maireana melanocoma		
	Maireana planifolia		
	Dysphania rhadinostachya		
	Maireana pyramidata		
	Enchylaena tomentosa		
	Sclerolaena bicornis		
	Tecticornia halocnemoides		
	Maireana carnosa		
	Dysphania plantaginella		
	Dysphania sphaerosperma		
	Sclerolaena glabra		
	Dysphania melanocarpa		
	Maireana eriosphaera		
	Tecticornia undulata		
	Einadia nutans		
	Sclerolaena diacantha		
	Maireana luehmannii		

	Salsola australis		
	Maireana tomentosa		
	Sclerolaena burbidgeae		
	Sclerolaena divaricata		
	Sclerolaena eriacantha		
	Dissocarpus paradoxus		
	Salsola tragus		
	Dysphania kalpari		
	Sclerolaena minuta		
	Sclerolaena deserticola		
	Eremophea spinosa		
	Atriplex semilunaris		
	Atriplex limbata		
	Maireana amoena		
	Sclerolaena recurvicuspis		
	Atriplex cinerea		
	Maireana villosa		
	Chenopodium gaudichaudianum		
	Maireana integra		
	Tecticornia pergranulata		
	Maireana platycarpa		
	Atriplex bunburyana		
	Dysphania congestiflora	P3	
	Atriplex lindleyi		
Cleomaceae	*Arivela viscosa*		
	Areocleome oxalidea		
Commelinaceae	*Commelina ensifolia*		
Convolvulaceae	*Bonamia erecta*		
	Convolvulus clementii		
	Evolvulus alsinoides		
	Cressa australis		
	Duperreya commixta		
	Operculina aequisepala		
	Bonamia media		
	Bonamia pannosa		
	Cuscuta victoriana		
	Ipomoea muelleri	P2	
	Ipomoea racemigera	P2	
	Ipomoea diamantinensis	P2	
	Ipomoea calobra	P2	
Cucurbitaceae	*Cucumis melo*		*
	Citrullus colocynthis		*
	Cucumis variabilis		
	Cucumis althaeoides		
Cyperaceae	*Eleocharis papillosa*	P3	
	Bulbostylis barbata		
	Bulbostylis turbinata		

	Bulbostylis burbidgeae	P4	
	Cyperus squarrosus		
	Cyperus rigidellus		
	Fimbristylis simulans	P1	
	Cyperus vaginatus		
	Cyperus bulbosus		
	Schoenoplectus subulatus		
	Fimbristylis microcarya	P1	
	Cyperus iria		
	Cyperus concinnus		
	Cyperus difformis		
	Cyperus bifax		
	Fimbristylis dichotoma	P1	
	Cyperus leptocarpus		
	Cyperus sp. (Coleman River)		
	Eleocharis geniculata		
	Schoenoplectiella dissachantha		
	Cyperus betchei		
	Isolepis congrua		
	Cyperus blakeanus		
	Fimbristylis leucocolea	P1	
	Cyperus ixiocarpus		
	Cyperus pygmaeus		
Droseraceae	*Drosera finlaysoniana*	P1	
Elatinaceae	*Bergia perennis*		
	Bergia trimera		
Euphorbiaceae	*Euphorbia australis*		
	Euphorbia careyi		
	Euphorbia tannensis		
	Euphorbia vaccaria		
	Adriana tomentosa		
	Euphorbia boophthona		
	Euphorbia biconvexa		
	Mallotus nesophilus		
	Euphorbia trigonosperma		
	Euphorbia wheeleri		
	Euphorbia coghlanii		
	Euphorbia inappendiculata		
Fabaceae	*Vachellia farnesiana*		*
	Parkinsonia aculeata		*
	Acacia aphanoclada	P1	
	Acacia orthocarpa	P1	
	Senna glutinosa		
	Senna artemisioides		
	Acacia cyperophylla	P1	
	Acacia trachycarpa	P1	
	Acacia bivenosa	P1	

	Swainsona stenodonta		
	Acacia sclerosperma	P1	
	Acacia pyrifolia	P1	
	Acacia aptaneura	P1	
	Tephrosia rosea		
	Cullen leucanthum		
	Acacia fecunda	P1	
	Acacia ampliceps	P1	
	Swainsona kingii		
	Indigofera monophylla		
	Acacia inaequilatera	P1	
	Acacia synchronicia	P1	
	Acacia arrecta	P1	
	Swainsona maccullochiana		
	Lotus australis		
	Tephrosia densa		
	Swainsona decurrens		
	Acacia acradenia	P1	
	Senna symonii		
	Acacia tenuissima	P1	
	Acacia spondylophylla	P1	
	Acacia eriopoda	P1	
	Acacia tumida	P1	
	Acacia tetragonophylla	P1	
	Acacia ancistrocarpa	P1	
	Acacia victoriae	P1	
	Acacia pruinocarpa	P1	
	Acacia coriacea	P1	
	Petalostylis labicheoides		
	Swainsona formosa		
	Cullen cinereum		
	Acacia dictyophleba	P1	
	Indigofera georgei		
	Acacia hilliana	P1	
	Cullen martinii		
	Tephrosia sp. Newman (A.A.Mitchell PRP 29)		
	Acacia colei	P1	
	Swainsona tanamiensis		
	Acacia sibirica	P1	
	Acacia xiphophylla	P1	
	Cullen stipulaceum		
	Indigofera ixocarpa	P2	
	Senna notabilis		
	Swainsona unifoliolata		
	Tephrosia sp. Bungaroo Creek (M.E.Trudgen 11601)		
	Rhynchosia minima		
	Acacia pachyacra	P1	

	Indigofera colutea		
	Senna sp. Meekatharra (E.Bailey 1-26)		
	Acacia citrinoviridis	P1	
	Senna sericea		
	Acacia retivenea	P1	
	Isotropis atropurpurea		
	Acacia marramamba	P1	
	Acacia rhodophloia	P1	
	Crotalaria medicaginea		
	Acacia aneura	P1	
	Sesbania cannabina		
	Cullen lachnostachys		
	Gompholobium sp. Roy Hill (G. Buller ATF08 AQ14)	P1	
	Indigofera trita		
	Lotus cruentus		
	Cajanus cinereus		
	Acacia ptychophylla	P1	
	Crotalaria cunninghamii		
	Acacia holosericea	P1	
	Aeschynomene indica		
	Petalostylis cassioides		
	Erythrina vespertilio		
	Acacia stellaticeps	P1	
	Swainsona thompsoniana	P3	
	Acacia kempeana	P1	
	Acacia sp. (Townsville)	P1	
	Indigofera linnaei		
	Glycine canescens	P1	
	Acacia melleodora	P1	
	Indigofera rugosa		
	Cullen leucochaites		
	Acacia arida	P1	
	Acacia wanyu	P1	
	Cullen pustulatum		
	Acacia balsamea	P1	
	Sesbania formosa		
	Alysicarpus muelleri		
	Acacia maitlandii	P1	
	Dichrostachys spicata		
	Trigonella suavissima		
	Rhynchosia australis		
	Acacia adoxa	P1	
	Acacia ayersiana	P1	
	Rothia indica		
	Acacia adsurgens	P1	
	Acacia ligulata	P1	
	Acacia distans	P1	

	Acacia monticola	P1	
	Tephrosia virens		
	Acacia microneura	P1	
	Tephrosia stipuligera		
	Senna hamersleyensis		
	Cullen pogonocarpum		
	Indigofera deserticola		
	Neptunia xanthonema		
	Isotropis parviflora	P3	
	Acacia catenulata	P1	
	Crotalaria novae-hollandiae		
	Senna ferraria		
	Acacia levata	P3	
	Senna stricta		
	Cajanus marmoratus		
	Acacia sericophylla	P1	
	Gompholobium polyzygum		
	Swainsona complanata		
	Acacia sibilans	P1	
	Rhynchosia bungarensis	P4	
	Swainsona pterostylis		
	Swainsona leeana		
	Jacksonia aculeata		
	Acacia subtiliformis	P3	
	Templetonia hookeri		
	Acacia sp. Ripon Hills (B.R.Maslin 8460)	P1	
	Gastrolobium grandiflorum		
	Crotalaria dissitiflora		
	Templetonia egena		
	Sesbania simpliciuscula		
	Senna occidentalis		
	Senna venusta		
	Acacia grasbyi	P1	
	Tephrosia sp. B Kimberley Flora (C.A.Gardner 7300)		
	Acacia drepanocarpa	P1	
	Acacia validinervia	P1	
	Acacia sp. Nullagine (B.R.Maslin 4955)	P1	
	Senna cardiosperma		
	Vigna lanceolata		
	Tephrosia sp. Northern (K.F.Kenneally 11950)		
	Tephrosia sp. NW Eremaean (S.van Leeuwen et al. PBS 0356)		
	Tephrosia supina		
	Indigofera chamaeclada		
	Vigna sp. Hamersley Clay (A.A.Mitchell PRP 113)		
	Desmodiopsis campylocaulon		
	Acacia cowleana	P1	
Frankeniaceae	*Frankenia setosa*		

	Frankenia ambita		
Gentianaceae	*Schenkia australis*		
Goodeniaceae	*Goodenia nuda*		
	Goodenia prostrata		
	Goodenia microptera		
	Goodenia lamprosperma		
	Scaevola spinescens		
	Goodenia cusackiana		
	Goodenia stobbsiana		
	Dampiera candicans		
	Scaevola collaris		
	Goodenia forrestii		
	Goodenia scaevolina		
	Scaevola parvifolia		
	Goodenia muelleriana		
	Goodenia sp. East Pilbara (A.R.Mitchell PRP 727)	P3	
	Goodenia aluta		
	Scaevola amblyanthera		
	Goodenia pascua		
	Goodenia vilmoriniae		
	Scaevola cunninghamii		
	Scaevola browniana		
	Goodenia tenuiloba		
	Goodenia wilunensis		
	Goodenia ramelii		
	Goodenia concinna		
	Goodenia pedicellata	P1	
	Goodenia iyouta		
Gyrostemonaceae	*Codonocarpus cotinifolius*		
Haloragaceae	*Haloragis gossei*		
	Haloragis maierae		
	Myriophyllum verrucosum		
Hydrocharitaceae	*Vallisneria nana*		
	Najas marina		
	Najas tenuifolia		
	Najas graminea		
Juncaginaceae	*Triglochin hexagona*		
Lamiaceae	*Dicrastylis cordifolia*		
	Basilicum polystachyon		
	Newcastelia sp. Hamersley Range (S.van Leeuwen 4264)		
	Clerodendrum floribundum		
	Newcastelia hexarrhena		
	Newcastelia cephalantha		
	Pityrodia sp. Marble Bar (G.Woodman & D.Coultas GWDS Opp 4)	EN	
	Teucrium racemosum		
	Newcastelia spodiotricha		
	Mesosphaerum suaveolens		

Linderniaceae	*Lindernia sp. Pilbara (M.N.Lyons & L.Lewis FV 1069)*	P1	
Loganiaceae	*Mitrasacme connata*		
Loranthaceae	*Amyema fitzgeraldii*		
	Amyema preissii		
	Amyema sanguinea		
	Lysiana casuarinae		
	Amyema hilliana		
	Lysiana subfalcata		
Lythraceae	*Ammannia baccifera*		
	Rotala diandra		
	Ammannia multiflora		
Malvaceae	*Malvastrum americanum*		*
	Hibiscus sturtii	P3	
	Gossypium robinsonii		
	Corchorus parviflorus		
	Abutilon sp. Dioicum (A.A.Mitchell PRP 1618)		
	Sida arsiniata		
	Abutilon lepidum		
	Gossypium australe		
	Abutilon oxycarpum		
	Corchorus lasiocarpus		
	Sida echinocarpa		
	Sida trichopoda		
	Corchorus walcottii		
	Abutilon sp. Pilbara (W.R.Barker 2025)		
	Triumfetta chaetocarpa		
	Hibiscus goldsworthii	P3	
	Triumfetta clementii		
	Hibiscus brachychlaenus	P3	
	Sida clementii		
	Abutilon leucopetalum		
	Lawrencia glomerata		
	Sida sp. L (A.M.Ashby 4202)		
	Sida arenicola		
	Sida rohlenae		
	Sida cardiophylla		
	Abutilon macrum		
	Corchorus laniflorus		
	Sida fibulifera		
	Abutilon sp. (Mataranka)		
	Abutilon malvifolium		
	Hibiscus burtonii	P3	
	Hibiscus coatesii	P3	
	Melhania oblongifolia		
	Sida sp. spiciform panicles (E.Leyland s.n. 14/8/1990)		
	Abutilon cryptopetalum		
	Sida sp. Rabbit Flat (B.J.Carter 626)		

	Lawrencia helmsii		
	Sida sp. (Small Flower)		
	Corchorus sidoides		
	Corchorus tridens		
	Hibiscus sp. Mt Robinson (G.Byrne 3537)	P3	
	Triumfetta appendiculata		
	Sida sp. Excedentifolia (J.L.Egan 1925)		
	Brachychiton acuminatus		
	Hibiscus austrinus	P3	
	Seringia exastia		
	Abutilon fraseri		
	Abutilon otocarpum		
	Sida aff. fibulifera		
	Lawrencia densiflora		
	Hibiscus brachysiphonius	P3	
	Sida platycalyx		
	Corchorus tectus		
	Sida brownii		
	Waltheria indica		
	Androcalva luteiflora		
	Hibiscus leptocladus	P3	
	Triumfetta leptacantha		
	Sida cunninghamii		
	Abutilon sp. Cape Range (A.S.George 1312)		
	Triumfetta maconochieana		
	Sida sp. Pindan (B.G.Thomson 3398)		
	Sida sp. Pilbara (A.A.Mitchell PRP1543)		
	Seringia nephrosperma		
Molluginaceae	*Trigastrotheca molluginea*		
	Glinus lotoides		
Moraceae	*Ficus aculeata*		
Myrtaceae	*Eucalyptus camaldulensis*	P4	
	Eucalyptus trivalva	P4	
	Eucalyptus leucophloia	P4	
	Eucalyptus rowleyi	P4	
	Melaleuca eleuterostachya	P4	
	Melaleuca xerophila	P4	
	Melaleuca glomerata	P4	
	Eucalyptus socialis	P4	
	Eucalyptus pilbarensis	P4	
	Eucalyptus lucasii	P4	
	Eucalyptus victrix	P4	
	Corymbia candida	P4	
	Melaleuca linophylla	P4	
	Eucalyptus gamophylla	P4	
	Eucalyptus xerothermica	P4	
	Calytrix carinata	P4	

	Corymbia flavescens	P4	
	Corymbia hamersleyana	P4	
	Eucalyptus rameliana	P4	
	Corymbia sp. Yampi Peninsula (R.L.Barrett & A.N.Start RLB 2280)	P4	
	Corymbia ferriticola	P4	
	Corymbia deserticola	P4	
	Eucalyptus aridimontana	P4	
	Eucalyptus carnei	P4	
	Corymbia opaca	P4	
	Melaleuca bracteata	P4	
Nyctaginaceae	*Boerhavia gardneri*		
	Boerhavia coccinea		
	Boerhavia repleta		
	Boerhavia burbidgeana		
	Commicarpus australis		
	Boerhavia schomburgkiana		
Oleaceae	*Jasminum didymum*		
Orobanchaceae	*Buchnera linearis*		
	Striga squamigera		
Papaveraceae	*Argemone ochroleuca*		
Pedaliaceae	*Josephinia eugeniae*		
	Josephinia sp. Mt Edgar Station (N.T.Burbidge 1194)		
Phrymaceae	*Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S.Weston 12768)*		
	Peplidium muelleri		
	Mimulus gracilis		
	Peplidium aithocheilum		
	Elacholoma hornii		
	Uvedalia linearis		
Phyllanthaceae	*Flueggea virosa*		
	Phyllanthus erwinii		
	Notoleptopus decaisnei		
	Phyllanthus carpentariae	P3	
	Phyllanthus exilis		
	Phyllanthus maderaspatensis		
	Phyllanthus lacunarius		
	Phyllanthus virgatus		
	Phyllanthus sulcatus		
	Synostemon rhytidospermus		
Pittosporaceae	*Pittosporum angustifolium*	P4	
Plantaginaceae	*Stemodia grossa*		
	Stemodia viscosa		
	Stemodia sp. Battle Hill (A.L.Payne 1006)	P1	
Plumbaginaceae	*Muellerolimon salicorniaceum*		
	Plumbago zeylanica		
Poaceae	*Cenchrus ciliaris*		*
	Setaria verticillata		*
	Echinochloa colona		*

	Cenchrus setiger		*
	Triodia wiseana	P1	
	Triodia veniciae	P1	
	Enneapogon caerulescens		
	Eragrostis setifolia		
	Triodia scintillans	P1	
	Dactyloctenium radulans		
	Triodia longiceps	P1	
	Triodia epactia	P1	
	Triodia schinzii	P1	
	Triodia brizoides	P1	
	Sporobolus australasicus		
	Enteropogon ramosus		
	Eriachne aristidea		
	Eragrostis crateriformis	P3	
	Dichanthium sericeum		
	Aristida contorta		
	Eragrostis xerophila		
	Eragrostis pergracilis		
	Triodia pungens	P1	
	Triodia vanleeuwenii	P1	
	Eragrostis dielsii		
	Eriochloa pseudoacrotricha		
	Perotis rara		
	Cymbopogon obtectus		
	Paspalidium clementii		
	Themeda triandra		
	Panicum decompositum		
	Cymbopogon ambiguus		
	Enneapogon polyphyllus		
	Tragus australianus		
	Triodia basedowii	P1	
	Aristida latifolia		
	Eragrostis cumingii		
	Chloris pectinata		
	Eriachne flaccida		
	Eriachne benthamii		
	Eragrostis tenellula		
	Sporobolus mitchellii		
	Eulalia aurea		
	Eragrostis desertorum		
	Eriachne mucronata		
	Triraphis mollis		
	Cynodon prostratus		
	Eriachne lanata		
	Iseilema dolichotrichum		
	Themeda sp. Hamersley Station (M.E.Trudgen 11431)	P3	

	Sporobolus caroli		
	Iseilema membranaceum		
	Eragrostis eriopoda		
	Aristida inaequiglumis		
	Chrysopogon fallax		
	Aristida holathera		
	Xerochloa laniflora		
	Enneapogon avenaceus		
	Lachnagrostis filiformis		
	Eragrostis leptocarpa		
	Urochloa occidentalis		
	Heteropogon contortus		
	Astrebla pectinata		
	Oxychloris scariosa		
	Chloris pumilio		
	Acrachne racemosa		
	Paractaenum refractum		
	Enneapogon robustissimus		
	Triodia angusta	P1	
	Eragrostis speciosa		
	Aristida anthoxanthoides		
	Eragrostis sp. Erect spikelets (P.K.Latz 2122)	P3	
	Sporobolus actinocladus		
	Aristida burbidgeae		
	Eriachne gardneri		
	Iseilema eremaeum		
	Paspalidium tabulatum		
	Tripogonella loliiformis		
	Eragrostis falcata		
	Diplachne fusca		
	Enneapogon lindleyanus		
	Setaria surgens		
	Paspalidium jubiflorum		
	Elytrophorus spicatus		
	Digitaria longiflora		
	Xerochloa barbata		
	Setaria dielsii		
	Triodia bitextura	P1	
	Enneapogon cylindricus		
	Eriachne obtusa		
	Aristida hygrometrica		
	Digitaria ctenantha		
	Paspalidium constrictum		
	Eriachne pulchella		
	Enteropogon acicularis		
	Iseilema vaginiflorum		
	Triodia melvillei	P1	

	Triodia secunda	P1	
	Triodia lanigera	P1	
	Aristida pruinosa		
	Eragrostis olida		
	Iseilema macratherum		
	Bothriochloa ewartiana		
	Eriachne tenuiculmis		
	Paspalidium rarum		
	Panicum laevinode		
	Eriachne melicacea		
	Themeda avenacea		
	Yakirra australiensis		
	Cenchrus pennisetiformis		
	Eragrostis cilianensis		
	Urochloa piligera		
Polygalaceae	*Polygala glaucifolia*		
	Polygala isingii		
Polygonaceae	*Duma florulenta*		
	Polygonum plebeium		
Portulacaceae	*Portulaca oleracea*		*
	Calandrinia quadrivalvis		
	Calandrinia stagnensis		
	Calandrinia ptychosperma		
	Portulaca cyclophylla		
	Calandrinia pumila		
	Portulaca filifolia		
	Calandrinia schistorhiza		
	Portulaca conspicua		
	Calandrinia pentavalvis		
Potamogetonaceae	*Potamogeton tepperi*		
	Althenia hearnii		
Primulaceae	*Samolus sp. Fortescue Marsh (A.Markey & R.Coppen FM 9702)*	P1	
	Samolus repens		
Proteaceae	*Grevillea pyramidalis*		
	Grevillea wickhamii	P3	
	Hakea lorea		
	Grevillea striata		
	Grevillea stenobotrya		
	Grevillea juncifolia		
Rubiaceae	*Oldenlandia crouchiana*		
	Psydrax latifolia		
	Synaptantha tillaeacea		
	Psydrax suaveolens		
	Oldenlandia galioides		
	Spermacoce brachystema		
	Oldenlandia sp. Hamersley Station (A.A.Mitchell PRP 1479)	P3	
Ruppiaceae	*Ruppia polycarpa*		

	Ruppia maritima		
Santalaceae	*Santalum spicatum*		
	Anthobolus leptomerioides		
	Santalum lanceolatum		
Sapindaceae	*Atalaya hemiglauca*		
	Dodonaea petiolaris		
	Dodonaea lanceolata		
	Dodonaea coriacea		
	Diplopeltis stuartii		
Scrophulariaceae	*Eremophila youngii*	P1	
	Eremophila cuneifolia	P1	
	Eremophila spongiocarpa	P3	
	Eremophila latrobei	P1	
	Eremophila longifolia	P1	
	Eremophila lanceolata	P1	
	Eremophila maculata	P1	
	Eremophila forrestii	P1	
	Eremophila pilosa	P1	
	Eremophila exilifolia	P1	
	Eremophila caespitosa	P1	
	Eremophila pterocarpa	P1	
Solanaceae	*Datura leichhardtii*		*
	Solanum lasiophyllum		
	Solanum phlomoides		
	Nicotiana heterantha		
	Solanum sturtianum		
	Solanum horridum		
	Solanum elatius		
	Solanum diversiflorum		
	Solanum sp. Mosquito Creek (A.A.Mitchell et al. AAM 10795)	P1	
	Solanum morrisonii		
	Nicotiana occidentalis		
	Nicotiana umbratica	P3	
	Solanum dioicum		
	Nicotiana benthamiana		
	Nicotiana simulans		
	Nicotiana rosulata		
	Solanum cleistogamum		
	Solanum gabrielae		
	Solanum austropiceum		
	Nicotiana karijini		
Stylidiaceae	*Stylidium fluminense*		
	Stylidium weeliwolli	P3	
	Levenhookia pulcherrima	P3	
	Stylidium bulbiferum		
Surianaceae	*Stylobasium spathulatum*		
Typhaceae	*Typha domingensis*		

Violaceae	*Afrohybanthus aurantiacus*		
Zygophyllaceae	*Tribulus terrestris*		*
	Tribulus suberosus		
	Tribulus platypterus		
	Tribulus hirsutus		
	Tribulus astrocarpus		
	Tribulus macrocarpus		
	Roepera compressa		
	Roepera eichleri		
	Roepera similis		
	Tribulus cistoides		
	Tribulus occidentalis		
	Tribulus sp. long-styled eichlerianus (A.S.George 10666)		
	Roepera iodocarpa		

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 01-Jul-2024

- Summary
- Details
  - Matters of NES
  - Other Matters Protected by the EPBC Act
  - Extra Information
- Caveat
- Acknowledgements

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	13
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	34
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.		
Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat likely to occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
MAMMAL		
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat known to occur within area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Rhinonicteris aurantia (Pilbara form) Pilbara Leaf-nosed Bat [82790]	Vulnerable	Roosting known to occur within area
REPTILE		
Liasis olivaceus barroni Pilbara Olive Python [66699]	Vulnerable	Species or species habitat likely to occur within area
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

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

Commonwealth Land Name	State
Unknown	
Commonwealth Land - [51746]	WA
Commonwealth Land - [51745]	WA

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area

Extra Information

Nationally Important Wetlands	[Resource Information]
Wetland Name	State
Fortescue Marshes	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
East Hamersley Railway	2023/09542		Assessment
Nyidinghu Iron Ore Mine	2023/09543		Assessment
Roy Hill Iron Ore Mine expansion, Pilbara Region, WA	2018/8330		Post-Approval
Sanjiv Ridge Project - Stage 2	2021/8885		Post-Approval
Controlled action			
Additional Rail Infrastructure between Herb Elliott Port Facility and Cloudbreak Mine Site	2010/5513	Controlled Action	Post-Approval
Baralaba Train Load Out and Rail Loop	2012/6548	Controlled Action	Post-Approval
Bonney Downs Rail Alignment	2011/5867	Controlled Action	Post-Approval
Brockman Railway	2011/5833	Controlled Action	Post-Approval
Christmas Creek Iron Ore Mine Expansion Project, East Pilbara, WA	2013/7055	Controlled Action	Post-Approval
Christmas Creek Water Management Scheme	2010/5706	Controlled Action	Post-Approval
Cloud Break Open Pit Iron Ore Mine	2005/2205	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
construction of iron ore mine & associated infrastructure	2013/6945	Controlled Action	Completed
Corunna Downs Iron Ore Mining Project, Pilbara Region, 33km south Marble Bar, WA	2017/7861	Controlled Action	Post-Approval
Expansion of Cloudbreak iron ore mine	2010/5696	Controlled Action	Post-Approval
FerrAus Pilbara Project - mine & Rail Pilbara Region WA	2011/6036	Controlled Action	Post-Approval
Golden Eagle Satellite Deposits Development	2011/5855	Controlled Action	Post-Approval
Koodaideri Iron Ore Mine & Infrastructure Project, WA	2012/6422	Controlled Action	Post-Approval
Marillana Iron Ore Project	2011/5892	Controlled Action	Post-Approval
McPhee Iron Ore Project	2021/8897	Controlled Action	Assessment Approach
Nullagine Iron Ore Extension Project, Pilbara region, WA	2013/6887	Controlled Action	Post-Approval
Nullagine Iron Ore Project	2009/4930	Controlled Action	Post-Approval
Roy Hill to Port Hedland Rail Line and Associated Infrastructure	2010/5424	Controlled Action	Post-Approval
Yandicoogina Junction South West and Oxbow Iron Ore Project	2011/5815	Controlled Action	Post-Approval
Not controlled action			
Development of iron ore resources in eastern Pilbara region, including port at P	2004/1562	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Iron Valley Iron Ore Project	2012/6458	Not Controlled Action	Completed
Pilbara Bulk Ore Transport System Project, WA	2016/7637	Not Controlled Action	Completed
Pilbara Transmission Project, Pilbara, WA	2018/8349	Not Controlled Action	Completed
Roy Hill Iron Ore Project	2008/4624	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Stage B of Pilbara Iron Ore and Infrastructure Project	2004/1897	Not Controlled Action	Completed
Yandicoogina Pocket and Billiard South, Iron ore mine, WA	2014/7343	Not Controlled Action	Completed
Not controlled action (particular manner)			
Additional Rail Infrastructure	2012/6314	Not Controlled Action (Particular Manner)	Post-Approval
Northwest Resources Blue Spec Shear Gold-Antimony Project	2012/6672	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Mining at the Blue Spec and Gold Spec deposits	2012/6234	Referral Decision	Completed

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

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

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

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

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

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Appendix B Plant species recorded within the survey area (all Ecologia and SLR records 2023 – 2024) and names amalgamated for data analysis.

Family	Name	Conservation status	Naturalised status	WAOL Status
Acanthaceae	*Dicladanthera forrestii*	None	Native	NA
Acanthaceae	*Rostellularia adscendens* var. *clementii*	None	Native	NA
Acanthaceae	*Rostellularia adscendens* var. *latifolia*	Priority 3 (DBCA)	Native	NA
Aizoaceae	*Trianthema cusackianum*	None	Native	NA
Aizoaceae	*Trianthema glossostigmum*	None	Native	NA
Aizoaceae	*Trianthema portulacastrum*	None	Introduced	Permitted - s11
Aizoaceae	*Trianthema triquetrum*	None	Native	NA
Aizoaceae	*Zaleya galericulata* subsp. *galericulata*	None	Native	NA
Amaranthaceae	*Achyranthes aspera*	None	Native	NA
Amaranthaceae	*Aerva javanica*	None	Introduced	Permitted - s11
Amaranthaceae	*Alternanthera denticulata* var. *denticulata*	None	Native	NA
Amaranthaceae	*Alternanthera nana*	None	Native	NA
Amaranthaceae	*Alternanthera nodiflora*	None	Native	NA
Amaranthaceae	*Alternanthera pungens*	None	Introduced	Permitted - s11
Amaranthaceae	*Amaranthus cuspidifolius*	None	Native	NA
Amaranthaceae	*Amaranthus undulatus*	None	Native	NA
Amaranthaceae	*Gomphrena affinis* subsp. *pilbarensis*	None	Native	NA
Amaranthaceae	*Gomphrena canescens* subsp. *canescens*	None	Native	NA
Amaranthaceae	*Gomphrena cunninghamii*	None	Native	NA
Amaranthaceae	*Gomphrena kanisii*	None	Native	NA
Amaranthaceae	*Gomphrena leptoclada* subsp. *leptoclada*	None	Native	NA
Amaranthaceae	*Ptilotus aervoides*	None	Native	NA
Amaranthaceae	*Ptilotus astrolasius*	None	Native	NA
Amaranthaceae	*Ptilotus auriculifolius*	None	Native	NA
Amaranthaceae	*Ptilotus axillaris*	None	Native	NA
Amaranthaceae	*Ptilotus calostachyus*	None	Native	NA
Amaranthaceae	*Ptilotus carinatus*	None	Native	NA
Amaranthaceae	*Ptilotus clementii*	None	Native	NA
Amaranthaceae	*Ptilotus exaltatus*	None	Native	NA
Amaranthaceae	*Ptilotus fusiformis*	None	Native	NA
Amaranthaceae	*Ptilotus gaudichaudii*	None	Native	NA
Amaranthaceae	*Ptilotus gomphrenoides*	None	Native	NA
Amaranthaceae	*Ptilotus helipteroides*	None	Native	NA
Amaranthaceae	*Ptilotus incanus*	None	Native	NA
Amaranthaceae	*Ptilotus mollis*	Priority 4 (DBCA)	Native	NA
Amaranthaceae	*Ptilotus obovatus* var. *obovatus*	None	Native	NA
Amaranthaceae	*Ptilotus polystachyus*	None	Native	NA
Amaranthaceae	*Ptilotus rotundifolius*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Amaranthaceae	*Ptilotus schwartzii*	None	Native	NA
Apocynaceae	*Calotropis procera*	None	Introduced	Declared Pest - s22(2)
Apocynaceae	*Carissa lanceolata*	None	Native	NA
Apocynaceae	*Cynanchum floribundum*	None	Native	NA
Apocynaceae	*Cynanchum viminale*	None	Native	NA
Apocynaceae	*Vincetoxicum lineare*	None	Native	NA
Araliaceae	*Trachymene oleracea*	None	Native	NA
Araliaceae	*Trachymene oleracea* subsp. *oleracea*	None	Native	NA
Arecaceae	*Phoenix dactylifera*	Other (Range Extension)	Introduced	Permitted - s11
Asteraceae	*Bidens bipinnata*	None	Introduced	Permitted - s11
Asteraceae	*Blumea tenella*	None	Native	NA
Asteraceae	*Brachyscome rudallensis*	Other (Range Extension)	Native	NA
Asteraceae	*Calocephalus knappii*	None	Native	NA
Asteraceae	*Centipeda minima* subsp. *macrocephala*	None	Native	NA
Asteraceae	*Flaveria trinervia*	None	Introduced	Not listed
Asteraceae	*Iotasperma sessilifolium*	Priority 3 (DBCA)	Native	NA
Asteraceae	*Leiocarpa semicalva* subsp. *semicalva*	None	Native	NA
Asteraceae	*Minuria integerrima*	None	Native	NA
Asteraceae	*Olearia aff. fluvialis*	Other (Anomalous features)	Native	NA
Asteraceae	*Pentalepis trichodesmoides* subsp. *trichodesmoides*	None	Native	NA
Asteraceae	*Peripleura virgata*	None	Native	NA
Asteraceae	*Pluchea dentex*	None	Native	NA
Asteraceae	*Pluchea ferdinandi-muelleri*	None	Native	NA
Asteraceae	*Pluchea rubelliflora*	None	Native	NA
Asteraceae	*Pluchea tetranthera*	None	Native	NA
Asteraceae	*Pseudognaphalium luteoalbum*	None	Native	NA
Asteraceae	*Pterocaulon serrulatum* var. *velutinum*	None	Native	NA
Asteraceae	*Pterocaulon sphacelatum*	None	Native	NA
Asteraceae	*Rhodanthe margarethae*	None	Native	NA
Asteraceae	*Rutidosis helichrysoides* subsp. *helichrysoides*	None	Native	NA
Asteraceae	*Sonchus oleraceus*	None	Introduced	Permitted - s11
Asteraceae	*Streptoglossa adscendens*	None	Native	NA
Asteraceae	*Streptoglossa bubakii*	None	Native	NA
Asteraceae	*Streptoglossa decurrens*	None	Native	NA
Asteraceae	*Streptoglossa liatroides*	None	Native	NA
Asteraceae	*Streptoglossa odora*	None	Native	NA
Boraginaceae	*Ehretia saligna* var. *saligna*	None	Native	NA
Boraginaceae	*Euploca chrysocarpa*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Boraginaceae	*Euploca conocarpa*	None	Native	NA
Boraginaceae	*Euploca cunninghamii*	None	Native	NA
Boraginaceae	*Euploca heterantha*	None	Native	NA
Boraginaceae	*Euploca pachyphylla*	None	Native	NA
Boraginaceae	*Euploca tanythrix*	None	Native	NA
Boraginaceae	*Heliotropium crispatum*	None	Native	NA
Boraginaceae	*Trichodesma zeylanicum* var. *zeylanicum*	None	Native	NA
Brassicaceae	*Lepidium muelleri-ferdinandi*	None	Native	NA
Brassicaceae	*Lepidium pedicellosum*	None	Native	NA
Brassicaceae	*Lepidium pholidogynum*	None	Native	NA
Brassicaceae	*Stenopetalum velutinum*	Other (Range Extension)	Native	NA
Campanulaceae	*Lobelia arnhemiaca*	None	Native	NA
Campanulaceae	*Wahlenbergia tumidifructa*	None	Native	NA
Capparaceae	*Capparis lasiantha*	None	Native	NA
Capparaceae	*Capparis spinosa* subsp. *nummularia*	None	Native	NA
Capparaceae	*Capparis umbonata*	None	Native	NA
Caryophyllaceae	*Polycarpaea corymbosa* var. *corymbosa*	None	Native	NA
Caryophyllaceae	*Polycarpaea holtzei*	None	Native	NA
Caryophyllaceae	*Polycarpaea involucrata*	None	Native	NA
Caryophyllaceae	*Polycarpaea longiflora*	None	Native	NA
Celastraceae	*Stackhousia muricata* subsp. annual (W.R. Barker 2172)	None	Native	NA
Chenopodiaceae	*Chenopodium murale*	Other (Range Extension)	Introduced	Permitted - s11
Chenopodiaceae	*Dysphania kalpari*	None	Native	NA
Chenopodiaceae	*Dysphania melanocarpa* forma *melanocarpa*	None	Native	NA
Chenopodiaceae	*Dysphania rhadinostachya* subsp. *rhadinostachya*	None	Native	NA
Chenopodiaceae	*Dysphania sphaerosperma*	None	Native	NA
Chenopodiaceae	*Enchylaena tomentosa* var. *tomentosa*	None	Native	NA
Chenopodiaceae	*Maireana georgei*	None	Native	NA
Chenopodiaceae	*Maireana melanocoma*	None	Native	NA
Chenopodiaceae	*Maireana planifolia*	None	Native	NA
Chenopodiaceae	*Maireana villosa*	None	Native	NA
Chenopodiaceae	*Rhagodia eremaea*	None	Native	NA
Chenopodiaceae	*Rhagodia* sp. Hamersley (M.Trudgen 17794)	None	Native	NA
Chenopodiaceae	*Salsola australis*	None	Native	NA
Chenopodiaceae	*Sclerolaena cornishiana*	None	Native	NA
Chenopodiaceae	*Sclerolaena costata*	None	Native	NA
Chenopodiaceae	*Sclerolaena densiflora*	None	Native	NA
Chenopodiaceae	*Sclerolaena eriacantha*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Chenopodiaceae	*Sclerolaena hostilis*	None	Native	NA
Cleomaceae	*Areocleome oxalidea*	None	Native	NA
Cleomaceae	*Arivela uncifera*	None	Native	NA
Cleomaceae	*Arivela viscosa*	None	Native	NA
Commelinaceae	*Commelina ensifolia*	None	Native	NA
Convolvulaceae	*Bonamia erecta*	None	Native	NA
Convolvulaceae	*Bonamia media*	None	Native	NA
Convolvulaceae	*Bonamia pannosa*	None	Native	NA
Convolvulaceae	*Bonamia pilbarensis*	None	Native	NA
Convolvulaceae	*Duperreya commixta*	None	Native	NA
Convolvulaceae	*Evolvulus alsinoides* var. *decumbens*	None	Native	NA
Convolvulaceae	*Evolvulus alsinoides* var. *villosicalyx*	None	Native	NA
Convolvulaceae	*Ipomoea lonchophylla*	None	Native	NA
Convolvulaceae	*Ipomoea muelleri*	None	Native	NA
Convolvulaceae	*Ipomoea plebeia*	None	Native	NA
Convolvulaceae	*Ipomoea polymorpha*	None	Native	NA
Convolvulaceae	*Ipomoea racemigera*	Priority 2 (DBCA)	Native	NA
Convolvulaceae	*Operculina aequisepala*	None	Native	NA
Convolvulaceae	*Polymeria ?mollis*	None	Native	NA
Convolvulaceae	*Polymeria ambigua*	None	Native	NA
Convolvulaceae	*Polymeria calycina*	None	Native	NA
Cucurbitaceae	*Austrobryonia pilbarensis*	None	Native	NA
Cucurbitaceae	*Citrullus amarus*	None	Introduced	Not listed
Cucurbitaceae	*Citrullus colocynthis*	None	Introduced	Permitted - s11
Cucurbitaceae	*Cucumis melo*	None	Native	NA
Cucurbitaceae	*Cucumis myriocarpus* subsp. *myriocarpus*	None	Introduced	Permitted - s11
Cucurbitaceae	*Cucumis variabilis*	None	Native	NA
Cyperaceae	*Bulbostylis barbata*	None	Native	NA
Cyperaceae	*Bulbostylis burbidgeae*	Priority 4 (DBCA)	Native	NA
Cyperaceae	*Bulbostylis turbinata*	None	Native	NA
Cyperaceae	*Cyperus bifax*	None	Native	NA
Cyperaceae	*Cyperus cunninghamii* subsp. *cunninghamii*	None	Native	NA
Cyperaceae	*Cyperus difformis*	None	Native	NA
Cyperaceae	*Cyperus hesperius*	None	Native	NA
Cyperaceae	*Cyperus iria*	None	Native	NA
Cyperaceae	*Cyperus ixiocarpus*	None	Native	NA
Cyperaceae	*Cyperus leptocarpus*	None	Native	NA
Cyperaceae	*Cyperus pulchellus*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Cyperaceae	*Cyperus squarrosus*	None	Native	NA
Cyperaceae	*Cyperus vaginatus*	None	Native	NA
Cyperaceae	*Fimbristylis depauperata*	None	Native	NA
Cyperaceae	*Fimbristylis dichotoma*	None	Native	NA
Cyperaceae	*Fimbristylis elegans*	None	Native	NA
Cyperaceae	*Fimbristylis microcarya*	None	Native	NA
Cyperaceae	*Fimbristylis simulans*	None	Native	NA
Cyperaceae	*Schoenoplectiella dissachantha*	None	Native	NA
Cyperaceae	*Schoenoplectus subulatus*	None	Native	NA
Elatinaceae	*Bergia pedicellaris*	None	Native	NA
Elatinaceae	*Bergia trimera*	None	Native	NA
Euphorbiaceae	*Adriana tomentosa* var. *tomentosa*	None	Native	NA
Euphorbiaceae	*Euphorbia australis* var. *hispidula*	None	Native	NA
Euphorbiaceae	*Euphorbia australis* var. *subtomentosa*	None	Native	NA
Euphorbiaceae	*Euphorbia biconvexa*	None	Native	NA
Euphorbiaceae	*Euphorbia boophthona*	None	Native	NA
Euphorbiaceae	*Euphorbia careyi*	None	Native	NA
Euphorbiaceae	*Euphorbia hirta*	Other (Range Extension)	Introduced	Not listed
Euphorbiaceae	*Euphorbia inappendiculata* var. *inappendiculata*	Priority 2 (DBCA)	Native	NA
Euphorbiaceae	*Euphorbia inappendiculata* var. *queenslandica*	Priority 2 (DBCA)	Native	NA
Euphorbiaceae	*Euphorbia stevenii*	Priority 3 (DBCA)	Native	NA
Euphorbiaceae	*Euphorbia tannensis* subsp. *eremophila*	None	Native	NA
Euphorbiaceae	*Euphorbia trigonosperma*	None	Native	NA
Euphorbiaceae	*Euphorbia vaccaria* var. *vaccaria*	None	Native	NA
Fabaceae	?*Glycine falcata*	Possible Priority 3	Native	NA
Fabaceae	*Acacia acradenia*	None	Native	NA
Fabaceae	*Acacia adoxa var. adoxa*	None	Native	NA
Fabaceae	*Acacia adsurgens*	None	Native	NA
Fabaceae	*Acacia ampliceps*	None	Native	NA
Fabaceae	*Acacia ancistrocarpa*	None	Native	NA
Fabaceae	*Acacia ancistrocarpa* x *monticola*	None	Native	NA
Fabaceae	*Acacia aptaneura*	None	Native	NA
Fabaceae	*Acacia arida*	None	Native	NA
Fabaceae	*Acacia arrecta*	None	Native	NA
Fabaceae	*Acacia ayersiana*	None	Native	NA
Fabaceae	*Acacia bivenosa*	None	Native	NA
Fabaceae	*Acacia catenulata* subsp. *occidentalis*	None	Native	NA
Fabaceae	*Acacia colei* var. *colei*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Fabaceae	*Acacia coriacea* subsp. *pendens*	None	Native	NA
Fabaceae	*Acacia cyperophylla* var. *omearana*	Priority 1 (DBCA)	Native	NA
Fabaceae	*Acacia elachantha*	None	Native	NA
Fabaceae	*Acacia eriopoda*	None	Native	NA
Fabaceae	*Acacia inaequilatera*	None	Native	NA
Fabaceae	*Acacia maitlandii*	None	Native	NA
Fabaceae	*Acacia monticola*	None	Native	NA
Fabaceae	*Acacia orthocarpa*	None	Native	NA
Fabaceae	*Acacia pruinocarpa*	None	Native	NA
Fabaceae	*Acacia ptychophylla*	None	Native	NA
Fabaceae	*Acacia pyrifolia* var. *morrisonii*	None	Native	NA
Fabaceae	*Acacia pyrifolia* var. *pyrifolia*	None	Native	NA
Fabaceae	*Acacia retivenea* subsp. *clandestina*	None	Native	NA
Fabaceae	*Acacia rhodophloia*	None	Native	NA
Fabaceae	*Acacia sclerosperma* subsp. *sclerosperma*	None	Native	NA
Fabaceae	*Acacia sibirica*	None	Native	NA
Fabaceae	*Acacia spondylophylla*	None	Native	NA
Fabaceae	*Acacia synchronicia*	None	Native	NA
Fabaceae	*Acacia tenuissima*	None	Native	NA
Fabaceae	*Acacia tetragonophylla*	None	Native	NA
Fabaceae	*Acacia trachycarpa*	None	Native	NA
Fabaceae	*Acacia tumida* var. *pilbarensis*	None	Native	NA
Fabaceae	*Alysicarpus muelleri*	None	Native	NA
Fabaceae	*Crotalaria cunninghamii* subsp. *cunninghamii*	Other (Range Extension)	Native	NA
Fabaceae	*Crotalaria cunninghamii* subsp. *sturtii*	None	Native	NA
Fabaceae	*Crotalaria dissitiflora* subsp. *benthamiana*	None	Native	NA
Fabaceae	*Crotalaria medicaginea* var. *neglecta*	None	Native	NA
Fabaceae	*Crotalaria novae-hollandiae* subsp. *novae-hollandiae*	None	Native	NA
Fabaceae	*Cullen ?lachnostachys*	None	Native	NA
Fabaceae	*Cullen graveolens*	None	Native	NA
Fabaceae	*Cullen leucanthum*	None	Native	NA
Fabaceae	*Cullen leucochaites*	None	Native	NA
Fabaceae	*Cullen martinii*	None	Native	NA
Fabaceae	*Cullen pogonocarpum*	None	Native	NA
Fabaceae	*Cullen pustulatum*	None	Native	NA
Fabaceae	*Cullen stipulaceum*	None	Native	NA
Fabaceae	*Desmodiopsis campylocaulon*	None	Native	NA
Fabaceae	*Erythrina vespertilio*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Fabaceae	*Glycine canescens*	None	Native	NA
Fabaceae	*Grona ?filiformis*	None	Native	NA
Fabaceae	*Grona muelleri*	None	Native	NA
Fabaceae	*Indigastrum parviflorum*	None	Native	NA
Fabaceae	*Indigofera colutea*	None	Native	NA
Fabaceae	*Indigofera deserticola*	None	Native	NA
Fabaceae	*Indigofera ixocarpa*	Priority 2 (DBCA)	Native	NA
Fabaceae	*Indigofera linifolia*	None	Native	NA
Fabaceae	*Indigofera linnaei*	None	Native	NA
Fabaceae	*Indigofera monophylla*	None	Native	NA
Fabaceae	*Indigofera rugosa*	None	Native	NA
Fabaceae	*Indigofera trita* subsp. *trita*	None	Native	NA
Fabaceae	*Isotropis atropurpurea*	None	Native	NA
Fabaceae	*Lotus cruentus*	None	Native	NA
Fabaceae	*Neptunia dimorphantha*	None	Native	NA
Fabaceae	*Neptunia longipila*	Priority 2 (DBCA)	Native	NA
Fabaceae	*Neptunia xanthonema*	None	Native	NA
Fabaceae	*Petalostylis labicheoides*	None	Native	NA
Fabaceae	*Rhynchosia minima*	None	Native	NA
Fabaceae	*Senna ?hamersleyensis*	None	Native	NA
Fabaceae	*Senna ?stricta*	None	Native	NA
Fabaceae	*Senna artemisioides* subsp. ×*artemisioides*	None	Native	NA
Fabaceae	*Senna artemisioides* subsp. *helmsii*	None	Native	NA
Fabaceae	*Senna artemisioides* subsp. *helmsii* × *oligophylla*	None	Native	NA
Fabaceae	*Senna artemisioides* subsp. *oligophylla*	None	Native	NA
Fabaceae	*Senna glaucifolia*	None	Native	NA
Fabaceae	*Senna glutinosa* subsp. ×*luerssenii*	None	Native	NA
Fabaceae	*Senna glutinosa subsp. glutinosa*	None	Native	NA
Fabaceae	*Senna glutinosa subsp. pruinosa*	None	Native	NA
Fabaceae	*Senna notabilis*	None	Native	NA
Fabaceae	*Senna occidentalis*	None	Introduced	Permitted - s11
Fabaceae	*Senna sericea*	None	Native	NA
Fabaceae	*Senna* sp. Karijini (M.E.Trudgen 10392)	None	Native	NA
Fabaceae	*Senna* sp. Meekatharra (E. Bailey 1-26)	None	Native	NA
Fabaceae	*Senna symonii*	None	Native	NA
Fabaceae	*Senna venusta*	None	Native	NA
Fabaceae	*Sesbania cannabina*	None	Native	NA
Fabaceae	*Swainsona decurrens*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Fabaceae	*Swainsona kingii*	None	Native	NA
Fabaceae	*Swainsona stenodonta*	None	Native	NA
Fabaceae	*Swainsona thompsoniana*	Priority 3 (DBCA)	Native	NA
Fabaceae	*Tephrosia densa*	None	Native	NA
Fabaceae	*Tephrosia rosea* var. *clementii*	None	Native	NA
Fabaceae	*Tephrosia rosea* var. Fortescue creeks (M.I.H. Brooker 2186)	None	Native	NA
Fabaceae	*Tephrosia* sp. Bungaroo Creek (M.E. Trudgen 11601)	None	Native	NA
Fabaceae	*Tephrosia* sp. clay soils (S. van Leeuwen et al. PBS 0273)	Other (Range Extension)	Native	NA
Fabaceae	*Tephrosia* sp. Newman (A.A.Mitchell PRP 29)	None	Native	NA
Fabaceae	*Tephrosia* sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	None	Native	NA
Fabaceae	*Tephrosia supina*	None	Native	NA
Fabaceae	*Tephrosia uniovulata*	None	Native	NA
Fabaceae	*Vachellia farnesiana*	None	Introduced	Permitted - s11
Fabaceae	*Vigna lanceolata* var. *lanceolata*	None	Native	NA
Fabaceae	*Vigna* sp. Hamersley Clay (A.A. Mitchell PRP 113)	None	Native	NA
Fabaceae	*Zornia albiflora*	None	Native	NA
Gentianaceae	*Schenkia clementii*	None	Native	NA
Goodeniaceae	*Dampiera candicans*	None	Native	NA
Goodeniaceae	*Goodenia ?tenuiloba*	None	Native	NA
Goodeniaceae	*Goodenia cusackiana*	None	Native	NA
Goodeniaceae	*Goodenia forrestii*	None	Native	NA
Goodeniaceae	*Goodenia lamprosperma*	None	Native	NA
Goodeniaceae	*Goodenia microptera*	None	Native	NA
Goodeniaceae	*Goodenia muelleriana*	None	Native	NA
Goodeniaceae	*Goodenia nuda*	None	Native	NA
Goodeniaceae	*Goodenia prostrata*	None	Native	NA
Goodeniaceae	*Goodenia stobbsiana*	None	Native	NA
Goodeniaceae	*Goodenia triodiophila*	None	Native	NA
Goodeniaceae	*Scaevola amblyanthera* var. *centralis*	None	Native	NA
Goodeniaceae	*Scaevola browniana* subsp. *browniana*	None	Native	NA
Goodeniaceae	*Scaevola spinescens*	None	Native	NA
Gyrostemonaceae	*Codonocarpus cotinifolius*	None	Native	NA
Haloragaceae	*Gonocarpus ephemerus*	None	Native	NA
Haloragaceae	*Haloragis maierae*	None	Native	NA
Haloragaceae	*Haloragis trigonocarpa*	None	Native	NA
Hydrocharitaceae	*Najas* sp.	None	Native	NA
Lamiaceae	*Basilicum polystachyon*	None	Native	NA
Lamiaceae	*Clerodendrum floribundum* var. *angustifolium*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Lamiaceae	*Clerodendrum tomentosum* var. *lanceolatum*	None	Native	NA
Lamiaceae	*Prostanthera albiflora*	None	Native	NA
Lamiaceae	*Quoya zonalis*	Endangered (EN)	Native	NA
Lamiaceae	*Teucrium teucriiflorum*	None	Native	NA
Lauraceae	*Cassytha capillaris*	None	Native	NA
Loranthaceae	*?Amyema benthamii*	None	Native	NA
Loranthaceae	*Amyema ?sanguinea*	None	Native	NA
Loranthaceae	*Amyema preissii*	None	Native	NA
Lythraceae	*Ammannia baccifera*	None	Native	NA
Lythraceae	*Ammannia multiflora*	None	Native	NA
Lythraceae	*Rotala diandra*	None	Native	NA
Malvaceae	*Abutilon ?amplum*	None	Native	NA
Malvaceae	*Abutilon cunninghamii*	None	Native	NA
Malvaceae	*Abutilon fraseri subsp. fraseri*	None	Native	NA
Malvaceae	*Abutilon lepidum*	None	Native	NA
Malvaceae	*Abutilon macrum*	None	Native	NA
Malvaceae	*Abutilon malvifolium*	None	Native	NA
Malvaceae	*Abutilon otocarpum*	None	Native	NA
Malvaceae	*Abutilon oxycarpum* subsp. Prostrate (A.A. Mitchell PRP 1266)	None	Native	NA
Malvaceae	*Abutilon* sp. Dioicum (A.A. Mitchell PRP 1618)	None	Native	NA
Malvaceae	*Androcalva luteiflora*	None	Native	NA
Malvaceae	*Corchorus incanus*	None	Native	NA
Malvaceae	*Corchorus lasiocarpus* subsp. *lasiocarpus*	None	Native	NA
Malvaceae	*Corchorus lasiocarpus* subsp. *parvus*	None	Native	NA
Malvaceae	*Corchorus parviflorus*	None	Native	NA
Malvaceae	*Corchorus sidoides* subsp. *vermicularis*	None	Native	NA
Malvaceae	*Corchorus* sp. Yarrie (J. Bull & D. Roberts CAL 01.05)	Priority 1 (DBCA)	Native	NA
Malvaceae	*Corchorus tridens*	None	Native	NA
Malvaceae	*Corchorus trilocularis*	None	Native	NA
Malvaceae	*Corchorus walcottii*	None	Native	NA
Malvaceae	*Gossypium australe*	None	Native	NA
Malvaceae	*Gossypium robinsonii*	None	Native	NA
Malvaceae	*Hibiscus austrinus* var. *austrinus*	None	Native	NA
Malvaceae	*Hibiscus brachysiphonius*	None	Native	NA
Malvaceae	*Hibiscus burtonii*	None	Native	NA
Malvaceae	*Hibiscus coatesii*	None	Native	NA
Malvaceae	*Hibiscus goldsworthii*	None	Native	NA
Malvaceae	*Hibiscus leptocladus*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Malvaceae	*Hibiscus sturtii* var. *campylochlamys*	None	Native	NA
Malvaceae	*Hibiscus sturtii* var. *grandiflorus*	None	Native	NA
Malvaceae	*Hibiscus sturtii* var. *platychlamys*	None	Native	NA
Malvaceae	*Hibiscus verdcourtii*	None	Native	NA
Malvaceae	*Lawrencia densiflora*	None	Native	NA
Malvaceae	*Malvastrum americanum*	None	Introduced	Permitted - s11
Malvaceae	*Melhania oblongifolia*	None	Native	NA
Malvaceae	*Seringia exastia*	None	Native	NA
Malvaceae	*Seringia nephrosperma*	None	Native	NA
Malvaceae	Sida ?sp. Golden calyces glabrous (H.N. Foote 32)	None	Native	NA
Malvaceae	*Sida* ?sp. L (A.M. Ashby 4202)	None	Native	NA
Malvaceae	*Sida arenicola*	None	Native	NA
Malvaceae	*Sida arsiniata*	None	Native	NA
Malvaceae	*Sida brownii*	None	Native	NA
Malvaceae	*Sida cardiophylla*	None	Native	NA
Malvaceae	*Sida clementii*	None	Native	NA
Malvaceae	*Sida echinocarpa*	None	Native	NA
Malvaceae	*Sida ectogama*	None	Native	NA
Malvaceae	*Sida fibulifera*	None	Native	NA
Malvaceae	*Sida platycalyx*	None	Native	NA
Malvaceae	*Sida rohlenae* subsp. *rohlenae*	None	Native	NA
Malvaceae	*Sida* sp. dark green fruits (S. van Leeuwen 2260)	None	Native	NA
Malvaceae	*Sida* sp. Excedentifolia (J.L. Egan 1925)	None	Native	NA
Malvaceae	*Sida* sp. Pilbara (A.A. Mitchell PRP 1543)	None	Native	NA
Malvaceae	*Sida* sp. spiciform panicles (E. Leyland s.n. 14/8/90)	None	Native	NA
Malvaceae	*Sida spinosa*	None	Native	NA
Malvaceae	*Sida trichopoda*	None	Native	NA
Malvaceae	*Triumfetta chaetocarpa*	None	Native	NA
Malvaceae	*Triumfetta clementii*	None	Native	NA
Malvaceae	*Triumfetta maconochieana*	None	Native	NA
Malvaceae	*Waltheria indica*	None	Native	NA
Malvaceae	*Waltheria virgata*	None	Native	NA
Marsileaceae	*Marsilea exarata*	None	Native	NA
Marsileaceae	*Marsilea hirsuta*	None	Native	NA
Menispermaceae	*Tinospora smilacina*	None	Native	NA
Molluginaceae	*Trigastrotheca molluginea*	None	Native	NA
Montiaceae	*Calandrinia ?stagnensis*	None	Native	NA
Montiaceae	*Calandrinia balonensis*	Other (Range Extension)	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Montiaceae	*Calandrinia pentavalvis*	None	Native	NA
Moraceae	*Ficus brachypoda*	None	Native	NA
Myrtaceae	*Calytrix carinata*	None	Native	NA
Myrtaceae	*Corymbia ?ferriticola*	None	Native	NA
Myrtaceae	*Corymbia candida* subsp. *candida*	None	Native	NA
Myrtaceae	*Corymbia hamersleyana*	None	Native	NA
Myrtaceae	*Eucalyptus camaldulensis* subsp. *refulgens*	None	Native	NA
Myrtaceae	*Eucalyptus leucophloia* subsp. *leucophloia*	None	Native	NA
Myrtaceae	*Eucalyptus socialis* subsp. *eucentrica*	None	Native	NA
Myrtaceae	*Eucalyptus victrix*	None	Native	NA
Myrtaceae	*Eucalyptus xerothermica*	None	Native	NA
Myrtaceae	*Melaleuca argentea*	None	Native	NA
Myrtaceae	*Melaleuca bracteata*	None	Native	NA
Myrtaceae	*Melaleuca eleuterostachya*	None	Native	NA
Myrtaceae	*Melaleuca glomerata*	None	Native	NA
Myrtaceae	*Melaleuca linophylla*	None	Native	NA
Nyctaginaceae	*Boerhavia burbidgeana*	None	Native	NA
Nyctaginaceae	*Boerhavia coccinea*	None	Native	NA
Nyctaginaceae	*Boerhavia gardneri*	None	Native	NA
Nyctaginaceae	*Boerhavia paludosa*	None	Native	NA
Nyctaginaceae	*Boerhavia schomburgkiana*	None	Native	NA
Nyctaginaceae	*Commicarpus australis*	None	Native	NA
Oleaceae	*Jasminum didymum* subsp. *lineare*	None	Native	NA
Onagraceae	*Ludwigia perennis*	None	Native	NA
Orobanchaceae	*Striga ?squamigera*	None	Native	NA
Papaveraceae	*Argemone ochroleuca* subsp. *ochroleuca*	None	Introduced	Permitted - s11
Pedaliaceae	*Josephinia eugeniae*	None	Native	NA
Phrymaceae	*Mimulus gracilis*	None	Native	NA
Phrymaceae	*Peplidium* sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)	None	Native	NA
Phyllanthaceae	*Cathetus exilis*	None	Native	NA
Phyllanthaceae	*Dendrophyllanthus erwinii*	None	Native	NA
Phyllanthaceae	*Flueggea virosa* subsp. *melanthesoides*	None	Native	NA
Phyllanthaceae	*Nellica maderaspatensis*	None	Native	NA
Phyllanthaceae	*Notoleptopus decaisnei*	None	Native	NA
Plantaginaceae	*Stemodia grossa*	None	Native	NA
Plantaginaceae	*Stemodia* sp. Battle Hill (A.L. Payne 1006)	Priority 1 (DBCA)	Native	NA
Plantaginaceae	*Stemodia viscosa*	None	Native	NA
Plumbaginaceae	*Plumbago zeylanica*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Poaceae	*Amphipogon sericeus*	None	Native	NA
Poaceae	*Aristida burbidgeae*	None	Native	NA
Poaceae	*Aristida contorta*	None	Native	NA
Poaceae	*Aristida holathera* var. *holathera*	None	Native	NA
Poaceae	*Aristida inaequiglumis*	None	Native	NA
Poaceae	*Aristida latifolia*	None	Native	NA
Poaceae	*Astrebla elymoides*	None	Native	NA
Poaceae	*Astrebla pectinata*	None	Native	NA
Poaceae	*Bothriochloa ewartiana*	None	Native	NA
Poaceae	*Cenchrus ciliaris*	None	Introduced	Permitted - s11
Poaceae	*Cenchrus setiger*	None	Introduced	Permitted - s11
Poaceae	*Chloris pectinata*	None	Native	NA
Poaceae	*Chrysopogon fallax*	None	Native	NA
Poaceae	*Cymbopogon ambiguus*	None	Native	NA
Poaceae	*Cymbopogon obtectus*	None	Native	NA
Poaceae	*Cynodon convergens*	None	Native	NA
Poaceae	*Cynodon dactylon*	Other (Range Extension)	Introduced	Permitted - s11
Poaceae	*Cynodon prostratus*	None	Native	NA
Poaceae	*Dactyloctenium radulans*	None	Native	NA
Poaceae	*Dichanthium sericeum* subsp. *humilius*	None	Native	NA
Poaceae	*Digitaria brownii*	None	Native	NA
Poaceae	*Digitaria ctenantha*	None	Native	NA
Poaceae	*Diplachne fusca* subsp. *muelleri*	None	Native	NA
Poaceae	*Echinochloa colona*	None	Introduced	Permitted - s11
Poaceae	*Elytrophorus spicatus*	None	Native	NA
Poaceae	*Enneapogon caerulescens*	None	Native	NA
Poaceae	*Enneapogon lindleyanus*	None	Native	NA
Poaceae	*Enneapogon polyphyllus*	None	Native	NA
Poaceae	*Enteropogon ramosus*	None	Native	NA
Poaceae	*Eragrostis cumingii*	None	Native	NA
Poaceae	*Eragrostis desertorum*	None	Native	NA
Poaceae	*Eragrostis dielsii*	None	Native	NA
Poaceae	*Eragrostis eriopoda*	None	Native	NA
Poaceae	*Eragrostis exigua*	Other (Range Extension)	Native	NA
Poaceae	*Eragrostis leptocarpa*	None	Native	NA
Poaceae	*Eragrostis setifolia*	None	Native	NA
Poaceae	*Eragrostis tenellula*	None	Native	NA
Poaceae	*Eragrostis xerophila*	None	Native	NA

Family	Name	Conservation status	Naturalised status	WAOL Status
Poaceae	*Eriachne aristidea*	None	Native	NA
Poaceae	*Eriachne benthamii*	None	Native	NA
Poaceae	*Eriachne ciliata*	None	Native	NA
Poaceae	*Eriachne flaccida*	None	Native	NA
Poaceae	*Eriachne lanata*	None	Native	NA
Poaceae	*Eriachne mucronata*	None	Native	NA
Poaceae	*Eriachne obtusa*	None	Native	NA
Poaceae	*Eriachne pulchella* subsp. *dominii*	None	Native	NA
Poaceae	*Eriachne pulchella* subsp. *pulchella*	None	Native	NA
Poaceae	*Eriachne tenuiculmis*	None	Native	NA
Poaceae	*Eulalia aurea*	None	Native	NA
Poaceae	*Heteropogon contortus*	None	Native	NA
Poaceae	*Ischaemum albovillosum*	None	Native	NA
Poaceae	*Iseilema dolichotrichum*	None	Native	NA
Poaceae	*Iseilema eremaeum*	None	Native	NA
Poaceae	*Iseilema membranaceum*	None	Native	NA
Poaceae	*Iseilema vaginiflorum*	None	Native	NA
Poaceae	*Panicum australiense* var. *australiense*	None	Native	NA
Poaceae	*Panicum decompositum*	None	Native	NA
Poaceae	*Panicum effusum*	None	Native	NA
Poaceae	*Panicum laevinode*	None	Native	NA
Poaceae	*Neurachne muelleri*	None	Native	NA
Poaceae	*Paspalidium basicladum*	None	Native	NA
Poaceae	*Paspalidium clementii*	None	Native	NA
Poaceae	*Paspalidium rarum*	None	Native	NA
Poaceae	*Paspalidium retiglume*	Priority 2 (DBCA)	Native	NA
Poaceae	*Perotis rara*	None	Native	NA
Poaceae	*Schizachyrium fragile*	None	Native	NA
Poaceae	*Setaria verticillata*	None	Introduced	Permitted - s11
Poaceae	*Sporobolus actinocladus*	None	Native	NA
Poaceae	*Sporobolus australasicus*	None	Native	NA
Poaceae	*Themeda triandra*	None	Native	NA
Poaceae	*Triodia basedowii*	None	Native	NA
Poaceae	*Triodia brizoides*	None	Native	NA
Poaceae	*Triodia epactia*	None	Native	NA
Poaceae	*Triodia longiceps*	None	Native	NA
Poaceae	*Triodia scintillans*	None	Native	NA
Poaceae	*Triodia wiseana*	None	Native	NA

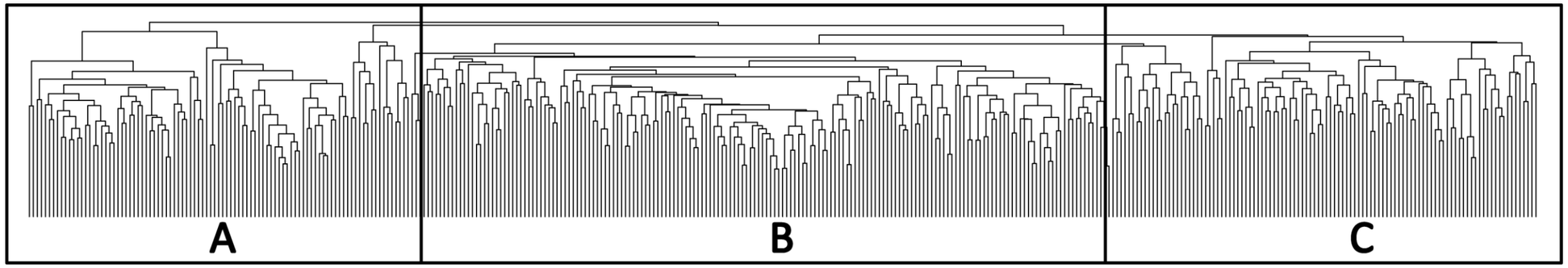
Family	Name	Conservation status	Naturalised status	WAOL Status
Poaceae	*Tripogonella loliiformis*	None	Native	NA
Poaceae	*Urochloa holosericea* subsp. *velutina*	None	Native	NA
Poaceae	*Urochloa occidentalis* var. *occidentalis*	None	Native	NA
Polygalaceae	*Polygala glaucifolia*	None	Native	NA
Portulacaceae	*Portulaca conspicua*	None	Native	NA
Portulacaceae	*Portulaca cyclophylla*	None	Native	NA
Portulacaceae	*Portulaca filifolia*	None	Native	NA
Portulacaceae	*Portulaca oleracea*	None	Native	NA
Potamogetonaceae	*Potamogeton tepperi*	None	Native	NA
Proteaceae	*Grevillea berryana*	None	Native	NA
Proteaceae	*Grevillea pyramidalis* subsp. *leucadendron*	None	Native	NA
Proteaceae	*Grevillea wickhamii* subsp. *aprica*	None	Native	NA
Proteaceae	*Grevillea wickhamii* subsp. *hispidula*	None	Native	NA
Proteaceae	*Hakea chordophylla*	None	Native	NA
Proteaceae	*Hakea lorea* subsp. *lorea*	None	Native	NA
Pteridaceae	*Cheilanthes brownii*	None	Native	NA
Pteridaceae	*Cheilanthes sieberi* subsp. *sieberi*	None	Native	NA
Rubiaceae	*Dolichocarpa crouchiana*	None	Native	NA
Rubiaceae	*Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)	Priority 3 (DBCA)	Native	NA
Rubiaceae	*Psydrax latifolia*	None	Native	NA
Rubiaceae	*Psydrax suaveolens*	None	Native	NA
Rubiaceae	*Scleromitrion galioides*	None	Native	NA
Rubiaceae	*Synaptantha tillaeacea* var. *tillaeacea*	None	Native	NA
Santalaceae	*Anthobolus leptomerioides*	None	Native	NA
Santalaceae	*Santalum lanceolatum*	None	Native	NA
Sapindaceae	*Atalaya hemiglauca*	None	Native	NA
Sapindaceae	*Dodonaea coriacea*	None	Native	NA
Sapindaceae	*Dodonaea lanceolata* var. *lanceolata*	None	Native	NA
Sapindaceae	*Dodonaea petiolaris*	None	Native	NA
Scrophulariaceae	*Eremophila cuneifolia*	None	Native	NA
Scrophulariaceae	*Eremophila exilifolia*	None	Native	NA
Scrophulariaceae	*Eremophila forrestii* subsp. *forrestii*	None	Native	NA
Scrophulariaceae	*Eremophila latrobei* subsp. *filiformis*	None	Native	NA
Scrophulariaceae	*Eremophila latrobei* subsp. *glabra*	None	Native	NA
Scrophulariaceae	*Eremophila latrobei* subsp. *latrobei*	None	Native	NA
Scrophulariaceae	*Eremophila longifolia*	None	Native	NA
Solanaceae	*Nicotiana benthamiana*	None	Native	NA
Solanaceae	*Nicotiana obliqua/occidentalis*	None	Native	NA

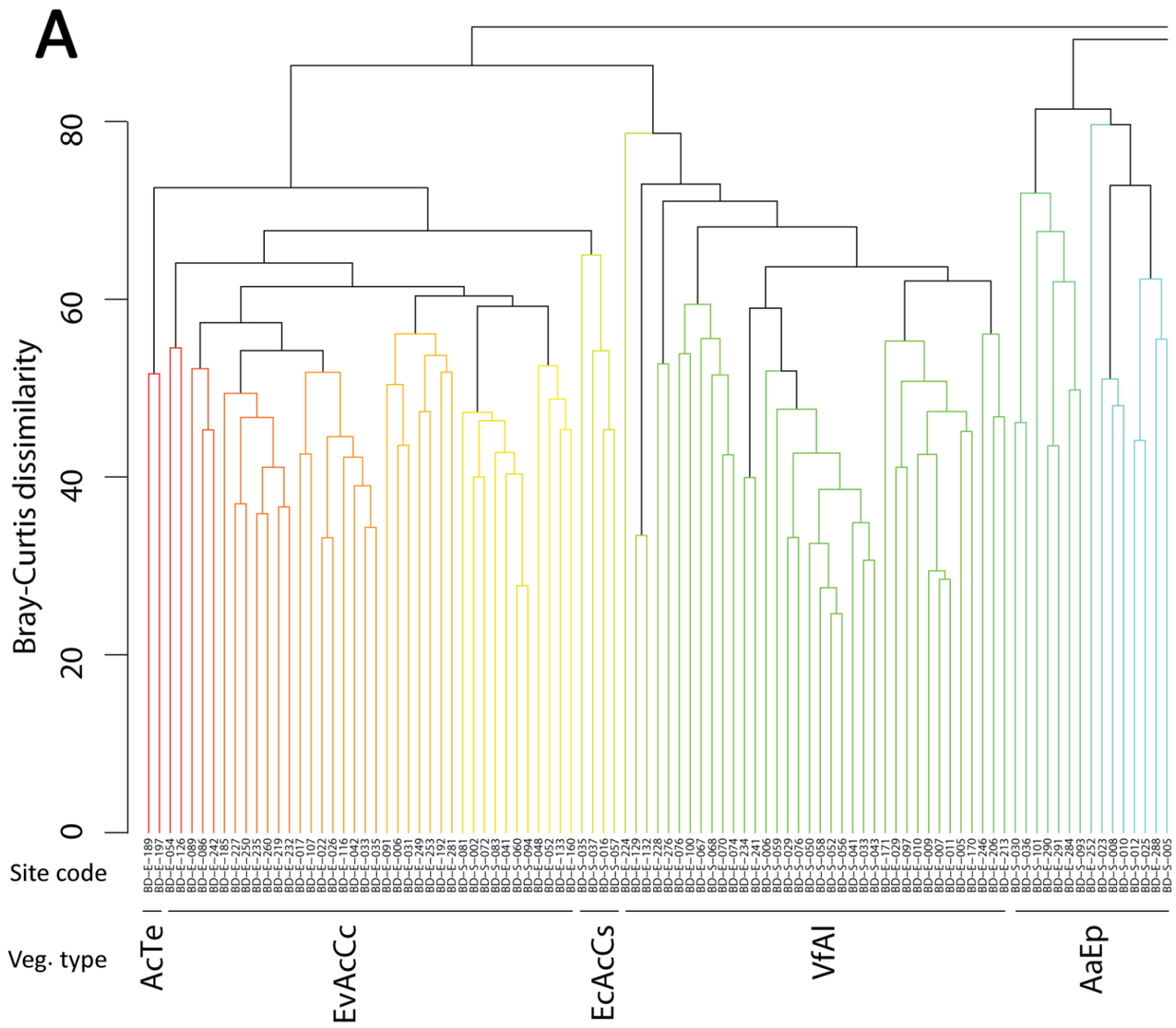
Family	Name	Conservation status	Naturalised status	WAOL Status
Solanaceae	*Nicotiana umbratica*	Priority 3 (DBCA)	Native	NA
Solanaceae	*Physalis angulata*	None	Introduced	Permitted - s11
Solanaceae	*Solanum* aff. *esuriale*	Other (Anomalous features)	Native	NA
Solanaceae	*Solanum* aff. *horridum*	Other (Anomalous features)	Native	NA
Solanaceae	*Solanum chippendalei*	None	Native	NA
Solanaceae	*Solanum cleistogamum*	None	Native	NA
Solanaceae	*Solanum diversiflorum*	None	Native	NA
Solanaceae	*Solanum elatius*	None	Native	NA
Solanaceae	*Solanum gabrielae*	None	Native	NA
Solanaceae	*Solanum horridum*	None	Native	NA
Solanaceae	*Solanum lasiophyllum*	None	Native	NA
Solanaceae	*Solanum nigrum*	None	Introduced	Permitted - s11
Solanaceae	*Solanum phlomoides*	None	Native	NA
Violaceae	*Afrohybanthus aurantiacus*	None	Native	NA
Zygophyllaceae	*Tribulopis angustifolia*	None	Native	NA
Zygophyllaceae	*Tribulus astrocarpus*	None	Native	NA
Zygophyllaceae	*Tribulus hirsutus*	None	Native	NA
Zygophyllaceae	*Tribulus platypterus*	None	Native	NA
Zygophyllaceae	*Tribulus suberosus*	None	Native	NA
Zygophyllaceae	*Tribulus terrestris*	None	Introduced	Permitted - s11

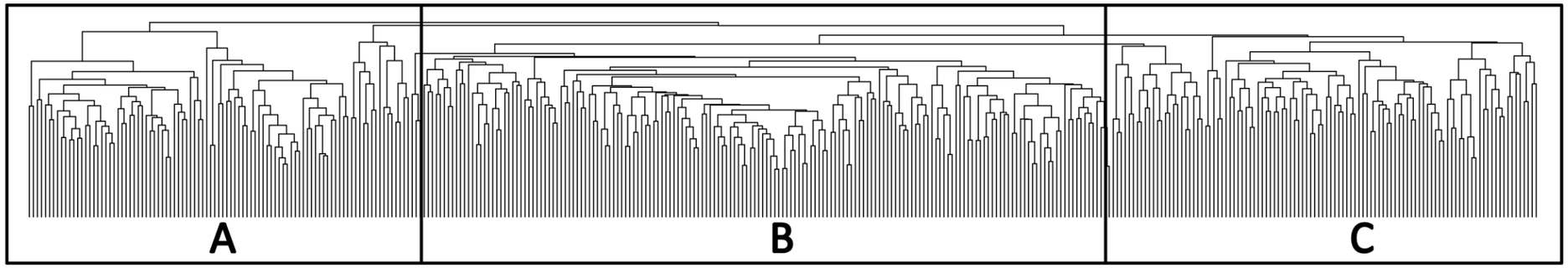
Names amalgamated for vegetation classification.

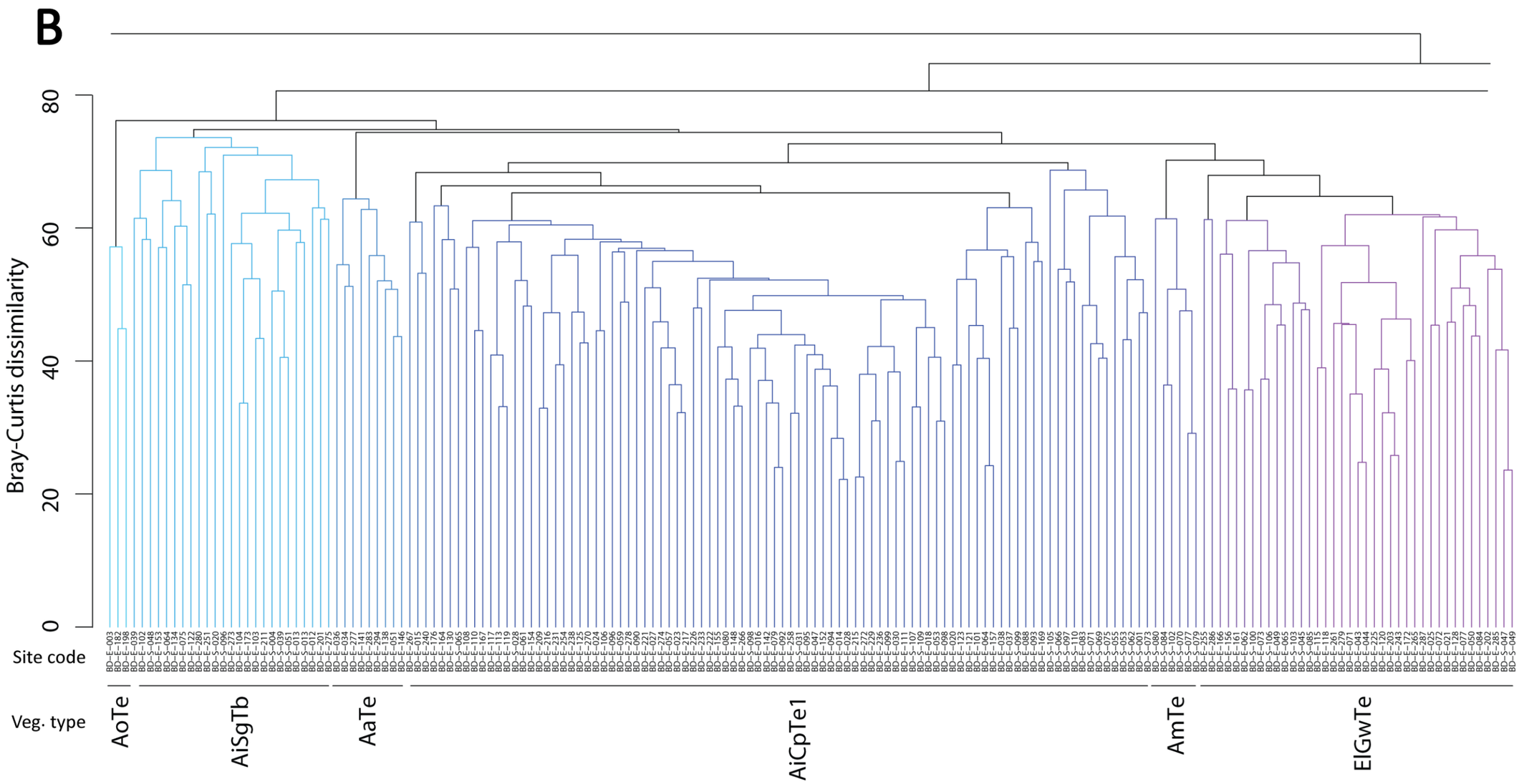
Analysis name	Included taxa	Justification for amalgamation
Alternanthera denticulata/nodiflora	See analysis name	Includes records that could not be adequately identified to either taxon.
Amaranthus undulatus/cuspidifolius	See analysis name	Includes records that could not be adequately identified to either taxon.
Bulbostylis barbata/turbinata	See analysis name	Includes records that could not be adequately identified to either taxon.
Cenchrus ciliaris/setiger	See analysis name	Includes records that could not be adequately identified to either taxon.
Corchorus tridens/trilocularis	See analysis name	Includes records that could not be adequately identified to either taxon.
Cullen leucochaites/lachnostachys	See analysis name	Includes records that could not be adequately identified to either taxon.
Dysphania kalpari/sphaerosperma	See analysis name	Includes records that could not be adequately identified to either taxon.
Eragrostis exigua/tenellula	See analysis name	Includes records that could not be adequately identified to either taxon.
Euphorbia australis/vaccaria	See analysis name	Includes records that could not be adequately identified to either taxon.
Euphorbia biconvexa/trigonosperma	See analysis name	Includes records that could not be adequately identified to either taxon.
Euphorbia boophthona/tannensis/stevenii	See analysis name	Includes records that could not be adequately identified to either taxon.
Euploca cunninghamii/tanythrix	See analysis name	Includes records that could not be adequately identified to either taxon.
Euploca pachyphylla/chrysocarpa	See analysis name	Includes records that could not be adequately identified to either taxon.
Grona filiformis/muelleri	See analysis name	Includes records that could not be adequately identified to either taxon.
Senna glaucifolia/symonii	See analysis name	Includes records that could not be adequately identified to either taxon.
Senna stricta/artemisioides subsp. x*luerssenii*	See analysis name	Includes records that could not be adequately identified to either taxon.
Seringia exastia/nephrosperma	See analysis name	Includes records that could not be adequately identified to either taxon.
Sida arsiniata/echinocarpa	See analysis name	Includes records that could not be adequately identified to either taxon.
Sida rohlenae/spinosa	See analysis name	Includes records that could not be adequately identified to either taxon.
Solanum cleistogamum/horridum	See analysis name	Includes records that could not be adequately identified to either taxon.
Solanum lasiophyllum/phlomoides	See analysis name	Includes records that could not be adequately identified to either taxon.
Tribulus hirsutus/terrestris	See analysis name	Includes records that could not be adequately identified to either taxon.
Acacia pyrifolia	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Clerodendrum floribundum	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Corchorus lasiocarpus	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Dichanthium sericeum	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Eremophila latrobei	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Eriachne pulchella	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Evolvulus alsinoides	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Grevillea wickhamii	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Hibiscus sturtii	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Rostellularia adscendens	Includes all infraspecific taxa	Infraspecific taxon could not always be adequately determined.
Crotalaria cunninghamii	Includes all infraspecific taxa	There are no confirmed records of subsp. *cunninghamii* in the Pilbara, and the SLR record could not be confirmed.
Senna artemisioides subsp. *oligophylla*	*S. artemisioides* subsp. *helmsii* x *oligophylla*	Possible hybrid. Assumed to be subsp. *oligophylla* for analysis.
Dolichocarpa crouchiana	Includes *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479)	Taxon is questionably distinct from *D. crouchiana*. Treated as *D. crouchiana* for analysis.

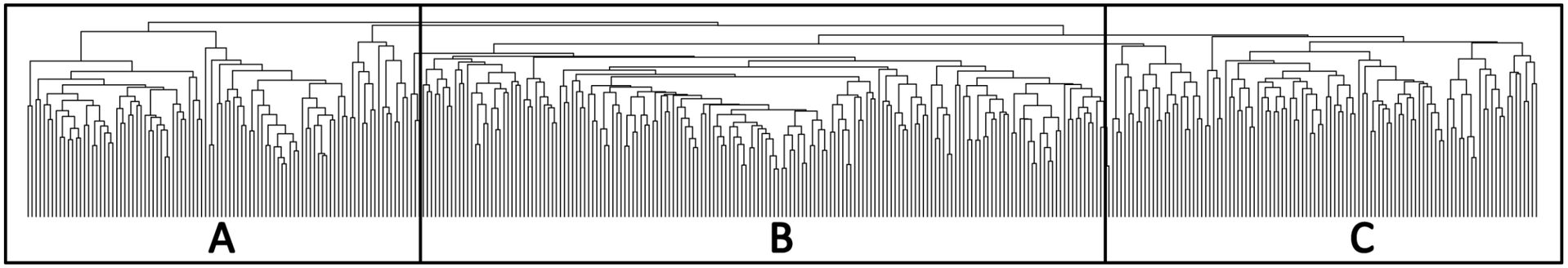
Appendix C UPGMA hierarchical agglomerative clustering dendrogram.

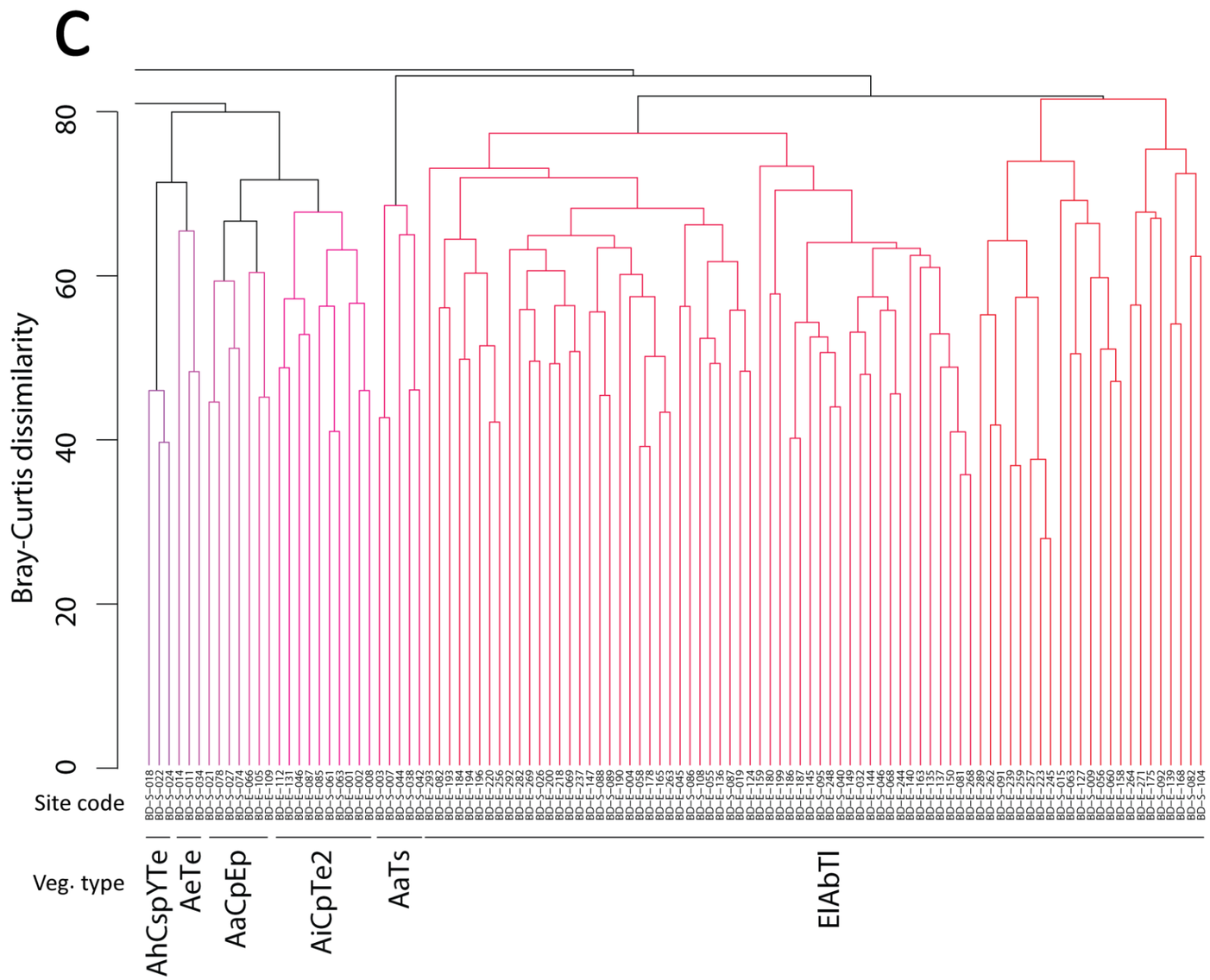

A
B
C


A
Bray-Curtis dissimilarity
0
20
40
60
80
Site code
Veg. type
AcTe
EvAcCc
EcAcCs
VfAl
AaEp


A
B
C


B
Bray-Curtis dissimilarity
0
20
40
60
80
Site code
Veg. type
AoTe
AiSgTb
AaTe
AiCpTe1
AmTe
ElGwTe


A
B
C


C
Bray-Curtis dissimilarity
0
20
40
60
80
Site code
Veg. type
AhCspYTe
AeTe
AaCpEp
AiCpTe2
AaTs
ElAbTl

Appendix D Species constancy within vegetation types.

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
?Amyema benthamii	–	–	–	–	–	–	–	–	–
?Glycine falcata	–	–	–	–	–	–	–	–	–
Abutilon ?amplum	–	–	–	–	–	–	–	–	–
Abutilon cunninghamii	–	13% (1.5)	–	–	–	–	–	–	–
Abutilon fraseri subsp. fraseri	–	7% (1.5)	–	–	–	–	–	–	–
Abutilon lepidum	14% (1.5)	20% (1.5)	11% (1.5)	–	–	–	–	2% (1.5)	10% (1.5)
Abutilon macrum	57% (1.5)	7% (1.5)	–	–	–	–	–	–	10% (1.5)
Abutilon malvifolium	–	–	–	–	–	–	–	–	–
Abutilon otocarpum	14% (1.5)	13% (1.5)	–	20% (1.5)	–	–	–	–	–
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	–	–	–	–	–	–	–	2% (1.5)	–
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	29% (1.5)	13% (1.5)	–	–	–	–	100% (3.37)	1% (1.5)	30% (2.43)
Acacia acradenia	–	–	–	–	–	–	–	2% (2.9)	–
Acacia adoxa var. adoxa	–	–	–	–	–	–	–	–	–
Acacia adsurgens	–	–	11% (4.3)	–	–	–	–	1% (4.3)	–
Acacia ampliceps	–	–	–	–	–	–	–	–	–
Acacia ancistrocarpa	–	7% (1.5)	33% (9.97)	100% (5.7)	–	–	–	7% (3.25)	–
Acacia ancistrocarpa x monticola	–	–	–	–	–	–	–	–	–
Acacia aptaneura	100% (15.07)	100% (29.09)	67% (18.22)	60% (7.4)	–	–	33% (4.3)	4% (5.92)	10% (9.2)
Acacia arida	–	–	–	–	–	–	–	2% (2.9)	–
Acacia arrecta	–	–	–	–	–	–	–	–	–
Acacia ayersiana	–	7% (4.3)	11% (4.3)	–	–	–	–	–	–
Acacia bivenosa	14% (1.5)	27% (2.2)	89% (6.95)	80% (1.5)	–	67% (2.9)	–	20% (1.97)	30% (2.43)
Acacia catenulata subsp. occidentalis	–	13% (8.95)	–	–	–	–	–	–	–
Acacia colei var. colei	14% (1.5)	7% (1.5)	–	40% (1.5)	–	–	–	4% (1.5)	20% (1.5)
Acacia coriacea subsp. pendens	14% (1.5)	20% (1.5)	–	–	–	–	–	2% (1.5)	20% (10.35)
Acacia cyperophylla var. omearana	–	–	11% (4.3)	–	100% (9.2)	–	–	–	–
Acacia elachantha	–	–	–	–	–	–	–	–	–
Acacia eriopoda	–	–	–	40% (4.3)	–	100% (4.3)	67% (4.3)	1% (1.5)	–
Acacia inaequilatera	29% (4.3)	–	11% (1.5)	–	–	–	–	82% (4.54)	80% (6.14)
Acacia maitlandii	–	–	–	20% (1.5)	–	33% (1.5)	–	1% (4.3)	–
Acacia monticola	–	–	–	–	–	–	–	–	–
Acacia orthocarpa	–	–	–	–	–	–	–	4% (2.9)	–
Acacia pruinocarpa	14% (1.5)	67% (2.9)	89% (7.36)	40% (2.9)	–	–	–	8% (2.7)	–
Acacia ptychophylla	–	–	–	–	–	–	–	–	–
Acacia pyrifolia var. morrisonii	–	–	–	–	–	–	–	1% (1.5)	–
Acacia pyrifolia var. pyrifolia	–	–	11% (4.3)	–	–	–	–	4% (3.6)	–
Acacia sclerosperma subsp. sclerosperma	–	–	–	–	–	–	–	–	–
Acacia sibirica	–	–	–	–	–	–	–	–	–
Acacia spondylophylla	–	–	–	–	50% (1.5)	–	–	–	–
Acacia synchronicia	43% (2.43)	13% (5.35)	33% (5)	–	–	–	–	12% (4.36)	10% (4.3)
Acacia tenuissima	–	–	22% (6.75)	20% (1.5)	–	–	–	1% (1.5)	–
Acacia tetragonophylla	100% (3.4)	33% (2.62)	–	80% (1.5)	–	–	–	8% (2.3)	10% (1.5)
Acacia trachycarpa	–	–	–	–	–	–	–	4% (2.9)	–
Acacia tumida var. pilbarensis	–	–	11% (4.3)	–	100% (6.75)	–	–	–	–
Achyranthes aspera	–	–	–	–	–	–	–	1% (1.5)	–
Adriana tomentosa var. tomentosa	–	–	–	–	–	–	–	–	–
Aerva javanica	29% (1.5)	–	–	–	–	–	–	5% (1.5)	–
Afrohybanthus aurantiacus	14% (1.5)	20% (1.5)	11% (1.5)	–	100% (1.5)	67% (1.5)	33% (1.5)	4% (1.5)	10% (1.5)
Alternanthera denticulata var. denticulata	–	7% (1.5)	–	–	–	–	–	–	–
Alternanthera nana	–	27% (1.5)	11% (1.5)	–	50% (1.5)	–	–	–	–
Alternanthera nodiflora	–	–	–	–	–	–	–	–	–
Alysicarpus muelleri	29% (1.5)	–	–	–	–	–	–	8% (1.5)	30% (1.5)
Amaranthus cuspidifolius	14% (1.5)	–	–	–	–	–	33% (1.5)	–	–
Amaranthus undulatus	–	7% (1.5)	–	–	–	–	–	–	10% (1.5)
Ammannia baccifera	–	–	–	–	–	–	–	–	–

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Ammannia multiflora	–	7% (1.5)	–	–	–	–	–	–	–
Amphipogon sericeus	–	–	11% (1.5)	–	–	–	–	1% (4.3)	–
Amyema ?sanguinea	–	–	–	–	–	–	–	–	–
Amyema preissii	–	–	–	–	–	–	–	1% (1.5)	–
Androcalva luteiflora	–	–	11% (1.5)	–	–	–	–	–	–
Anthobolus leptomerioides	–	13% (2.9)	22% (1.5)	–	–	–	–	–	–
Areocleome oxalidea	–	7% (1.5)	–	–	–	–	–	–	–
Argemone ochroleuca subsp. ochroleuca	–	–	–	–	–	–	–	–	–
Aristida burbidgeae	–	–	–	–	–	–	33% (1.5)	–	–
Aristida contorta	86% (5.27)	33% (3.04)	44% (1.5)	20% (1.5)	–	33% (1.5)	–	29% (2.69)	90% (2.43)
Aristida holathera var. holathera	–	–	11% (1.5)	–	–	67% (1.5)	–	1% (4.3)	20% (1.5)
Aristida inaequiglumis	–	13% (1.5)	11% (4.3)	–	–	–	–	–	–
Aristida latifolia	–	–	–	–	–	–	–	2% (1.5)	10% (4.3)
Arivela uncifera	–	–	–	–	–	–	–	1% (1.5)	–
Arivela viscosa	29% (1.5)	27% (4.12)	11% (1.5)	–	100% (2.9)	33% (1.5)	67% (1.5)	20% (1.5)	40% (1.5)
Astrebla elymoides	–	–	–	–	–	–	–	–	–
Astrebla pectinata	–	–	–	–	–	–	–	–	–
Atalaya hemiglauca	14% (1.5)	7% (1.5)	–	–	50% (4.3)	–	100% (1.5)	1% (9.2)	20% (4.3)
Austrobryonia pilbarensis	–	–	–	–	–	–	–	–	–
Basilicum polystachyon	–	–	–	–	–	–	–	–	–
Bergia pedicellaris	–	–	–	–	–	–	–	–	–
Bergia trimera	–	–	–	–	–	–	–	–	–
Bidens bipinnata	29% (1.5)	40% (4.07)	–	40% (1.5)	–	33% (4.3)	–	–	–
Blumea tenella	–	–	–	–	–	–	–	–	–
Boerhavia burbidgeana	–	–	–	–	50% (1.5)	–	–	1% (1.5)	–
Boerhavia coccinea	29% (1.5)	20% (1.5)	–	20% (1.5)	50% (1.5)	–	33% (1.5)	8% (1.5)	50% (2.06)
Boerhavia gardneri	14% (1.5)	–	–	–	–	–	–	14% (1.5)	20% (2.9)
Boerhavia paludosa	–	–	–	–	–	–	–	–	10% (1.5)
Boerhavia schomburgkiana	–	–	–	–	–	–	–	–	–
Bonamia erecta	–	–	–	40% (1.5)	–	–	–	–	–
Bonamia media	–	–	–	–	–	–	–	–	–
Bonamia pannosa	–	–	–	20% (1.5)	–	33% (1.5)	–	–	10% (1.5)
Bonamia pilbarensis	57% (1.5)	–	11% (1.5)	40% (1.5)	50% (1.5)	33% (1.5)	–	55% (1.55)	70% (1.9)
Bothriochloa ewartiana	–	–	–	–	–	–	–	–	–
Bulbostylis barbata	14% (1.5)	7% (1.5)	–	–	–	67% (1.5)	33% (1.5)	3% (1.5)	–
Bulbostylis burbidgeae	–	–	–	–	–	–	100% (1.5)	–	–
Bulbostylis turbinata	–	–	–	–	–	–	–	4% (4.12)	10% (1.5)
Calandrinia ?stagnensis	–	7% (1.5)	–	–	–	–	–	–	–
Calandrinia balonensis	–	–	–	–	–	–	–	–	–
Calocephalus knappii	14% (1.5)	–	–	–	–	–	–	1% (1.5)	–
Calotropis procera	–	–	–	–	–	–	–	–	–
Capparis lasiantha	–	–	11% (4.3)	–	–	–	–	–	–
Capparis spinosa subsp. nummularia	–	–	–	–	–	–	–	–	10% (1.5)
Capparis umbonata	–	–	–	40% (2.9)	–	–	–	1% (1.5)	–
Carissa lanceolata	29% (1.5)	–	–	–	–	–	–	–	–
Cassytha capillaris	–	–	–	20% (1.5)	–	33% (1.5)	–	–	–
Cathetus exilis	–	–	–	–	100% (1.5)	–	–	–	–
Cenchrus ciliaris	14% (1.5)	33% (12.58)	–	40% (1.5)	50% (4.3)	–	33% (1.5)	11% (2.06)	50% (8.12)
Cenchrus setiger	43% (2.43)	27% (13.95)	–	–	–	–	–	9% (1.85)	40% (6.05)
Centipeda minima subsp. macrocephala	–	7% (1.5)	–	–	–	–	–	–	–
Cheilanthes brownii	–	–	–	–	–	33% (1.5)	67% (1.5)	–	–
Cheilanthes sieberi subsp. sieberi	57% (1.5)	33% (1.5)	11% (1.5)	20% (1.5)	–	–	–	–	–
Chenopodium murale	–	–	–	–	–	–	–	–	–
Chloris pectinata	14% (1.5)	7% (1.5)	–	–	–	–	–	–	20% (1.5)
Chrysopogon fallax	43% (1.5)	13% (1.5)	–	20% (1.5)	–	–	–	1% (1.5)	10% (1.5)

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Citrullus amarus	–	–	–	–	–	–	–	–	–
Citrullus colocynthis	–	–	–	–	–	–	–	–	–
Clerodendrum floribundum var. angustifolium	–	–	–	–	–	–	–	–	–
Clerodendrum tomentosum var. lanceolatum	–	–	–	–	–	–	–	1% (1.5)	–
Commelina ensifolia	–	7% (1.5)	–	–	–	–	–	–	–
Commicarpus australis	–	–	–	–	–	–	–	–	–
Corchorus incanus	–	–	11% (1.5)	–	–	–	–	3% (1.5)	10% (1.5)
Corchorus lasiocarpus subsp. lasiocarpus	14% (1.5)	–	–	–	–	33% (1.5)	–	5% (1.5)	–
Corchorus lasiocarpus subsp. parvus	–	–	–	–	–	–	–	8% (1.5)	–
Corchorus parviflorus	100% (1.5)	33% (2.06)	–	40% (1.5)	–	67% (1.5)	–	46% (2.32)	90% (5.51)
Corchorus sidoides subsp. vermicularis	–	–	–	20% (1.5)	–	–	–	–	–
Corchorus sp. Yarrie (J. Bull & D. Roberts CAL 01.05)	–	–	–	–	–	–	100% (4.3)	–	–
Corchorus tridens	29% (1.5)	13% (1.5)	–	–	50% (1.5)	33% (1.5)	–	–	–
Corchorus trilocularis	14% (1.5)	–	–	–	–	–	–	–	10% (1.5)
Corchorus walcottii	–	–	–	–	–	–	–	–	–
Corymbia ?ferriticola	–	–	–	–	–	–	–	–	–
Corymbia candida subsp. candida	–	20% (3.37)	–	–	50% (4.3)	–	–	–	–
Corymbia hamersleyana	–	–	–	20% (1.5)	–	–	–	25% (2.84)	20% (1.5)
Crotalaria cunninghamii subsp. cunninghamii	–	–	–	–	–	–	–	–	–
Crotalaria cunninghamii subsp. sturtii	–	–	–	–	–	–	–	–	–
Crotalaria dissitiflora subsp. benthamiana	–	–	–	–	–	–	–	–	–
Crotalaria medicaginea var. neglecta	–	20% (1.5)	–	–	50% (1.5)	–	–	7% (1.5)	40% (1.5)
Cucumis melo	–	20% (1.5)	–	–	–	–	–	–	10% (1.5)
Cucumis myriocarpus subsp. myriocarpus	–	–	–	–	–	–	–	–	–
Cucumis variabilis	43% (1.5)	27% (1.5)	22% (1.5)	–	–	33% (1.5)	67% (1.5)	14% (1.5)	40% (1.5)
Cullen ?lachnostachys	–	–	–	–	–	–	–	–	–
Cullen graveolens	–	–	–	–	–	–	–	–	–
Cullen leucanthum	–	–	–	–	–	–	–	–	20% (1.5)
Cullen leucochaites	–	–	–	–	–	–	–	–	–
Cullen pustulatum	–	–	–	–	–	–	–	1% (1.5)	–
Cymbopogon ambiguus	43% (2.43)	20% (1.5)	44% (2.2)	20% (1.5)	50% (4.3)	–	100% (2.43)	14% (1.93)	50% (1.5)
Cymbopogon obtectus	–	–	–	–	–	–	–	1% (4.3)	–
Cynanchum floribundum	–	–	–	–	–	–	33% (1.5)	–	–
Cynanchum viminale	–	–	11% (1.5)	–	–	–	–	1% (1.5)	–
Cynodon convergens	–	–	–	–	–	–	33% (1.5)	1% (1.5)	–
Cynodon dactylon	–	–	–	–	–	–	–	–	–
Cynodon prostratus	–	–	–	–	–	–	–	1% (1.5)	–
Cyperus bifax	–	–	–	–	–	–	–	–	–
Cyperus cunninghamii subsp. cunninghamii	–	–	–	–	–	–	33% (1.5)	–	–
Cyperus difformis	–	7% (1.5)	–	–	–	–	–	–	–
Cyperus hesperius	–	–	–	–	50% (1.5)	–	–	–	–
Cyperus iria	–	7% (1.5)	–	–	–	33% (1.5)	–	–	–
Cyperus ixiocarpus	–	–	–	–	–	33% (1.5)	–	–	–
Cyperus squarrosus	–	–	–	–	–	33% (1.5)	–	–	–
Cyperus vaginatus	–	13% (1.5)	–	–	50% (1.5)	–	–	–	20% (1.5)
Dactyloctenium radulans	–	20% (2.43)	–	–	50% (1.5)	33% (1.5)	–	2% (1.5)	20% (1.5)
Dampiera candicans	–	–	–	60% (1.5)	–	67% (1.5)	–	2% (1.5)	10% (1.5)
Dendrophyllanthus erwinii	–	–	–	–	–	33% (1.5)	–	–	–
Desmodiopsis campylocaulon	–	–	–	–	–	–	–	–	–
Dichanthium sericeum subsp. humilius	–	13% (1.5)	–	–	–	–	–	1% (1.5)	10% (1.5)
Dicladanthera forrestii	–	7% (1.5)	–	–	–	–	–	–	–
Digitaria brownii	–	–	–	20% (1.5)	–	–	33% (1.5)	–	–
Digitaria ctenantha	14% (1.5)	–	–	–	–	–	–	–	–
Diplachne fusca subsp. muelleri	–	–	–	–	–	–	–	–	–
Dodonaea coriacea	–	–	–	40% (1.5)	–	–	–	1% (1.5)	–

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Dodonaea lanceolata var. lanceolata	–	–	–	–	–	–	–	–	–
Dodonaea petiolaris	–	27% (16.62)	22% (2.9)	–	–	–	–	–	–
Dolichocarpa crouchiana	–	–	–	–	–	–	–	1% (1.5)	10% (1.5)
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	–	–	–	–	–	–	–	–	–
Duperreya commixta	29% (1.5)	40% (1.5)	67% (1.5)	–	–	–	–	–	–
Dysphania kalpari	–	7% (1.5)	–	–	–	–	–	–	–
Dysphania melanocarpa forma melanocarpa	–	–	–	–	–	–	–	1% (1.5)	–
Dysphania rhadinostachya subsp. rhadinostachya	–	–	–	–	–	–	–	–	20% (1.5)
Dysphania sphaerosperma	–	–	11% (1.5)	–	–	–	–	–	–
Echinochloa colona	–	7% (1.5)	–	–	–	–	–	–	–
Ehretia saligna var. saligna	–	–	–	–	–	–	–	1% (4.3)	–
Enchylaena tomentosa var. tomentosa	29% (1.5)	13% (1.5)	11% (1.5)	–	–	–	–	–	–
Enneapogon caerulescens	43% (2.43)	13% (1.5)	–	–	–	–	–	23% (1.5)	70% (2.3)
Enneapogon lindleyanus	–	–	–	–	–	–	100% (1.5)	–	–
Enneapogon polyphyllus	100% (2.3)	53% (5.99)	11% (1.5)	40% (1.5)	–	67% (1.5)	33% (1.5)	15% (1.5)	90% (2.12)
Enteropogon ramosus	–	–	–	–	–	–	–	–	–
Eragrostis cumingii	14% (1.5)	13% (1.5)	–	–	–	–	–	–	–
Eragrostis desertorum	–	13% (2.9)	11% (1.5)	–	–	–	–	1% (1.5)	–
Eragrostis dielsii	–	–	–	–	–	–	–	–	–
Eragrostis eriopoda	14% (1.5)	–	–	–	–	–	–	5% (1.5)	–
Eragrostis exigua	–	–	–	–	–	–	–	–	–
Eragrostis leptocarpa	–	7% (1.5)	–	–	–	–	–	–	–
Eragrostis setifolia	–	–	–	–	–	–	–	–	–
Eragrostis tenellula	–	27% (2.2)	–	–	–	–	–	–	20% (1.5)
Eragrostis xerophila	14% (1.5)	–	–	–	–	–	–	–	–
Eremophila cuneifolia	14% (1.5)	13% (4.3)	11% (4.3)	–	–	–	–	–	–
Eremophila exilifolia	–	–	–	–	–	–	–	–	–
Eremophila forrestii subsp. forrestii	29% (2.9)	40% (1.97)	11% (1.5)	–	–	–	–	3% (2.43)	10% (4.3)
Eremophila latrobei subsp. filiformis	–	40% (1.5)	44% (3.6)	–	–	–	–	–	–
Eremophila latrobei subsp. glabra	14% (9.2)	–	22% (2.9)	–	–	–	–	2% (2.9)	–
Eremophila latrobei subsp. latrobei	14% (1.5)	–	22% (2.9)	40% (1.5)	–	–	–	–	–
Eremophila longifolia	–	–	–	–	–	–	–	7% (2.78)	10% (1.5)
Eriachne aristidea	–	–	–	–	–	33% (1.5)	–	–	–
Eriachne benthamii	–	–	–	–	–	–	–	–	–
Eriachne ciliata	14% (1.5)	7% (1.5)	–	–	–	33% (1.5)	–	–	–
Eriachne flaccida	–	–	–	–	–	–	–	–	–
Eriachne lanata	–	–	–	–	–	–	–	8% (3.4)	–
Eriachne mucronata	57% (1.5)	33% (2.62)	11% (1.5)	–	50% (16.4)	–	100% (1.5)	2% (1.5)	20% (1.5)
Eriachne obtusa	14% (1.5)	–	–	–	–	–	–	–	–
Eriachne pulchella subsp. dominii	–	7% (1.5)	11% (1.5)	–	–	–	–	5% (1.5)	–
Eriachne pulchella subsp. pulchella	–	13% (1.5)	–	20% (1.5)	–	33% (1.5)	–	2% (1.5)	–
Eriachne tenuiculmis	–	–	–	–	100% (4.3)	–	–	–	–
Erythrina vespertilio	–	–	–	–	–	–	–	–	–
Eucalyptus camaldulensis subsp. refulgens	–	–	–	–	–	–	–	–	–
Eucalyptus leucophloia subsp. leucophloia	–	7% (1.5)	22% (2.9)	40% (2.9)	–	–	–	1% (1.5)	–
Eucalyptus socialis subsp. eucentrica	–	–	–	–	–	–	–	–	–
Eucalyptus victrix	14% (1.5)	–	–	–	100% (5.35)	–	–	1% (4.3)	10% (1.5)
Eucalyptus xerothermica	–	13% (4.3)	–	–	–	–	–	–	–
Eulalia aurea	–	13% (1.5)	–	20% (1.5)	–	–	–	1% (1.5)	–
Euphorbia australis var. hispidula	–	–	–	–	–	–	–	1% (1.5)	–
Euphorbia australis var. subtomentosa	29% (1.5)	13% (1.5)	–	–	–	–	67% (1.5)	13% (1.5)	40% (1.5)
Euphorbia biconvexa	–	7% (1.5)	–	20% (1.5)	–	–	–	2% (2.9)	40% (1.5)
Euphorbia boophthona	14% (1.5)	7% (1.5)	–	–	–	–	–	2% (1.5)	10% (1.5)
Euphorbia careyi	–	–	–	–	–	–	–	12% (1.5)	10% (1.5)
Euphorbia hirta	–	–	–	–	–	–	–	–	–

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Euphorbia inappendiculata var. inappendiculata	–	–	–	–	–	–	–	–	–
Euphorbia inappendiculata var. queenslandica	–	–	–	–	–	–	–	–	–
Euphorbia stevenii	–	–	–	–	–	–	–	–	–
Euphorbia tannensis subsp. eremophila	–	7% (1.5)	–	–	–	–	–	3% (1.5)	–
Euphorbia trigonosperma	–	20% (1.5)	–	–	100% (1.5)	–	–	–	10% (1.5)
Euphorbia vaccaria var. vaccaria	14% (1.5)	–	–	–	–	–	–	1% (1.5)	–
Euploca chrysocarpa	–	–	–	–	–	–	–	3% (1.5)	10% (1.5)
Euploca conocarpa	–	–	–	–	–	–	–	–	–
Euploca cunninghamii	–	–	–	–	–	–	–	–	–
Euploca heterantha	14% (1.5)	–	–	–	–	–	–	3% (1.5)	–
Euploca pachyphylla	–	–	–	20% (1.5)	–	–	–	2% (1.5)	–
Euploca tanythrix	14% (1.5)	–	–	–	–	–	–	–	–
Evolvulus alsinoides var. decumbens	–	7% (1.5)	–	–	–	–	–	3% (1.5)	–
Evolvulus alsinoides var. villosicalyx	100% (1.5)	53% (1.5)	22% (1.5)	40% (1.5)	50% (1.5)	100% (1.5)	100% (1.5)	16% (1.5)	80% (1.85)
Ficus brachypoda	–	–	–	–	–	–	–	–	–
Fimbristylis depauperata	–	–	–	–	–	–	–	–	–
Fimbristylis dichotoma	43% (1.5)	7% (1.5)	–	20% (1.5)	–	67% (1.5)	–	10% (3.29)	–
Fimbristylis microcarya	–	–	–	–	–	–	–	–	–
Fimbristylis simulans	–	–	–	–	–	33% (1.5)	–	–	–
Flaveria trinervia	–	7% (1.5)	–	–	–	–	–	–	–
Flueggea virosa subsp. melanthesoides	–	–	–	–	50% (1.5)	–	–	–	–
Glycine canescens	–	–	–	–	–	–	–	–	–
Gomphrena affinis subsp. pilbarensis	–	–	–	–	–	–	–	–	–
Gomphrena canescens subsp. canescens	–	13% (1.5)	–	–	–	33% (1.5)	–	1% (1.5)	–
Gomphrena cunninghamii	86% (1.5)	7% (1.5)	–	20% (1.5)	–	33% (1.5)	67% (1.5)	3% (2.43)	70% (1.5)
Gomphrena kanisii	–	7% (1.5)	–	–	–	–	–	–	–
Gomphrena leptoclada subsp. leptoclada	–	–	–	–	–	33% (1.5)	–	–	–
Gonocarpus ephemerus	–	–	–	–	–	33% (1.5)	–	–	–
Goodenia ?tenuiloba	–	–	–	–	–	–	–	1% (1.5)	–
Goodenia cusackiana	–	–	–	–	–	–	–	–	–
Goodenia forrestii	–	–	–	–	–	–	–	2% (1.5)	–
Goodenia lamprosperma	–	–	–	–	50% (1.5)	33% (1.5)	–	–	–
Goodenia microptera	14% (1.5)	–	–	20% (1.5)	–	33% (1.5)	–	7% (1.5)	10% (1.5)
Goodenia muelleriana	57% (1.5)	–	–	–	–	–	–	3% (1.5)	10% (1.5)
Goodenia prostrata	–	20% (1.5)	–	–	–	–	–	–	–
Goodenia stobbsiana	–	7% (1.5)	33% (2.43)	80% (1.5)	–	–	–	8% (1.5)	–
Goodenia triodiophila	–	–	–	60% (1.5)	–	–	–	–	–
Gossypium australe	14% (1.5)	–	–	20% (1.5)	–	–	–	8% (1.9)	20% (2.9)
Gossypium robinsonii	–	–	–	–	–	–	67% (2.9)	–	–
Grevillea berryana	–	20% (3.37)	–	–	–	–	–	–	–
Grevillea pyramidalis subsp. leucadendron	–	–	–	–	–	–	–	24% (2.65)	30% (3.37)
Grevillea wickhamii subsp. aprica	–	–	44% (1.5)	–	100% (1.5)	–	–	12% (3.41)	–
Grevillea wickhamii subsp. hispidula	–	7% (4.3)	–	40% (1.5)	–	33% (1.5)	100% (2.43)	5% (2.06)	–
Grona ?filiformis	–	–	–	–	–	–	–	–	–
Grona muelleri	–	–	–	–	–	–	–	–	–
Hakea chordophylla	–	–	–	–	–	–	–	1% (1.5)	–
Hakea lorea subsp. lorea	14% (1.5)	7% (1.5)	33% (1.5)	80% (1.5)	–	–	–	38% (2.14)	20% (2.9)
Haloragis trigonocarpa	–	–	–	–	–	–	–	–	–
Heliotropium crispatum	–	–	–	–	–	–	–	–	10% (1.5)
Hibiscus austrinus var. austrinus	–	–	–	–	–	–	–	–	–
Hibiscus brachysiphonius	–	–	–	–	–	–	–	–	–
Hibiscus burtonii	–	27% (1.5)	44% (1.5)	20% (1.5)	–	–	–	–	–
Hibiscus coatesii	–	7% (1.5)	11% (1.5)	–	–	–	–	2% (1.5)	30% (1.5)
Hibiscus sturtii var. campylochlamys	57% (1.5)	–	44% (1.5)	60% (1.5)	–	67% (1.5)	33% (1.5)	2% (1.5)	10% (1.5)
Hibiscus sturtii var. grandiflorus	–	7% (1.5)	–	–	–	–	–	1% (1.5)	–

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Hibiscus sturtii var. platychlamys	–	–	11% (1.5)	20% (1.5)	–	–	–	2% (1.5)	30% (1.5)
Hibiscus verdcourtii	–	–	–	–	–	–	–	–	–
Indigofera colutea	43% (1.5)	–	–	–	–	–	–	8% (1.5)	40% (1.5)
Indigofera deserticola	–	–	–	–	–	–	–	1% (1.5)	–
Indigofera linifolia	–	–	–	–	–	–	–	13% (1.5)	20% (1.5)
Indigofera linnaei	–	–	–	–	–	–	–	2% (1.5)	–
Indigofera monophylla	29% (2.9)	7% (1.5)	56% (5.6)	100% (1.5)	50% (1.5)	100% (1.5)	67% (1.5)	27% (3.21)	–
Indigofera rugosa	–	–	–	–	–	–	–	1% (1.5)	–
Indigofera trita subsp. trita	–	–	–	–	–	–	–	2% (1.5)	10% (1.5)
Iotasperma sessilifolium	–	–	–	–	–	–	–	1% (1.5)	–
Ipomoea lonchophylla	–	–	–	–	–	–	–	–	–
Ipomoea muelleri	–	7% (1.5)	–	–	50% (1.5)	33% (1.5)	–	1% (1.5)	–
Ipomoea plebeia	–	–	–	–	–	–	–	–	–
Ipomoea polymorpha	–	7% (1.5)	–	–	50% (1.5)	–	–	–	10% (1.5)
Ipomoea racemigera	–	13% (1.5)	–	–	–	–	–	–	–
Ischaemum albovillosum	–	–	–	–	–	–	–	–	–
Iseilema dolichotrichum	14% (1.5)	–	–	–	–	–	–	–	–
Iseilema eremaeum	–	7% (1.5)	–	–	–	–	–	–	–
Iseilema membranaceum	–	7% (1.5)	–	–	–	–	–	–	–
Iseilema vaginiflorum	43% (1.5)	7% (1.5)	–	–	–	–	–	5% (1.5)	30% (2.43)
Isotropis atropurpurea	–	–	–	20% (1.5)	–	33% (1.5)	–	–	–
Jasminum didymum subsp. lineare	–	–	22% (2.9)	–	–	–	33% (1.5)	–	–
Josephinia eugeniae	–	–	–	–	–	–	–	–	–
Leiocarpa semicalva subsp. semicalva	–	–	–	–	–	–	67% (1.5)	–	–
Lepidium muelleri-ferdinandi	–	–	–	–	–	–	–	–	–
Lepidium pedicellosum	–	–	–	–	–	–	–	–	–
Lobelia arnhemiaca	–	–	–	–	–	–	–	–	–
Lotus cruentus	–	–	–	–	–	–	–	–	–
Ludwigia perennis	–	–	–	–	–	–	–	–	–
Maireana georgei	–	13% (1.5)	–	–	–	–	–	–	–
Maireana melanocoma	–	–	–	–	–	–	–	–	–
Maireana planifolia	14% (1.5)	13% (1.5)	–	–	–	–	–	–	–
Maireana villosa	–	13% (1.5)	–	–	–	–	–	–	–
Malvastrum americanum	29% (1.5)	27% (7.15)	–	–	50% (1.5)	–	–	–	20% (1.5)
Marsilea exarata	–	–	–	–	–	–	–	–	–
Marsilea hirsuta	–	7% (1.5)	–	–	–	–	–	–	–
Melaleuca argentea	–	–	–	–	–	–	–	–	–
Melaleuca bracteata	–	–	–	–	–	–	–	–	–
Melaleuca eleuterostachya	–	–	–	–	–	–	–	–	–
Melaleuca glomerata	–	–	–	–	–	–	–	–	–
Melaleuca linophylla	–	–	–	–	–	–	–	–	10% (16.4)
Melhania oblongifolia	43% (1.5)	–	–	–	–	–	–	1% (1.5)	–
Minuria integerrima	–	–	–	–	–	–	–	–	10% (1.5)
Najas sp.	–	–	–	–	–	–	–	–	–
Nellica maderaspatensis	–	13% (1.5)	–	–	50% (1.5)	–	–	1% (1.5)	20% (1.5)
Neptunia dimorphantha	–	–	–	–	–	–	–	–	–
Neptunia longipila	–	–	–	–	–	–	–	–	–
Neptunia xanthonema	–	–	–	–	–	–	–	–	–
Nicotiana benthamiana	–	–	–	–	–	–	–	–	–
Nicotiana obliqua/occidentalis	–	–	–	–	–	–	–	–	–
Nicotiana umbratica	–	–	–	–	–	33% (1.5)	100% (1.5)	–	–
Notoleptopus decaisnei	–	7% (1.5)	–	–	–	–	–	–	10% (1.5)
Olearia aff. fluvialis	–	–	–	–	–	–	–	–	–
Operculina aequisepala	–	–	–	–	–	–	–	–	–
Panicum australiense var. australiense	–	–	–	20% (1.5)	–	–	–	1% (1.5)	–

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Panicum decompositum	–	–	–	–	–	–	–	–	–
Panicum effusum	–	7% (1.5)	–	–	–	–	–	–	–
Panicum laevinode	–	–	–	–	–	–	–	–	–
Neurachne muelleri	14% (1.5)	–	22% (10.35)	60% (1.5)	–	33% (1.5)	–	4% (1.5)	40% (2.2)
Paspalidium basicladum	14% (1.5)	20% (2.43)	–	20% (1.5)	–	–	33% (1.5)	–	20% (1.5)
Paspalidium clementii	43% (1.5)	–	–	–	–	–	–	–	–
Paspalidium rarum	–	–	–	–	50% (1.5)	33% (1.5)	33% (1.5)	–	–
Paspalidium retiglume	–	–	–	–	–	–	–	–	–
Pentalepis trichodesmoides subsp. trichodesmoides	–	–	11% (1.5)	–	–	–	–	4% (2.2)	10% (1.5)
Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)	–	–	–	–	–	–	–	–	–
Peripleura virgata	–	–	–	–	–	–	–	1% (1.5)	–
Perotis rara	–	–	–	–	–	33% (1.5)	33% (1.5)	2% (1.5)	–
Petalostylis labicheoides	–	7% (1.5)	–	–	–	–	–	–	–
Pluchea dentex	–	–	–	40% (1.5)	50% (1.5)	67% (1.5)	–	1% (1.5)	–
Pluchea ferdinandi-muelleri	–	–	–	–	–	–	–	1% (1.5)	–
Pluchea rubelliflora	–	7% (1.5)	–	–	–	–	–	–	–
Pluchea tetranthera	14% (1.5)	–	–	–	–	–	–	5% (2.62)	–
Plumbago zeylanica	–	–	–	–	–	–	–	–	–
Polycarpaea corymbosa var. corymbosa	–	–	–	–	–	33% (1.5)	–	–	–
Polycarpaea holtzei	–	–	–	–	–	–	–	–	10% (1.5)
Polycarpaea involucrata	–	–	–	–	–	–	–	–	–
Polycarpaea longiflora	–	–	–	–	–	–	33% (1.5)	–	–
Polygala glaucifolia	–	–	–	–	–	–	–	2% (1.5)	–
Polymeria ?mollis	–	7% (1.5)	–	–	–	–	–	–	–
Polymeria ambigua	–	–	–	–	50% (1.5)	–	33% (1.5)	1% (1.5)	–
Polymeria calycina	–	–	–	–	–	–	–	1% (1.5)	–
Portulaca conspicua	–	–	–	–	–	–	–	–	–
Portulaca cyclophylla	–	–	–	–	–	–	–	3% (1.5)	–
Portulaca filifolia	–	–	–	–	–	–	–	–	–
Portulaca oleracea	43% (1.5)	33% (1.5)	11% (1.5)	20% (1.5)	–	–	–	2% (1.5)	10% (1.5)
Potamogeton tepperi	–	–	–	–	–	–	–	–	–
Pseudognaphalium luteoalbum	–	–	–	–	–	–	–	–	–
Psydrax latifolia	–	47% (1.5)	–	–	–	–	–	–	–
Psydrax suaveolens	–	40% (1.5)	44% (2.2)	20% (1.5)	–	–	–	–	–
Pterocaulon serrulatum var. velutinum	–	–	–	–	–	–	–	–	–
Pterocaulon sphacelatum	–	7% (1.5)	–	–	–	–	67% (1.5)	–	30% (1.5)
Ptilotus aervoides	14% (1.5)	–	–	–	–	–	–	3% (1.5)	10% (1.5)
Ptilotus astrolasius	14% (1.5)	20% (2.43)	11% (1.5)	20% (1.5)	–	–	–	3% (1.5)	–
Ptilotus auriculifolius	–	–	–	–	–	–	–	2% (1.5)	10% (1.5)
Ptilotus axillaris	–	–	–	–	–	–	–	1% (1.5)	–
Ptilotus calostachyus	–	13% (1.5)	33% (1.5)	40% (1.5)	–	–	–	16% (1.5)	20% (1.5)
Ptilotus carinatus	–	–	–	–	–	–	–	–	–
Ptilotus clementii	–	–	–	–	–	–	–	1% (1.5)	10% (1.5)
Ptilotus exaltatus	14% (1.5)	27% (2.2)	–	–	–	–	–	1% (1.5)	10% (1.5)
Ptilotus fusiformis	–	–	–	20% (1.5)	–	67% (1.5)	–	–	–
Ptilotus gaudichaudii	–	7% (1.5)	–	–	–	–	–	–	–
Ptilotus gomphrenoides	14% (1.5)	7% (1.5)	–	–	–	–	–	–	10% (4.3)
Ptilotus helipteroides	–	7% (1.5)	–	–	–	–	–	–	–
Ptilotus incanus	–	–	–	–	–	–	–	2% (2.9)	10% (4.3)
Ptilotus obovatus var. obovatus	–	20% (1.5)	–	–	–	–	33% (1.5)	1% (1.5)	20% (1.5)
Ptilotus polystachyus	–	13% (1.5)	–	–	–	–	33% (1.5)	–	–
Ptilotus rotundifolius	–	–	–	–	–	–	–	1% (1.5)	–
Ptilotus schwartzii	–	20% (3.37)	11% (4.3)	–	–	–	–	–	–
Rhagodia eremaea	57% (1.5)	20% (2.43)	–	–	–	–	–	1% (1.5)	–
Rhagodia sp. Hamersley (M.Trudgen 17794)	–	7% (1.5)	–	20% (1.5)	–	–	–	–	–

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Rhodanthe margarethae	–	–	–	–	–	–	–	–	–
Rhynchosia minima	29% (1.5)	13% (1.5)	11% (4.3)	–	–	33% (1.5)	33% (1.5)	26% (1.62)	90% (1.81)
Rostellularia adscendens var. clementii	14% (1.5)	40% (3.25)	–	–	50% (1.5)	–	–	–	–
Rostellularia adscendens var. latifolia	–	–	–	–	–	–	33% (1.5)	–	–
Rotala diandra	–	–	–	–	–	–	–	–	–
Rutidosis helichrysoides subsp. helichrysoides	–	–	–	–	–	–	–	–	–
Salsola australis	–	7% (1.5)	–	–	–	–	–	7% (1.5)	40% (1.5)
Santalum lanceolatum	–	–	–	–	50% (1.5)	–	–	–	–
Scaevola amblyanthera var. centralis	–	–	11% (1.5)	–	–	–	–	9% (1.5)	–
Scaevola spinescens	–	–	–	–	–	–	–	1% (1.5)	–
Schizachyrium fragile	–	–	–	40% (1.5)	–	67% (1.5)	–	–	–
Schoenoplectus subulatus	–	–	–	–	–	–	–	–	–
Sclerolaena cornishiana	71% (2.06)	13% (1.5)	–	20% (1.5)	–	–	–	12% (2.01)	10% (4.3)
Sclerolaena costata	29% (1.5)	7% (1.5)	–	–	–	–	–	9% (1.85)	40% (2.9)
Sclerolaena densiflora	–	–	–	–	–	–	–	–	–
Sclerolaena eriacantha	–	–	–	–	–	–	–	–	–
Sclerolaena hostilis	–	–	–	–	–	–	–	1% (1.5)	–
Scleromitrion galioides	–	–	–	–	–	–	–	–	–
Senna ?hamersleyensis	–	–	–	–	–	–	–	–	10% (4.3)
Senna ?stricta	14% (1.5)	13% (2.9)	33% (2.43)	–	–	–	–	15% (1.9)	–
Senna artemisioides subsp. ×artemisioides	–	–	–	–	–	–	–	–	–
Senna artemisioides subsp. helmsii	29% (1.5)	13% (1.5)	11% (1.5)	60% (2.43)	–	–	–	8% (2.3)	10% (1.5)
Senna artemisioides subsp. helmsii x oligophylla	–	–	–	–	–	–	–	–	–
Senna artemisioides subsp. oligophylla	–	7% (4.3)	44% (1.5)	–	–	–	–	10% (1.5)	30% (1.5)
Senna glaucifolia	–	7% (1.5)	–	–	–	–	–	–	–
Senna glutinosa subsp. ×luerssenii	14% (1.5)	33% (3.18)	56% (3.18)	40% (1.5)	–	–	–	10% (2.12)	–
Senna glutinosa subsp. glutinosa	14% (1.5)	20% (2)	44% (2.2)	40% (1.5)	–	–	–	22% (1.78)	20% (1.5)
Senna glutinosa subsp. pruinosa	14% (1.5)	7% (1.5)	–	20% (1.5)	–	–	–	16% (2.06)	20% (1.5)
Senna notabilis	14% (1.5)	13% (1.5)	22% (1.5)	–	50% (1.5)	33% (1.5)	–	11% (1.5)	80% (3.36)
Senna sericea	–	–	–	20% (1.5)	–	–	–	–	–
Senna sp. Karijini (M.E.Trudgen 10392)	–	–	–	–	–	–	–	1% (1.5)	–
Senna sp. Meekatharra (E. Bailey 1-26)	–	–	–	–	–	–	–	–	–
Senna symonii	–	–	–	40% (1.5)	–	–	–	11% (2.34)	10% (1.5)
Senna venusta	–	–	–	–	–	–	100% (2.43)	1% (1.5)	–
Seringia exastia	–	7% (4.3)	33% (6.47)	20% (1.5)	–	–	–	–	–
Seringia nephrosperma	–	–	–	20% (1.5)	–	–	–	–	–
Sesbania cannabina	–	–	–	–	100% (1.5)	–	–	–	–
Setaria verticillata	–	20% (1.5)	–	–	–	–	–	–	–
Sida ?sp. L (A.M. Ashby 4202)	–	–	–	–	–	–	–	1% (1.5)	–
Sida arenicola	–	–	11% (1.5)	20% (1.5)	–	–	–	–	–
Sida arsiniata	–	–	–	20% (1.5)	–	–	–	1% (1.5)	10% (1.5)
Sida brownii	14% (1.5)	–	–	–	–	–	–	–	–
Sida cardiophylla	–	–	–	–	–	–	–	–	–
Sida clementii	–	–	–	20% (1.5)	–	–	–	–	–
Sida echinocarpa	43% (1.5)	7% (1.5)	–	–	–	–	33% (1.5)	13% (1.73)	40% (2.2)
Sida ectogama	–	13% (16.4)	–	–	–	–	–	–	–
Sida fibulifera	14% (1.5)	40% (1.5)	–	20% (1.5)	–	–	–	4% (1.5)	–
Sida platycalyx	–	13% (1.5)	–	–	–	–	–	–	–
Sida rohlenae subsp. rohlenae	14% (1.5)	–	–	–	–	–	67% (1.5)	3% (1.5)	40% (2.2)
Sida sp. dark green fruits (S. van Leeuwen 2260)	–	20% (1.5)	–	20% (1.5)	–	–	–	2% (1.5)	–
Sida sp. Excedentifolia (J.L. Egan 1925)	–	–	–	–	–	–	–	–	–
Sida sp. Golden calyces glabrous (H.N. Foote 32)	–	–	–	–	–	–	–	–	–
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	–	–	11% (1.5)	40% (1.5)	–	33% (1.5)	33% (1.5)	9% (1.85)	–
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	14% (1.5)	–	–	–	–	–	–	–	–
Sida spinosa	–	7% (1.5)	–	–	–	–	–	–	10% (1.5)

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Sida trichopoda	43% (1.5)	–	22% (1.5)	–	–	–	–	2% (1.5)	30% (1.5)
Solanum aff. esuriale	–	–	–	20% (1.5)	–	–	–	–	–
Solanum aff. horridum	14% (1.5)	–	–	–	–	33% (1.5)	33% (1.5)	4% (1.5)	20% (1.5)
Solanum chippendalei	–	–	–	20% (1.5)	–	33% (1.5)	67% (1.5)	2% (1.5)	–
Solanum cleistogamum	14% (1.5)	7% (1.5)	–	–	–	33% (1.5)	67% (1.5)	2% (1.5)	20% (1.5)
Solanum diversiflorum	–	–	–	–	–	33% (1.5)	33% (1.5)	–	10% (1.5)
Solanum elatius	–	–	–	–	–	–	–	1% (1.5)	–
Solanum gabrielae	–	–	–	–	–	–	100% (1.5)	–	–
Solanum horridum	57% (1.5)	7% (1.5)	11% (1.5)	–	50% (1.5)	–	–	26% (1.5)	70% (1.9)
Solanum lasiophyllum	57% (1.5)	7% (1.5)	33% (1.5)	40% (1.5)	–	33% (1.5)	–	9% (1.5)	20% (1.5)
Solanum nigrum	–	–	–	–	–	–	–	–	–
Solanum phlomoides	29% (1.5)	7% (1.5)	–	–	–	–	–	–	10% (1.5)
Sonchus oleraceus	–	–	–	–	–	–	–	–	–
Sporobolus actinocladus	–	–	–	–	–	–	–	–	–
Sporobolus australasicus	43% (1.5)	13% (1.5)	11% (1.5)	–	–	–	–	23% (1.5)	50% (1.5)
Stackhousia muricata subsp. annual (W.R. Barker 2172)	–	–	–	–	–	–	–	1% (4.3)	–
Stemodia grossa	–	–	–	–	–	–	–	2% (1.5)	10% (1.5)
Stemodia sp. Battle Hill (A.L. Payne 1006)	–	–	–	–	–	–	–	–	–
Stemodia viscosa	–	7% (1.5)	–	–	–	–	–	–	–
Streptoglossa adscendens	–	–	–	–	–	–	–	–	–
Streptoglossa bubakii	–	–	–	–	–	–	–	–	–
Streptoglossa decurrens	–	–	–	–	–	–	–	1% (1.5)	–
Streptoglossa liatroides	–	–	–	–	–	–	–	2% (1.5)	–
Streptoglossa odora	–	–	–	–	–	–	–	–	–
Striga ?squamigera	–	–	–	–	–	–	–	–	–
Swainsona decurrens	–	–	–	–	–	–	–	3% (2.43)	20% (1.5)
Swainsona kingii	–	–	–	–	–	33% (1.5)	–	–	–
Swainsona stenodonta	–	–	–	–	–	–	–	11% (1.5)	10% (1.5)
Swainsona thompsoniana	–	–	–	–	–	–	–	–	–
Synaptantha tillaeacea var. tillaeacea	–	–	–	–	–	33% (1.5)	–	–	–
Tephrosia densa	–	–	–	–	–	–	33% (1.5)	–	10% (1.5)
Tephrosia rosea var. clementii	–	–	–	–	–	–	–	4% (2.2)	–
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	–	–	11% (1.5)	–	–	–	–	1% (1.5)	–
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	–	–	–	–	–	–	33% (1.5)	–	–
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	14% (1.5)	–	–	–	–	–	–	–	–
Tephrosia sp. Newman (A.A.Mitchell PRP 29)	–	–	–	–	–	–	–	1% (1.5)	–
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	29% (1.5)	–	–	20% (1.5)	–	–	–	7% (1.5)	10% (1.5)
Tephrosia supina	–	–	–	–	–	–	–	1% (1.5)	–
Tephrosia uniovulata	–	–	–	–	–	33% (1.5)	–	–	–
Teucrium teucriiflorum	–	7% (1.5)	–	–	–	–	–	–	–
Themeda triandra	29% (1.5)	7% (1.5)	–	20% (1.5)	–	–	–	2% (2.9)	10% (1.5)
Tinospora smilacina	–	–	–	–	–	–	–	–	–
Trachymene oleracea subsp. oleracea	–	–	–	–	–	–	–	–	–
Trianthema cusackianum	–	–	–	–	–	–	–	–	–
Trianthema glossostigmum	–	–	–	–	–	–	–	2% (1.5)	–
Trianthema portulacastrum	–	–	–	–	–	–	–	–	–
Trianthema triquetrum	29% (1.5)	7% (1.5)	–	–	–	33% (1.5)	–	1% (1.5)	30% (1.5)
Tribulopis angustifolia	–	7% (1.5)	–	–	–	–	–	–	–
Tribulus astrocarpus	–	7% (1.5)	–	–	–	–	–	–	10% (1.5)
Tribulus hirsutus	–	–	11% (1.5)	–	–	–	–	7% (1.5)	–
Tribulus suberosus	14% (1.5)	13% (1.5)	–	40% (1.5)	–	–	–	8% (1.5)	10% (1.5)
Tribulus terrestris	14% (1.5)	–	–	–	–	–	–	1% (1.5)	10% (1.5)
Trichodesma zeylanicum var. zeylanicum	29% (1.5)	–	11% (1.5)	–	–	–	–	3% (1.5)	–
Trigastrotheca molluginea	–	–	11% (1.5)	40% (1.5)	–	100% (1.5)	100% (1.5)	5% (2.06)	–
Triodia basedowii	–	–	–	–	–	–	–	–	–

Name	AaCpTw[1]	AaEp	AaTe	AaTs	AcTe	AeTe	AhCspYTe	AiCpTe1	AiCpTe2
Triodia brizoides	43% (20.5)	40% (14)	11% (4.3)	20% (16.4)	–	–	–	12% (6.65)	20% (28.6)
Triodia epactia	43% (19.03)	13% (2.9)	100% (28.38)	60% (1.5)	100% (9.2)	100% (27.4)	100% (11.67)	100% (34.79)	100% (14.98)
Triodia longiceps	43% (2.43)	47% (4.9)	22% (6.75)	60% (1.5)	100% (9.2)	67% (21.4)	–	8% (2.7)	20% (2.9)
Triodia scintillans	–	13% (1.5)	–	100% (39)	–	–	–	–	–
Triodia wiseana	57% (17.9)	–	11% (4.3)	20% (1.5)	–	–	–	7% (12.75)	30% (5)
Tripogonella loliiformis	43% (1.5)	–	11% (4.3)	20% (1.5)	–	67% (1.5)	67% (1.5)	4% (2.2)	–
Triumfetta chaetocarpa	–	–	–	–	–	67% (1.5)	67% (1.5)	–	–
Triumfetta clementii	–	–	–	–	–	–	–	–	10% (1.5)
Triumfetta maconochieana	–	–	–	–	–	–	100% (1.5)	–	–
Urochloa holosericea subsp. velutina	–	–	–	–	–	33% (1.5)	–	–	–
Urochloa occidentalis var. occidentalis	29% (1.5)	27% (1.5)	–	–	–	–	–	–	–
Vachellia farnesiana	–	20% (1.5)	–	–	50% (1.5)	–	–	7% (1.5)	50% (6.02)
Vigna lanceolata var. lanceolata	–	–	–	–	–	–	–	–	–
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	–	–	–	–	–	–	–	–	10% (1.5)
Vincetoxicum lineare	–	7% (1.5)	11% (1.5)	40% (1.5)	–	–	–	–	–
Wahlenbergia tumidifructa	–	–	–	–	–	–	–	–	–
Waltheria indica	–	–	–	–	–	–	–	–	–
Waltheria virgata	–	–	–	60% (1.5)	–	33% (1.5)	–	–	–
Zaleya galericulata subsp. galericulata	–	–	–	–	–	–	–	–	10% (1.5)
Zornia albiflora	–	–	–	–	–	33% (1.5)	–	–	–

Name	AiSgTb	AmTe	AoTe	EcAcCs	ElAbTl	ElGwTe	EvAcCc	VfAl
?Amyema benthamii	–	–	–	–	–	–	3% (1.5)	–
?Glycine falcata	–	–	–	–	–	–	–	6% (1.5)
Abutilon ?amplum	–	–	–	–	–	–	3% (1.5)	–
Abutilon cunninghamii	–	–	–	–	4% (1.5)	–	–	–
Abutilon fraseri subsp. fraseri	–	–	–	–	1% (1.5)	–	3% (1.5)	–
Abutilon lepidum	–	–	–	–	4% (1.5)	–	–	–
Abutilon macrum	–	–	–	–	–	–	–	–
Abutilon malvifolium	–	–	–	–	–	–	–	39% (1.5)
Abutilon otocarpum	4% (1.5)	–	–	–	1% (1.5)	–	–	6% (1.5)
Abutilon oxycarpum subsp. Prostrate (A.A. Mitchell PRP 1266)	–	–	–	–	–	–	–	–
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	4% (1.5)	–	–	–	5% (2.2)	–	5% (1.5)	–
Acacia acradenia	–	–	–	–	–	8% (7.4)	–	–
Acacia adoxa var. adoxa	–	–	67% (2.9)	–	1% (1.5)	–	–	–
Acacia adsurgens	4% (4.3)	–	33% (1.5)	–	4% (7.4)	3% (4.3)	3% (4.3)	–
Acacia ampliceps	–	–	–	75% (1.5)	–	–	29% (3.73)	–
Acacia ancistrocarpa	28% (3.4)	50% (1.5)	–	–	21% (4.09)	33% (3.38)	13% (3.74)	–
Acacia ancistrocarpa x monticola	–	17% (1.5)	–	–	–	–	–	–
Acacia aptaneura	8% (1.5)	–	–	–	6% (2.62)	15% (5.27)	5% (1.5)	–
Acacia arida	–	–	–	–	–	–	–	–
Acacia arrecta	–	–	–	–	6% (4.72)	–	–	–
Acacia ayersiana	–	–	–	–	–	–	–	–
Acacia bivenosa	48% (1.73)	17% (1.5)	33% (4.3)	25% (1.5)	67% (3.42)	33% (2.74)	24% (4.14)	6% (1.5)
Acacia catenulata subsp. occidentalis	–	–	–	–	–	–	–	–
Acacia colei var. colei	12% (1.5)	–	33% (1.5)	50% (1.5)	4% (2.43)	–	8% (3.37)	–
Acacia coriacea subsp. pendens	4% (1.5)	–	–	100% (3.6)	4% (1.5)	3% (1.5)	97% (6.97)	3% (1.5)
Acacia cyperophylla var. omearana	–	–	–	–	–	–	–	–
Acacia elachantha	4% (1.5)	–	–	–	–	–	–	–
Acacia eriopoda	12% (2.43)	–	33% (1.5)	–	1% (1.5)	–	5% (6.75)	–
Acacia inaequilatera	72% (3.48)	–	–	–	32% (3.8)	15% (4.65)	5% (5.35)	3% (1.5)
Acacia maitlandii	–	–	67% (10.35)	–	3% (2.9)	–	–	–
Acacia monticola	4% (1.5)	100% (62.98)	–	–	–	31% (6.01)	3% (1.5)	–
Acacia orthocarpa	4% (1.5)	–	100% (19.73)	–	1% (1.5)	–	–	–

Name	AiSgTb	AmTe	AoTe	EcAcCs	ElAbTl	ElGwTe	EvAcCc	VfAl
Acacia pruinocarpa	28% (3.4)	33% (1.5)	–	–	8% (2.43)	38% (4.39)	–	–
Acacia ptychophylla	8% (12.8)	–	–	–	5% (10.88)	10% (5.52)	–	–
Acacia pyrifolia var. morrisonii	–	–	–	–	–	–	–	–
Acacia pyrifolia var. pyrifolia	–	17% (1.5)	–	75% (1.5)	9% (2.7)	3% (1.5)	76% (3.55)	6% (1.5)
Acacia sclerosperma subsp. sclerosperma	–	–	–	–	3% (1.5)	–	3% (1.5)	–
Acacia sibirica	–	–	–	–	4% (2.43)	3% (4.3)	–	–
Acacia spondylophylla	–	–	–	–	1% (1.5)	–	–	–
Acacia synchronicia	24% (1.97)	–	–	–	32% (3.19)	–	8% (2.43)	42% (2.57)
Acacia tenuissima	–	–	–	–	9% (4.83)	3% (1.5)	3% (4.3)	–
Acacia tetragonophylla	4% (1.5)	17% (1.5)	–	–	9% (1.5)	–	11% (2.9)	6% (2.9)
Acacia trachycarpa	–	17% (1.5)	–	100% (2.2)	1% (1.5)	3% (1.5)	39% (4.72)	–
Acacia tumida var. pilbarensis	4% (1.5)	–	33% (1.5)	–	4% (3.37)	8% (9.03)	26% (8.19)	–
Achyranthes aspera	4% (1.5)	–	–	25% (1.5)	–	–	21% (2.81)	–
Adriana tomentosa var. tomentosa	–	–	–	–	–	–	3% (1.5)	–
Aerva javanica	–	–	–	25% (1.5)	3% (1.5)	3% (1.5)	26% (1.78)	6% (1.5)
Afrohybanthus aurantiacus	16% (1.5)	33% (1.5)	–	–	14% (1.5)	10% (1.5)	45% (1.5)	6% (1.5)
Alternanthera denticulata var. denticulata	–	–	–	50% (1.5)	–	–	21% (1.5)	–
Alternanthera nana	12% (1.5)	17% (1.5)	–	–	–	–	53% (1.78)	–
Alternanthera nodiflora	–	–	–	–	–	–	3% (9.2)	–
Alysicarpus muelleri	4% (1.5)	–	–	–	3% (1.5)	–	16% (1.5)	14% (1.5)
Amaranthus cuspidifolius	4% (1.5)	–	–	–	–	–	3% (1.5)	–
Amaranthus undulatus	4% (1.5)	–	–	50% (1.5)	–	–	37% (1.5)	–
Ammannia baccifera	–	–	–	25% (1.5)	–	–	16% (2.9)	–
Ammannia multiflora	–	–	–	–	–	–	–	–
Amphipogon sericeus	12% (1.5)	–	–	–	1% (1.5)	33% (3.67)	–	–
Amyema ?sanguinea	–	–	–	–	–	–	5% (1.5)	–
Amyema preissii	–	–	–	–	1% (4.3)	–	–	–
Androcalva luteiflora	–	–	–	–	3% (2.9)	–	11% (2.2)	–
Anthobolus leptomerioides	–	–	–	–	3% (1.5)	–	–	–
Areocleome oxalidea	–	–	–	–	–	–	–	–
Argemone ochroleuca subsp. ochroleuca	–	–	–	50% (1.5)	–	–	21% (2.2)	–
Aristida burbidgeae	–	–	–	–	1% (1.5)	–	–	–
Aristida contorta	28% (1.5)	17% (1.5)	33% (1.5)	–	9% (2.3)	3% (1.5)	3% (1.5)	25% (5.43)
Aristida holathera var. holathera	–	–	–	25% (1.5)	–	3% (1.5)	–	3% (1.5)
Aristida inaequiglumis	8% (1.5)	–	–	–	–	–	–	3% (4.3)
Aristida latifolia	–	–	–	–	4% (1.5)	3% (1.5)	–	75% (7.74)
Arivela uncifera	–	–	–	–	–	–	–	–
Arivela viscosa	36% (1.5)	–	–	100% (1.5)	13% (2.62)	–	50% (2.35)	92% (3.16)
Astrebla elymoides	–	–	–	–	–	–	–	6% (1.5)
Astrebla pectinata	–	–	–	–	–	–	–	6% (2.9)
Atalaya hemiglauca	4% (4.3)	–	–	75% (2.43)	3% (1.5)	3% (4.3)	71% (4.46)	6% (2.9)
Austrobryonia pilbarensis	–	–	–	–	–	–	–	44% (1.5)
Basilicum polystachyon	–	–	–	–	–	–	5% (1.5)	–
Bergia pedicellaris	–	–	–	–	–	–	5% (1.5)	–
Bergia trimera	–	–	–	–	–	–	5% (1.5)	–
Bidens bipinnata	8% (1.5)	–	–	–	–	–	–	–
Blumea tenella	–	–	–	–	–	–	3% (1.5)	–
Boerhavia burbidgeana	4% (1.5)	–	–	–	–	–	37% (1.7)	17% (1.97)
Boerhavia coccinea	12% (1.5)	–	–	50% (1.5)	5% (2.2)	–	45% (1.92)	31% (2.01)
Boerhavia gardneri	4% (1.5)	–	–	–	4% (2.43)	–	5% (2.9)	22% (2.2)
Boerhavia paludosa	–	–	–	–	1% (1.5)	–	–	42% (2.06)
Boerhavia schomburgkiana	–	–	–	–	–	–	–	11% (1.5)
Bonamia erecta	–	17% (1.5)	–	–	–	–	–	–
Bonamia media	–	–	–	25% (1.5)	–	–	–	–
Bonamia pannosa	–	–	–	–	–	–	3% (1.5)	–

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Bonamia pilbarensis	60% (1.5)	50% (1.5)	33% (1.5)	25% (1.5)	21% (1.5)	44% (1.5)	11% (1.5)	17% (1.5)
Bothriochloa ewartiana	–	–	–	–	1% (4.3)	–	5% (2.9)	3% (1.5)
Bulbostylis barbata	20% (1.5)	–	–	75% (1.5)	1% (1.5)	–	3% (1.5)	11% (1.5)
Bulbostylis burbidgeae	–	–	–	–	–	–	–	–
Bulbostylis turbinata	–	–	33% (4.3)	–	4% (3.37)	–	3% (1.5)	17% (1.97)
Calandrinia ?stagnensis	–	–	–	–	–	–	–	–
Calandrinia balonensis	–	–	–	25% (1.5)	–	–	–	–
Calocephalus knappii	–	–	–	–	–	–	–	–
Calotropis procera	–	–	–	–	–	–	3% (1.5)	–
Capparis lasiantha	4% (1.5)	17% (1.5)	–	–	4% (1.5)	3% (1.5)	5% (1.5)	–
Capparis spinosa subsp. nummularia	8% (1.5)	–	–	–	3% (1.5)	3% (1.5)	3% (1.5)	8% (1.5)
Capparis umbonata	12% (1.5)	33% (1.5)	–	–	23% (1.97)	10% (1.5)	11% (2.9)	–
Carissa lanceolata	4% (1.5)	–	–	–	–	–	3% (1.5)	3% (1.5)
Cassytha capillaris	–	–	33% (4.3)	25% (1.5)	5% (3.6)	–	–	–
Cathetus exilis	–	–	–	25% (1.5)	–	–	3% (1.5)	–
Cenchrus ciliaris	16% (1.5)	–	–	50% (4.3)	10% (1.85)	–	95% (22.93)	14% (2.06)
Cenchrus setiger	–	17% (1.5)	–	100% (22.15)	12% (1.5)	–	84% (16.97)	11% (1.5)
Centipeda minima subsp. macrocephala	–	–	–	50% (1.5)	–	–	13% (3.04)	3% (1.5)
Cheilanthes brownii	–	–	–	–	–	–	–	–
Cheilanthes sieberi subsp. sieberi	4% (1.5)	–	–	25% (1.5)	1% (1.5)	–	5% (1.5)	–
Chenopodium murale	–	–	–	–	–	–	3% (1.5)	–
Chloris pectinata	–	–	–	–	–	–	3% (4.3)	25% (4.14)
Chrysopogon fallax	–	–	–	25% (1.5)	1% (1.5)	–	5% (1.5)	3% (1.5)
Citrullus amarus	–	–	–	–	–	–	–	3% (1.5)
Citrullus colocynthis	–	–	–	–	–	–	5% (1.5)	3% (1.5)
Clerodendrum floribundum var. angustifolium	8% (2.9)	–	–	–	–	–	–	–
Clerodendrum tomentosum var. lanceolatum	–	17% (1.5)	–	–	–	–	–	–
Commelina ensifolia	–	–	–	–	–	–	–	3% (1.5)
Commicarpus australis	–	–	–	–	–	–	–	3% (1.5)
Corchorus incanus	4% (4.3)	–	–	–	4% (2.43)	–	11% (1.5)	–
Corchorus lasiocarpus subsp. lasiocarpus	4% (1.5)	–	–	–	3% (1.5)	3% (1.5)	8% (1.5)	3% (1.5)
Corchorus lasiocarpus subsp. parvus	8% (1.5)	–	–	–	–	15% (1.97)	5% (1.5)	–
Corchorus parviflorus	28% (2.3)	17% (1.5)	–	50% (1.5)	45% (2.42)	8% (2.43)	42% (1.85)	31% (1.5)
Corchorus sidoides subsp. vermicularis	–	–	–	–	–	–	–	–
Corchorus sp. Yarrie (J. Bull & D. Roberts CAL 01.05)	–	–	–	–	–	–	–	–
Corchorus tridens	–	–	–	25% (1.5)	4% (1.5)	–	13% (3.04)	31% (1.75)
Corchorus trilocularis	–	–	–	–	–	–	–	31% (1.5)
Corchorus walcottii	–	–	–	–	1% (1.5)	–	–	–
Corymbia ?ferriticola	–	–	–	–	–	–	3% (4.3)	–
Corymbia candida subsp. candida	–	–	–	–	–	–	–	–
Corymbia hamersleyana	36% (2.43)	33% (2.9)	67% (2.9)	–	36% (4.66)	33% (2.74)	21% (10.41)	–
Crotalaria cunninghamii subsp. cunninghamii	–	–	–	75% (1.5)	–	–	–	–
Crotalaria cunninghamii subsp. sturtii	–	–	–	–	–	–	3% (1.5)	–
Crotalaria dissitiflora subsp. benthamiana	–	–	–	–	–	–	–	25% (3.52)
Crotalaria medicaginea var. neglecta	–	–	–	25% (1.5)	1% (1.5)	–	42% (1.5)	75% (2.2)
Cucumis melo	–	–	–	–	–	–	3% (1.5)	25% (1.5)
Cucumis myriocarpus subsp. myriocarpus	–	–	–	–	–	–	–	8% (1.5)
Cucumis variabilis	20% (1.5)	–	–	100% (1.5)	5% (1.5)	3% (1.5)	45% (1.5)	14% (1.5)
Cullen ?lachnostachys	4% (1.5)	–	–	–	–	–	–	–
Cullen graveolens	–	–	–	–	–	–	–	28% (3.83)
Cullen leucanthum	–	–	–	25% (1.5)	–	–	37% (1.5)	–
Cullen leucochaites	–	–	–	–	–	–	3% (1.5)	–
Cullen pustulatum	–	–	–	–	–	–	–	–
Cymbopogon ambiguus	64% (1.85)	33% (1.5)	–	–	13% (1.5)	23% (1.5)	50% (2.53)	14% (5.04)
Cymbopogon obtectus	–	17% (1.5)	–	–	1% (1.5)	–	–	–

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Cynanchum floribundum	–	–	–	25% (1.5)	–	–	–	–
Cynanchum viminale	–	–	–	–	–	–	–	–
Cynodon convergens	–	–	–	–	1% (1.5)	–	–	64% (5.58)
Cynodon dactylon	–	–	–	–	–	–	13% (5.7)	–
Cynodon prostratus	–	–	–	–	–	–	–	3% (1.5)
Cyperus bifax	–	–	–	–	–	–	3% (1.5)	–
Cyperus cunninghamii subsp. cunninghamii	–	–	–	–	–	–	–	–
Cyperus difformis	–	–	–	25% (1.5)	–	–	8% (2.43)	–
Cyperus hesperius	–	–	–	–	–	–	–	–
Cyperus iria	–	–	–	–	–	–	3% (4.3)	6% (1.5)
Cyperus ixiocarpus	–	–	–	25% (1.5)	–	–	–	–
Cyperus squarrosus	–	–	–	–	–	–	–	–
Cyperus vaginatus	–	–	–	75% (1.5)	–	–	87% (5.61)	–
Dactyloctenium radulans	–	–	–	50% (1.5)	1% (1.5)	–	24% (1.81)	14% (1.5)
Dampiera candicans	8% (1.5)	–	–	25% (1.5)	3% (1.5)	44% (2.78)	–	–
Dendrophyllanthus erwinii	–	–	–	–	1% (1.5)	–	–	–
Desmodiopsis campylocaulon	–	–	–	–	1% (1.5)	–	–	31% (1.5)
Dichanthium sericeum subsp. humilius	–	–	–	–	3% (1.5)	–	16% (2.43)	33% (1.73)
Dicladanthera forrestii	–	–	–	–	–	–	–	–
Digitaria brownii	–	–	–	–	–	–	–	–
Digitaria ctenantha	4% (1.5)	–	–	–	–	–	3% (1.5)	–
Diplachne fusca subsp. muelleri	–	–	–	–	–	–	5% (1.5)	–
Dodonaea coriacea	12% (1.5)	17% (1.5)	–	–	8% (1.97)	28% (2.01)	–	–
Dodonaea lanceolata var. lanceolata	–	–	–	–	–	–	3% (1.5)	–
Dodonaea petiolaris	8% (1.5)	–	–	–	–	–	–	–
Dolichocarpa crouchiana	4% (1.5)	–	–	–	1% (1.5)	–	–	56% (1.64)
Dolichocarpa sp. Hamersley Station (A.A. Mitchell PRP 1479)	–	–	–	–	–	–	–	33% (1.5)
Duperreya commixta	8% (1.5)	17% (1.5)	–	–	3% (1.5)	3% (1.5)	11% (1.5)	–
Dysphania kalpari	–	–	–	25% (1.5)	–	–	–	–
Dysphania melanocarpa forma melanocarpa	–	–	–	–	–	–	–	–
Dysphania rhadinostachya subsp. rhadinostachya	4% (1.5)	–	–	25% (1.5)	–	–	5% (1.5)	3% (1.5)
Dysphania sphaerosperma	–	–	–	–	1% (1.5)	–	–	–
Echinochloa colona	–	–	–	25% (1.5)	–	–	18% (2.7)	–
Ehretia saligna var. saligna	–	–	–	–	1% (1.5)	–	5% (1.5)	–
Enchylaena tomentosa var. tomentosa	–	–	–	–	8% (1.5)	–	–	–
Enneapogon caerulescens	24% (1.5)	17% (1.5)	33% (1.5)	25% (1.5)	14% (1.75)	3% (1.5)	18% (1.5)	47% (2.32)
Enneapogon lindleyanus	–	–	–	–	–	–	5% (2.9)	–
Enneapogon polyphyllus	32% (2.46)	–	–	–	6% (1.5)	5% (1.5)	8% (1.5)	25% (3.06)
Enteropogon ramosus	–	–	–	–	–	–	3% (1.5)	–
Eragrostis cumingii	–	–	–	50% (1.5)	–	–	13% (2.62)	–
Eragrostis desertorum	–	–	–	–	8% (3.98)	–	–	8% (3.37)
Eragrostis dielsii	–	–	–	–	–	–	3% (1.5)	–
Eragrostis eriopoda	–	–	–	25% (1.5)	5% (1.5)	3% (1.5)	–	–
Eragrostis exigua	–	–	–	–	–	–	8% (2.43)	–
Eragrostis leptocarpa	–	–	–	–	–	–	16% (1.5)	6% (1.5)
Eragrostis setifolia	–	–	–	–	–	–	–	3% (1.5)
Eragrostis tenellula	–	–	–	25% (1.5)	3% (1.5)	–	24% (2.12)	25% (1.81)
Eragrostis xerophila	–	–	–	–	–	–	–	28% (3.11)
Eremophila cuneifolia	–	–	–	–	1% (1.5)	–	–	–
Eremophila exilifolia	–	–	–	–	1% (4.3)	–	–	–
Eremophila forrestii subsp. forrestii	4% (1.5)	–	–	–	1% (1.5)	–	–	3% (1.5)
Eremophila latrobei subsp. filiformis	–	–	–	–	–	–	–	–
Eremophila latrobei subsp. glabra	4% (9.2)	–	–	–	–	–	–	–
Eremophila latrobei subsp. latrobei	8% (2.9)	–	–	–	–	–	–	–
Eremophila longifolia	12% (2.43)	–	–	–	8% (1.97)	–	8% (2.43)	3% (1.5)

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Eriachne aristidea	–	–	–	25% (1.5)	–	–	–	–
Eriachne benthamii	–	–	–	–	–	–	3% (1.5)	6% (8.95)
Eriachne ciliata	–	17% (1.5)	–	–	3% (1.5)	5% (1.5)	3% (1.5)	–
Eriachne flaccida	–	–	–	–	1% (1.5)	–	–	3% (16.4)
Eriachne lanata	4% (4.3)	–	–	–	13% (2.9)	56% (6.07)	–	–
Eriachne mucronata	44% (3.03)	50% (1.5)	–	–	23% (2.59)	49% (2.53)	13% (2.06)	58% (10.04)
Eriachne obtusa	8% (5.35)	33% (1.5)	–	–	1% (1.5)	8% (2.43)	–	–
Eriachne pulchella subsp. dominii	–	–	–	–	4% (1.5)	–	–	3% (1.5)
Eriachne pulchella subsp. pulchella	4% (1.5)	–	–	–	1% (1.5)	–	–	3% (1.5)
Eriachne tenuiculmis	–	–	–	–	–	–	29% (3.47)	–
Erythrina vespertilio	–	–	–	–	–	–	5% (1.5)	–
Eucalyptus camaldulensis subsp. refulgens	–	–	–	75% (13.3)	–	–	53% (10.38)	–
Eucalyptus leucophloia subsp. leucophloia	4% (1.5)	17% (1.5)	–	–	50% (6.8)	59% (5.15)	3% (9.2)	–
Eucalyptus socialis subsp. eucentrica	–	–	–	–	3% (9.2)	–	–	–
Eucalyptus victrix	–	–	–	25% (9.2)	1% (9.2)	–	92% (14.77)	–
Eucalyptus xerothermica	–	–	–	–	1% (4.3)	–	–	–
Eulalia aurea	–	–	–	50% (2.9)	–	–	3% (1.5)	–
Euphorbia australis var. hispidula	–	–	–	–	–	–	3% (1.5)	–
Euphorbia australis var. subtomentosa	–	–	–	100% (1.5)	12% (1.5)	–	61% (1.62)	11% (1.5)
Euphorbia biconvexa	–	–	–	–	5% (2.2)	3% (1.5)	32% (1.73)	8% (2.43)
Euphorbia boophthona	–	–	–	–	–	–	–	11% (1.5)
Euphorbia careyi	16% (2.2)	–	–	–	6% (2.06)	3% (4.3)	8% (1.5)	–
Euphorbia hirta	–	–	–	–	–	–	8% (1.5)	–
Euphorbia inappendiculata var. inappendiculata	–	–	–	–	1% (1.5)	–	–	–
Euphorbia inappendiculata var. queenslandica	–	–	–	–	–	–	–	36% (1.5)
Euphorbia stevenii	–	–	–	–	–	–	–	3% (1.5)
Euphorbia tannensis subsp. eremophila	4% (1.5)	–	–	–	–	–	–	3% (1.5)
Euphorbia trigonosperma	4% (1.5)	–	–	50% (1.5)	1% (1.5)	–	29% (1.5)	8% (1.5)
Euphorbia vaccaria var. vaccaria	–	–	–	–	1% (1.5)	–	–	3% (1.5)
Euploca chrysocarpa	4% (1.5)	–	–	–	24% (1.79)	–	–	–
Euploca conocarpa	–	–	–	–	–	–	–	14% (1.5)
Euploca cunninghamii	8% (1.5)	–	–	–	1% (1.5)	–	–	14% (2.06)
Euploca heterantha	4% (1.5)	–	–	–	3% (1.5)	–	–	3% (1.5)
Euploca pachyphylla	–	–	–	25% (1.5)	1% (1.5)	–	–	–
Euploca tanythrix	–	–	–	–	–	–	–	22% (1.85)
Evolvulus alsinoides var. decumbens	–	17% (1.5)	–	75% (1.5)	3% (1.5)	–	21% (1.5)	–
Evolvulus alsinoides var. villosicalyx	32% (1.85)	17% (1.5)	–	–	13% (1.5)	5% (1.5)	34% (1.5)	31% (1.5)
Ficus brachypoda	4% (1.5)	–	–	–	–	–	3% (1.5)	–
Fimbristylis depauperata	–	–	–	50% (1.5)	–	–	–	–
Fimbristylis dichotoma	24% (1.97)	–	–	–	5% (1.5)	3% (1.5)	–	11% (5.22)
Fimbristylis microcarya	–	–	–	–	–	–	5% (1.5)	–
Fimbristylis simulans	–	–	–	–	3% (8.95)	3% (1.5)	–	–
Flaveria trinervia	–	–	–	–	–	–	–	–
Flueggea virosa subsp. melanthesoides	–	–	–	–	–	–	32% (2.2)	–
Glycine canescens	–	–	–	–	–	–	18% (1.5)	–
Gomphrena affinis subsp. pilbarensis	–	–	–	–	–	–	–	3% (1.5)
Gomphrena canescens subsp. canescens	–	–	–	–	–	–	–	–
Gomphrena cunninghamii	24% (1.5)	–	–	–	–	–	5% (1.5)	14% (1.5)
Gomphrena kanisii	8% (1.5)	–	–	–	–	3% (1.5)	–	–
Gomphrena leptoclada subsp. leptoclada	–	–	–	–	–	–	–	–
Gonocarpus ephemerus	–	–	–	–	–	–	–	–
Goodenia ?tenuiloba	–	–	–	–	–	–	3% (1.5)	–
Goodenia cusackiana	12% (1.5)	–	–	–	18% (2.45)	13% (2.06)	–	–
Goodenia forrestii	–	–	–	–	–	–	–	–
Goodenia lamprosperma	–	–	–	25% (1.5)	–	–	–	–

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Goodenia microptera	8% (1.5)	–	–	–	10% (1.5)	–	8% (1.5)	–
Goodenia muelleriana	–	–	–	–	5% (1.5)	–	–	47% (1.5)
Goodenia prostrata	–	–	–	–	–	–	–	–
Goodenia stobbsiana	20% (2.06)	67% (1.5)	–	25% (1.5)	23% (1.81)	46% (2.55)	–	–
Goodenia triodiophila	–	–	–	–	–	3% (1.5)	–	–
Gossypium australe	32% (1.85)	–	–	–	5% (1.5)	5% (2.9)	34% (2.15)	3% (1.5)
Gossypium robinsonii	–	–	–	50% (1.5)	1% (1.5)	–	11% (3.6)	–
Grevillea berryana	–	–	–	–	–	–	–	–
Grevillea pyramidalis subsp. leucadendron	12% (3.37)	–	–	–	3% (1.5)	3% (9.2)	8% (1.5)	–
Grevillea wickhamii subsp. aprica	20% (5.14)	–	100% (2.43)	–	3% (2.9)	28% (4.62)	18% (3.1)	–
Grevillea wickhamii subsp. hispidula	16% (1.5)	83% (22.02)	–	50% (1.5)	3% (1.5)	23% (4.77)	5% (1.5)	–
Grona ?filiformis	–	–	–	–	–	–	–	6% (1.5)
Grona muelleri	–	–	–	–	–	–	–	56% (3.08)
Hakea chordophylla	4% (1.5)	–	–	–	1% (1.5)	–	–	–
Hakea lorea subsp. lorea	48% (1.97)	17% (1.5)	–	–	24% (2.24)	15% (1.97)	5% (1.5)	6% (1.5)
Haloragis trigonocarpa	–	–	–	–	1% (1.5)	–	–	–
Heliotropium crispatum	–	–	–	25% (1.5)	–	–	–	67% (2.56)
Hibiscus austrinus var. austrinus	–	–	–	25% (1.5)	–	–	–	–
Hibiscus brachysiphonius	–	–	–	–	–	–	–	56% (2.44)
Hibiscus burtonii	4% (1.5)	–	–	–	3% (1.5)	–	–	6% (2.9)
Hibiscus coatesii	20% (1.5)	33% (1.5)	–	–	6% (1.5)	3% (1.5)	3% (1.5)	–
Hibiscus sturtii var. campylochlamys	12% (1.5)	33% (1.5)	–	–	18% (1.5)	3% (1.5)	3% (1.5)	3% (1.5)
Hibiscus sturtii var. grandiflorus	8% (1.5)	–	–	–	–	–	–	–
Hibiscus sturtii var. platychlamys	–	17% (1.5)	–	–	4% (1.5)	–	3% (1.5)	11% (1.5)
Hibiscus verdcourtii	–	–	–	–	–	–	–	6% (1.5)
Indigofera colutea	4% (1.5)	–	–	25% (1.5)	1% (1.5)	–	13% (1.5)	17% (1.5)
Indigofera deserticola	–	–	–	–	1% (4.3)	–	–	–
Indigofera linifolia	–	–	–	25% (1.5)	3% (1.5)	–	39% (1.5)	33% (2.38)
Indigofera linnaei	–	–	–	25% (1.5)	3% (1.5)	–	11% (1.5)	–
Indigofera monophylla	36% (2.36)	67% (2.9)	–	25% (4.3)	38% (2.53)	23% (2.12)	32% (1.97)	–
Indigofera rugosa	–	–	–	–	–	–	–	–
Indigofera trita subsp. trita	4% (1.5)	–	–	–	4% (1.5)	–	26% (1.5)	44% (2.38)
Iotasperma sessilifolium	–	–	–	–	–	–	–	–
Ipomoea lonchophylla	–	–	–	–	–	–	–	14% (2.06)
Ipomoea muelleri	–	–	–	100% (1.5)	–	–	55% (1.5)	28% (1.78)
Ipomoea plebeia	–	–	–	–	–	–	13% (1.5)	–
Ipomoea polymorpha	–	–	–	25% (1.5)	–	–	11% (1.5)	11% (1.5)
Ipomoea racemigera	–	–	–	–	–	–	8% (1.5)	–
Ischaemum albovillosum	–	–	–	–	–	–	–	3% (1.5)
Iseilema dolichotrichum	–	–	–	–	1% (1.5)	–	–	–
Iseilema eremaeum	–	–	–	–	–	–	–	–
Iseilema membranaceum	–	–	–	–	–	–	–	6% (1.5)
Iseilema vaginiflorum	4% (1.5)	–	–	–	–	–	–	47% (5.39)
Isotropis atropurpurea	–	–	–	–	–	–	–	–
Jasminum didymum subsp. lineare	4% (1.5)	–	–	–	1% (1.5)	3% (1.5)	8% (1.5)	–
Josephinia eugeniae	–	–	–	–	–	–	–	14% (2.06)
Leiocarpa semicalva subsp. semicalva	–	–	–	–	–	–	–	–
Lepidium muelleri-ferdinandi	–	–	–	–	–	–	3% (1.5)	–
Lepidium pedicellosum	–	–	–	–	1% (1.5)	–	–	–
Lobelia arnhemiaca	–	–	–	–	–	–	5% (1.5)	–
Lotus cruentus	–	–	–	–	–	–	–	3% (1.5)
Ludwigia perennis	–	–	–	–	–	–	3% (1.5)	–
Maireana georgei	4% (1.5)	–	–	–	4% (1.5)	–	–	–
Maireana melanocoma	–	–	–	–	1% (1.5)	–	–	–
Maireana planifolia	–	–	–	–	–	–	–	–

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Maireana villosa	8% (1.5)	–	–	–	–	–	–	–
Malvastrum americanum	4% (1.5)	–	–	25% (1.5)	4% (1.5)	–	50% (1.65)	39% (1.5)
Marsilea exarata	–	–	–	–	–	–	18% (2.6)	–
Marsilea hirsuta	–	–	–	–	–	–	–	6% (1.5)
Melaleuca argentea	–	–	–	50% (5.35)	–	–	–	–
Melaleuca bracteata	–	–	–	–	–	–	21% (7.3)	–
Melaleuca eleuterostachya	–	–	–	–	1% (16.4)	–	–	–
Melaleuca glomerata	–	–	–	50% (8.95)	–	–	58% (8.06)	–
Melaleuca linophylla	–	–	–	50% (4.3)	–	–	39% (8.49)	–
Melhania oblongifolia	–	–	–	–	1% (1.5)	–	3% (1.5)	3% (1.5)
Minuria integerrima	–	–	–	–	1% (1.5)	–	–	8% (1.5)
Najas sp.	–	–	–	–	–	–	3% (1.5)	–
Nellica maderaspatensis	–	–	–	–	5% (1.5)	–	53% (1.5)	75% (1.5)
Neptunia dimorphantha	–	–	–	–	1% (1.5)	–	–	22% (2.46)
Neptunia longipila	–	–	–	–	–	–	–	22% (2.81)
Neptunia xanthonema	–	–	–	–	–	–	3% (1.5)	11% (2.2)
Nicotiana benthamiana	8% (1.5)	–	–	–	–	–	–	–
Nicotiana obliqua/occidentalis	–	–	–	–	–	–	11% (1.5)	–
Nicotiana umbratica	4% (1.5)	–	–	–	–	–	–	–
Notoleptopus decaisnei	–	–	–	–	–	–	18% (1.5)	–
Olearia aff. fluvialis	–	–	–	25% (1.5)	–	–	–	–
Operculina aequisepala	–	–	–	–	–	–	3% (1.5)	58% (2.95)
Panicum australiense var. australiense	–	–	–	–	–	–	–	–
Panicum decompositum	–	–	–	–	–	–	5% (1.5)	28% (4.09)
Panicum effusum	–	–	–	–	–	–	–	6% (1.5)
Panicum laevinode	–	–	–	–	–	–	–	8% (2.43)
Neurachne muelleri	28% (1.5)	50% (1.5)	33% (1.5)	–	21% (1.5)	15% (1.5)	8% (1.5)	–
Paspalidium basicladum	–	–	–	–	1% (1.5)	–	–	–
Paspalidium clementii	16% (1.5)	–	–	–	3% (1.5)	–	–	–
Paspalidium rarum	4% (1.5)	–	–	25% (1.5)	–	–	–	–
Paspalidium retiglume	–	–	–	–	–	–	–	14% (1.5)
Pentalepis trichodesmoides subsp. trichodesmoides	–	–	–	–	4% (2.43)	–	3% (1.5)	–
Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)	–	–	–	–	–	–	3% (1.5)	–
Peripleura virgata	–	–	–	–	–	–	–	–
Perotis rara	4% (1.5)	–	–	50% (1.5)	–	–	–	–
Petalostylis labicheoides	–	–	–	50% (1.5)	4% (4.3)	3% (1.5)	5% (1.5)	–
Pluchea dentex	–	–	–	25% (1.5)	–	–	3% (1.5)	–
Pluchea ferdinandi-muelleri	12% (1.5)	–	–	25% (1.5)	8% (1.97)	–	3% (1.5)	–
Pluchea rubelliflora	–	–	–	25% (1.5)	–	–	18% (3.1)	–
Pluchea tetranthera	16% (1.5)	–	–	–	12% (1.5)	–	3% (1.5)	3% (1.5)
Plumbago zeylanica	–	–	–	25% (1.5)	–	–	8% (1.5)	–
Polycarpaea corymbosa var. corymbosa	4% (1.5)	–	–	25% (1.5)	–	–	–	–
Polycarpaea holtzei	–	–	–	25% (1.5)	–	–	–	–
Polycarpaea involucrata	8% (1.5)	–	–	–	–	–	–	–
Polycarpaea longiflora	4% (1.5)	–	–	–	–	–	5% (1.5)	–
Polygala glaucifolia	–	–	–	–	–	–	–	6% (1.5)
Polymeria ?mollis	–	–	–	–	–	–	–	–
Polymeria ambigua	–	–	–	75% (1.5)	4% (1.5)	–	16% (1.5)	–
Polymeria calycina	–	–	–	–	–	–	13% (1.5)	–
Portulaca conspicua	4% (1.5)	–	–	–	–	–	–	–
Portulaca cyclophylla	–	–	33% (1.5)	–	4% (2.43)	3% (1.5)	3% (1.5)	–
Portulaca filifolia	–	–	–	–	–	–	–	3% (1.5)
Portulaca oleracea	4% (1.5)	–	–	–	–	–	29% (1.75)	53% (1.5)
Potamogeton tepperi	–	–	–	–	–	–	8% (2.43)	–
Pseudognaphalium luteoalbum	–	–	–	25% (1.5)	–	–	–	–

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Psydrax latifolia	–	–	–	–	–	–	–	–
Psydrax suaveolens	–	–	–	–	1% (1.5)	–	–	–
Pterocaulon serrulatum var. velutinum	–	–	–	–	1% (1.5)	–	–	3% (1.5)
Pterocaulon sphacelatum	4% (1.5)	–	–	–	1% (1.5)	–	3% (1.5)	6% (1.5)
Ptilotus aervoides	–	–	–	–	4% (1.5)	–	–	22% (2.81)
Ptilotus astrolasius	–	–	–	–	12% (2.12)	8% (2.43)	–	–
Ptilotus auriculifolius	–	–	–	–	3% (1.5)	–	–	–
Ptilotus axillaris	–	–	–	–	1% (1.5)	–	–	3% (1.5)
Ptilotus calostachyus	36% (1.5)	50% (1.5)	–	–	23% (1.5)	69% (1.6)	–	–
Ptilotus carinatus	–	–	–	–	–	–	–	6% (2.9)
Ptilotus clementii	4% (1.5)	–	–	–	12% (2.36)	8% (1.5)	–	–
Ptilotus exaltatus	8% (1.5)	–	–	–	24% (1.65)	15% (1.5)	3% (1.5)	6% (1.5)
Ptilotus fusiformis	–	–	–	–	–	–	–	–
Ptilotus gaudichaudii	–	–	–	–	–	–	–	–
Ptilotus gomphrenoides	–	–	–	–	–	–	8% (1.5)	64% (2.39)
Ptilotus helipteroides	–	–	–	–	–	–	–	–
Ptilotus incanus	4% (1.5)	–	–	–	3% (1.5)	3% (1.5)	–	–
Ptilotus obovatus var. obovatus	12% (1.5)	17% (1.5)	–	–	1% (1.5)	–	–	–
Ptilotus polystachyus	–	–	–	–	–	–	–	–
Ptilotus rotundifolius	–	–	–	–	–	–	–	–
Ptilotus schwartzii	–	–	–	–	–	3% (1.5)	–	–
Rhagodia eremaea	–	–	–	–	–	–	–	–
Rhagodia sp. Hamersley (M.Trudgen 17794)	–	–	–	–	–	–	–	–
Rhodanthe margarethae	8% (1.5)	–	–	–	–	–	–	–
Rhynchosia minima	8% (2.9)	17% (1.5)	–	25% (1.5)	9% (1.9)	–	66% (1.92)	78% (2.48)
Rostellularia adscendens var. clementii	–	–	–	–	1% (1.5)	–	21% (1.85)	11% (2.9)
Rostellularia adscendens var. latifolia	4% (1.5)	–	–	–	–	–	–	–
Rotala diandra	–	–	–	–	–	–	3% (1.5)	–
Rutidosis helichrysoides subsp. helichrysoides	–	–	–	–	–	–	3% (1.5)	–
Salsola australis	12% (1.5)	–	–	–	15% (1.5)	3% (1.5)	11% (1.5)	8% (1.5)
Santalum lanceolatum	–	33% (1.5)	–	–	5% (4.12)	5% (5.35)	–	–
Scaevola amblyanthera var. centralis	4% (1.5)	–	–	–	14% (1.5)	–	13% (2.06)	–
Scaevola spinescens	–	–	–	–	5% (1.5)	–	–	–
Schizachyrium fragile	–	–	–	–	–	–	–	–
Schoenoplectus subulatus	–	–	–	–	–	–	5% (1.5)	–
Sclerolaena cornishiana	4% (1.5)	–	–	–	3% (1.5)	–	–	17% (1.5)
Sclerolaena costata	4% (1.5)	–	–	–	3% (1.5)	–	8% (1.5)	17% (1.97)
Sclerolaena densiflora	8% (1.5)	–	–	–	1% (4.3)	3% (1.5)	–	–
Sclerolaena eriacantha	–	–	–	–	3% (1.5)	–	–	–
Sclerolaena hostilis	–	–	–	–	–	–	–	–
Scleromitrion galioides	–	–	–	25% (1.5)	–	–	3% (1.5)	–
Senna ?hamersleyensis	–	–	–	–	1% (1.5)	–	–	14% (2.06)
Senna ?stricta	12% (3.37)	–	–	–	19% (2.99)	13% (2.06)	3% (4.3)	–
Senna artemisioides subsp. ×artemisioides	–	–	–	–	1% (1.5)	–	–	–
Senna artemisioides subsp. helmsii	8% (1.5)	–	–	–	6% (2.06)	–	–	19% (1.9)
Senna artemisioides subsp. helmsii x oligophylla	–	–	–	–	1% (1.5)	–	–	–
Senna artemisioides subsp. oligophylla	16% (1.5)	17% (1.5)	–	–	21% (2.38)	8% (2.43)	–	14% (1.5)
Senna glaucifolia	–	–	–	–	–	–	–	–
Senna glutinosa subsp. ×luerssenii	36% (1.5)	17% (1.5)	–	–	37% (2.73)	13% (3.04)	–	3% (1.5)
Senna glutinosa subsp. glutinosa	52% (1.93)	67% (1.5)	–	–	28% (2.26)	49% (2.09)	5% (1.5)	–
Senna glutinosa subsp. pruinosa	44% (2.26)	–	–	–	14% (2.71)	5% (1.5)	–	3% (1.5)
Senna notabilis	8% (1.5)	–	–	–	12% (1.5)	3% (1.5)	34% (1.5)	53% (1.65)
Senna sericea	–	–	–	–	10% (3.25)	3% (1.5)	–	–
Senna sp. Karijini (M.E.Trudgen 10392)	–	–	–	–	–	–	–	6% (1.5)
Senna sp. Meekatharra (E. Bailey 1-26)	4% (1.5)	–	–	–	–	–	–	3% (1.5)

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Senna symonii	12% (2.43)	17% (1.5)	–	–	54% (3.02)	28% (2.26)	–	–
Senna venusta	4% (1.5)	–	–	–	–	–	–	–
Seringia exastia	4% (1.5)	–	–	–	–	18% (1.5)	–	–
Seringia nephrosperma	–	–	–	–	–	–	–	–
Sesbania cannabina	–	–	–	50% (1.5)	–	–	32% (1.5)	–
Setaria verticillata	–	–	–	–	–	–	–	–
Sida ?sp. L (A.M. Ashby 4202)	–	–	–	–	3% (1.5)	–	–	3% (1.5)
Sida arenicola	4% (1.5)	–	–	–	–	10% (1.5)	–	–
Sida arsiniata	–	–	–	–	–	–	–	–
Sida brownii	–	–	–	–	–	–	–	–
Sida cardiophylla	–	33% (1.5)	–	–	1% (1.5)	–	–	–
Sida clementii	–	–	–	–	–	–	–	3% (1.5)
Sida echinocarpa	16% (1.5)	–	–	–	9% (1.5)	–	5% (1.5)	3% (1.5)
Sida ectogama	–	–	–	–	–	–	–	–
Sida fibulifera	4% (1.5)	17% (1.5)	–	–	9% (1.5)	–	8% (1.5)	50% (7.78)
Sida platycalyx	–	–	–	–	–	–	–	–
Sida rohlenae subsp. rohlenae	24% (1.5)	17% (1.5)	–	75% (1.5)	4% (1.5)	–	37% (1.7)	19% (1.5)
Sida sp. dark green fruits (S. van Leeuwen 2260)	4% (1.5)	–	–	–	1% (1.5)	–	–	–
Sida sp. Excedentifolia (J.L. Egan 1925)	4% (1.5)	17% (1.5)	–	–	–	–	–	–
Sida sp. Golden calyces glabrous (H.N. Foote 32)	–	–	–	–	1% (1.5)	3% (1.5)	–	–
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	24% (1.5)	–	–	–	6% (1.5)	31% (1.5)	3% (1.5)	–
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	–	–	–	–	1% (1.5)	–	3% (1.5)	–
Sida spinosa	–	–	–	–	–	–	11% (1.5)	33% (1.5)
Sida trichopoda	–	–	–	–	6% (1.5)	–	16% (1.5)	42% (5.7)
Solanum aff. esuriale	–	–	–	–	–	–	–	–
Solanum aff. horridum	4% (1.5)	–	–	–	3% (1.5)	–	–	8% (1.5)
Solanum chippendalei	–	–	–	25% (1.5)	–	–	–	–
Solanum cleistogamum	12% (1.5)	–	–	–	4% (1.5)	–	3% (1.5)	11% (1.5)
Solanum diversiflorum	–	–	–	75% (1.5)	1% (4.3)	–	3% (1.5)	–
Solanum elatius	4% (1.5)	17% (1.5)	–	–	6% (1.5)	–	–	–
Solanum gabrielae	–	–	–	–	–	–	–	–
Solanum horridum	16% (1.5)	–	–	–	14% (1.5)	8% (1.5)	11% (1.5)	50% (1.5)
Solanum lasiophyllum	12% (1.5)	17% (1.5)	–	–	15% (1.5)	10% (1.5)	–	67% (1.5)
Solanum nigrum	–	–	–	–	–	–	3% (1.5)	–
Solanum phlomoides	–	–	–	–	3% (1.5)	–	3% (1.5)	–
Sonchus oleraceus	–	–	–	–	–	–	5% (1.5)	–
Sporobolus actinocladus	–	–	–	–	1% (1.5)	–	3% (1.5)	–
Sporobolus australasicus	32% (1.5)	–	–	–	9% (1.5)	–	18% (1.5)	33% (1.5)
Stackhousia muricata subsp. annual (W.R. Barker 2172)	–	–	–	–	5% (1.5)	–	–	–
Stemodia grossa	4% (1.5)	–	–	–	–	–	26% (2.06)	–
Stemodia sp. Battle Hill (A.L. Payne 1006)	–	–	–	–	–	–	–	6% (1.5)
Stemodia viscosa	–	–	–	25% (1.5)	–	–	3% (1.5)	–
Streptoglossa adscendens	–	–	–	–	3% (1.5)	–	–	6% (1.5)
Streptoglossa bubakii	–	–	–	–	3% (1.5)	–	–	19% (2.3)
Streptoglossa decurrens	–	–	–	–	–	–	3% (1.5)	–
Streptoglossa liatroides	–	–	–	–	1% (1.5)	–	–	22% (1.5)
Streptoglossa odora	–	–	–	–	–	–	–	8% (1.5)
Striga ?squamigera	–	–	–	25% (1.5)	–	–	–	–
Swainsona decurrens	–	–	–	–	–	–	–	–
Swainsona kingii	–	–	–	25% (1.5)	–	–	–	–
Swainsona stenodonta	8% (1.5)	–	–	–	1% (1.5)	–	3% (1.5)	–
Swainsona thompsoniana	–	–	–	–	–	–	–	33% (1.5)
Synaptantha tillaeacea var. tillaeacea	–	–	–	–	–	–	–	–
Tephrosia densa	–	–	–	–	–	–	–	–
Tephrosia rosea var. clementii	4% (4.3)	–	–	–	1% (1.5)	–	5% (1.5)	–

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Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	–	–	–	–	–	–	8% (3.37)	–
Tephrosia sp. Bungaroo Creek (M.E. Trudgen 11601)	–	–	–	–	–	3% (1.5)	–	–
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	4% (1.5)	–	–	–	4% (1.5)	–	–	69% (1.61)
Tephrosia sp. Newman (A.A.Mitchell PRP 29)	–	–	–	–	–	–	–	–
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	16% (1.5)	–	–	–	5% (1.5)	5% (1.5)	–	–
Tephrosia supina	4% (1.5)	–	–	–	–	–	–	–
Tephrosia uniovulata	–	–	–	–	–	–	–	–
Teucrium teucriiflorum	–	–	–	–	–	–	–	–
Themeda triandra	20% (3.04)	–	–	25% (1.5)	4% (3.37)	3% (1.5)	26% (3.11)	–
Tinospora smilacina	4% (1.5)	–	–	–	–	–	–	–
Trachymene oleracea subsp. oleracea	–	–	–	50% (1.5)	–	–	–	–
Trianthema cusackianum	–	–	–	–	1% (1.5)	–	–	–
Trianthema glossostigmum	–	–	–	–	3% (1.5)	3% (1.5)	8% (2.43)	6% (1.5)
Trianthema portulacastrum	–	–	–	–	–	–	5% (1.5)	–
Trianthema triquetrum	4% (1.5)	–	–	–	4% (1.5)	–	24% (1.81)	14% (2.62)
Tribulopis angustifolia	–	–	–	–	–	–	–	–
Tribulus astrocarpus	–	–	–	–	–	–	–	–
Tribulus hirsutus	8% (1.5)	–	–	–	15% (1.73)	–	16% (1.5)	6% (1.5)
Tribulus suberosus	24% (1.5)	–	–	–	12% (2.74)	15% (2.43)	–	6% (1.5)
Tribulus terrestris	–	–	–	–	–	–	3% (4.3)	8% (1.5)
Trichodesma zeylanicum var. zeylanicum	8% (1.5)	–	–	–	1% (1.5)	–	–	6% (1.5)
Trigastrotheca molluginea	20% (1.5)	17% (1.5)	33% (1.5)	25% (1.5)	8% (1.5)	8% (1.5)	3% (1.5)	6% (1.5)
Triodia basedowii	–	–	–	–	–	3% (26.4)	–	–
Triodia brizoides	84% (19.46)	17% (9.2)	67% (17.8)	–	46% (20.19)	10% (9.82)	–	25% (5.08)
Triodia epactia	84% (18.61)	100% (19.88)	100% (25)	–	40% (10.75)	100% (27.86)	71% (6.09)	47% (7.11)
Triodia longiceps	16% (2.2)	–	67% (6.75)	100% (6.62)	65% (17.22)	8% (9.03)	63% (6.04)	17% (7.4)
Triodia scintillans	4% (39.4)	–	–	–	3% (20.45)	–	–	–
Triodia wiseana	–	–	–	–	51% (19.98)	5% (5.35)	3% (1.5)	3% (1.5)
Tripogonella loliiformis	8% (1.5)	–	–	–	3% (2.9)	–	–	6% (1.5)
Triumfetta chaetocarpa	–	–	–	50% (1.5)	1% (1.5)	–	–	–
Triumfetta clementii	–	–	–	–	–	–	–	–
Triumfetta maconochieana	4% (1.5)	–	–	–	–	3% (4.3)	–	–
Urochloa holosericea subsp. velutina	–	–	–	–	–	–	–	–
Urochloa occidentalis var. occidentalis	4% (1.5)	–	–	–	–	–	–	8% (2.43)
Vachellia farnesiana	8% (1.5)	–	–	25% (1.5)	9% (1.5)	–	79% (3.76)	86% (4.84)
Vigna lanceolata var. lanceolata	–	–	–	100% (1.5)	–	–	5% (1.5)	–
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	–	–	–	–	–	–	18% (1.5)	44% (1.68)
Vincetoxicum lineare	–	–	–	–	–	–	–	–
Wahlenbergia tumidifructa	–	–	–	75% (1.5)	–	–	3% (1.5)	–
Waltheria indica	–	–	–	–	–	–	3% (1.5)	–
Waltheria virgata	–	–	33% (1.5)	–	–	–	–	–
Zaleya galericulata subsp. galericulata	–	–	–	–	–	–	–	–
Zornia albiflora	–	–	–	–	–	–	–	–

[1]Values indicate the percentage of sampling sites within the vegetation type in which the taxon was recorded (constancy) and mean percent foliage cover across those sites (importance; in parentheses).

Appendix E Flora and vegetation sampling site data.

BD_E_001

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.9195, 119.97614				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	1 – 4
Senna symonii	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	1 – 4
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Euphorbia ?boophthona	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Minuria integerrima	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Pterocaulon sphacelatum	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Salsola australis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	1 – 4
Stemodia grossa	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (0.5-1 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

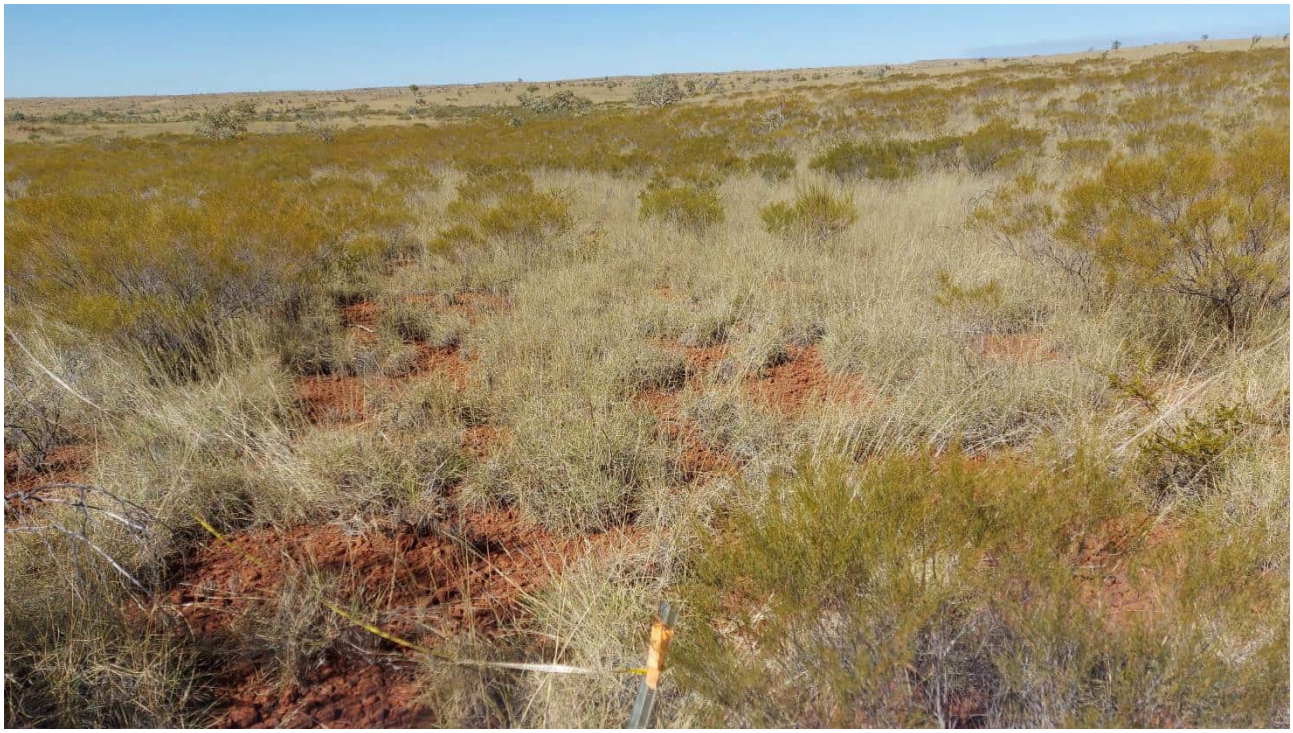
BD_E_002

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.92801, 119.86246				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Sida echinocarpa	Shrub (<0.5 m)	< 1
Malvastrum americanum	Herb (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Polycarpaea holtzei	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_003

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.93045, 119.84653				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Sandy clay loam		
Rock type	Dolerite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia colei var. *colei*	Shrub (>2 m)	Assoc.
Acacia eriopoda	Shrub (1-2 m)	< 1
Acacia maitlandii	Shrub (1-2 m)	10 – 24
Acacia orthocarpa	Shrub (1-2 m)	25 – 32
Grevillea wickhamii	Shrub (1-2 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_004

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.92855, 119.97433				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Clay loam		
Rock type	Quartz, ironstone, calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena densiflora	Herb (<0.5 m)	1 – 4
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_005

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.94435, 119.91938				
Landform	Plain (clay)	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	1 – 4
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Polygala glaucifolia	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	5 – 9
Chloris pectinata	Tussock Grass (<0.5 m)	5 – 9

Name	Stratum	Percent cover (%)
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	5 – 9
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	10 – 24
Panicum decompositum	Tussock Grass (<0.5 m)	5 – 9

BD_E_006

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.93856, 119.86586				
Landform	Major creek (5-30 m)	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Mixed river alluvium, calcrete	**Rock size**	Mixed	**Rock cover**	10 – 30%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Corymbia hamersleyana	Tree (<10 m)	25 – 32
Acacia ampliceps	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia pyrifolia	Shrub (1-2 m)	5 – 9
Atalaya hemiglauca	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	1 – 4
Corchorus incanus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Polymeria ?calycina	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_007

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.93936, 119.88496				
Landform	Plain (clay)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	1 – 4
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	1 – 4
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Euphorbia ?boophthona	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	1 – 4
Heliotropium crispatum	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	1 – 4
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	5 – 9
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Pterocaulon sphacelatum	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Rhynchosia minima	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	5 – 9
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	25 – 32
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	5 – 9
Panicum decompositum	Tussock Grass (<0.5 m)	5 – 9
Paspalidium retiglume	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Urochloa occidentalis var. *occidentalis*	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_008

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.93905, 119.97609				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Swainsona decurrens	Herb (<0.5 m)	< 1
Zaleya galericulata subsp. *galericulata*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	1 – 4
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Triodia brizoides	Hummock Grass (<0.5 m)	50 – 74
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_009

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.94348, 119.93301				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	< 1
Acacia synchronicia	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Austrobryonia pilbarensis	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Corchorus trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia boophthona	Herb (<0.5 m)	< 1
Euphorbia inappendiculata var. *queenslandica*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	1 – 4
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia xanthonema	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Operculina aequisepala	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Pterocaulon sphacelatum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	5 – 9
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Chrysopogon fallax	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	5 – 9
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eragrostis desertorum	Tussock Grass (<0.5 m)	1 – 4
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	33 – 49
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	10 – 24
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_010

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.95095, 119.91795				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Orange	**Soil texture**	Clay		
Rock type	Dolerite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	< 1
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	1 – 4
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia sp.	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	1 – 4
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Aristida latifolia	Tussock Grass (<0.5 m)	5 – 9

Name	Stratum	Percent cover (%)
Chloris pectinata	Tussock Grass (<0.5 m)	5 – 9
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	10 – 24
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_011

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.94346, 119.89337				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Sida spinosa	Herb (0.5-1 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	1 – 4
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Neptunia xanthonema	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Aristida latifolia	Tussock Grass (<0.5 m)	25 – 32
Cynodon convergens	Tussock Grass (<0.5 m)	5 – 9
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	25 – 32
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	5 – 9
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4

BD_E_012

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.95453, 119.93438				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	5 – 9
Acacia colei var. *colei*	Shrub (0.5-1 m)	< 1
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24

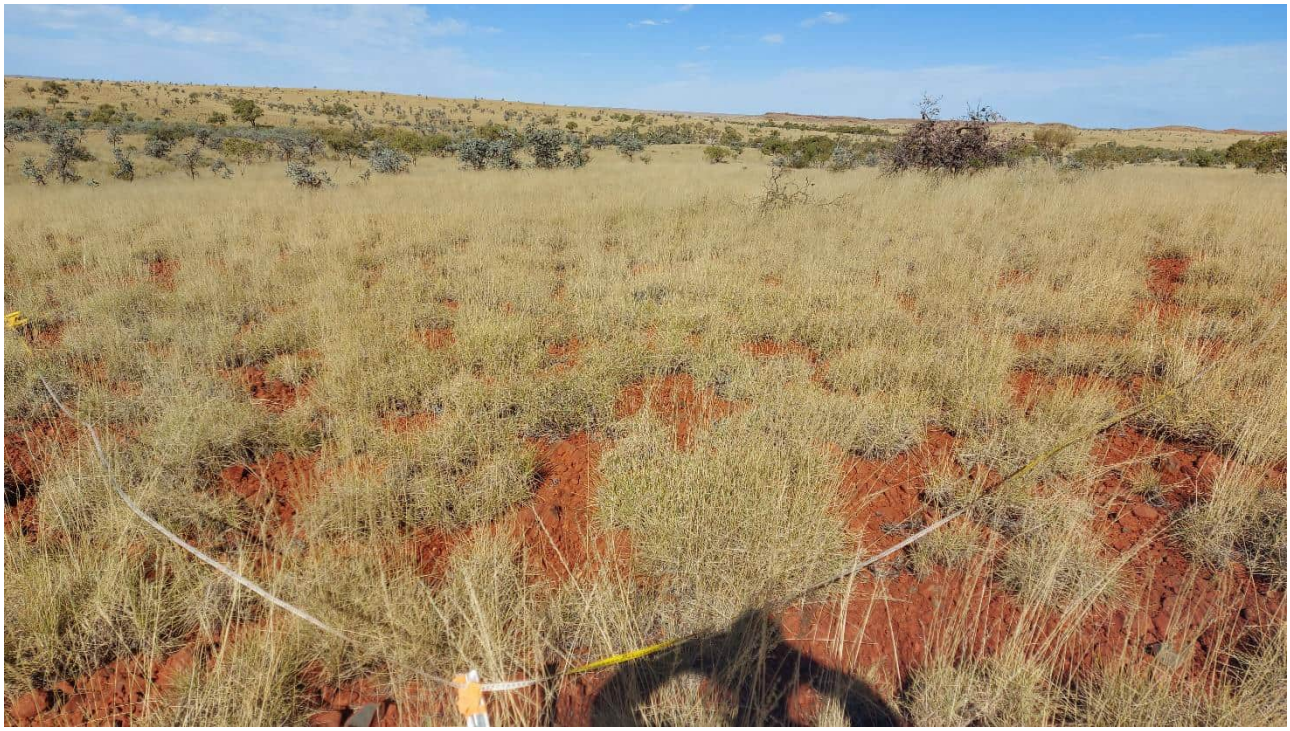
BD_E_013

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.95592, 119.94736				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia eriopoda	Shrub (>2 m)	< 1
Acacia synchronicia	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	5 – 9
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen ?lachnostachys	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	1 – 4
Achyranthes aspera	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Stemodia grossa	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_014

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.96602, 119.92164				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia tetragonophylla	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_015

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.97508, 119.92119				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Quartz	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia vaccaria var. *vaccaria*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32
?Amyema preissii	Parasitic/Epiphytic (1-2 m)	< 1

BD_E_016

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-21.98262, 120.00164				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite, quartz	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	Assoc.
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_017

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.97114, 119.91831				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	10 – 30%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	Assoc.
Eucalyptus victrix	Tree (10-30 m)	25 – 32
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	10 – 24
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Cyperus iria	Sedge (<0.5 m)	1 – 4
Fimbristylis microcarya	Sedge (<0.5 m)	< 1
Achyranthes aspera	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Nicotiana obliqua/occidentalis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	1 – 4
Sida spinosa	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	33 – 49
Echinochloa colona	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis cumingii	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Amyema ?sanguinea	Parasitic/Epiphytic (<0.5 m)	< 1

BD_E_018

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.96913, 120.01533				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

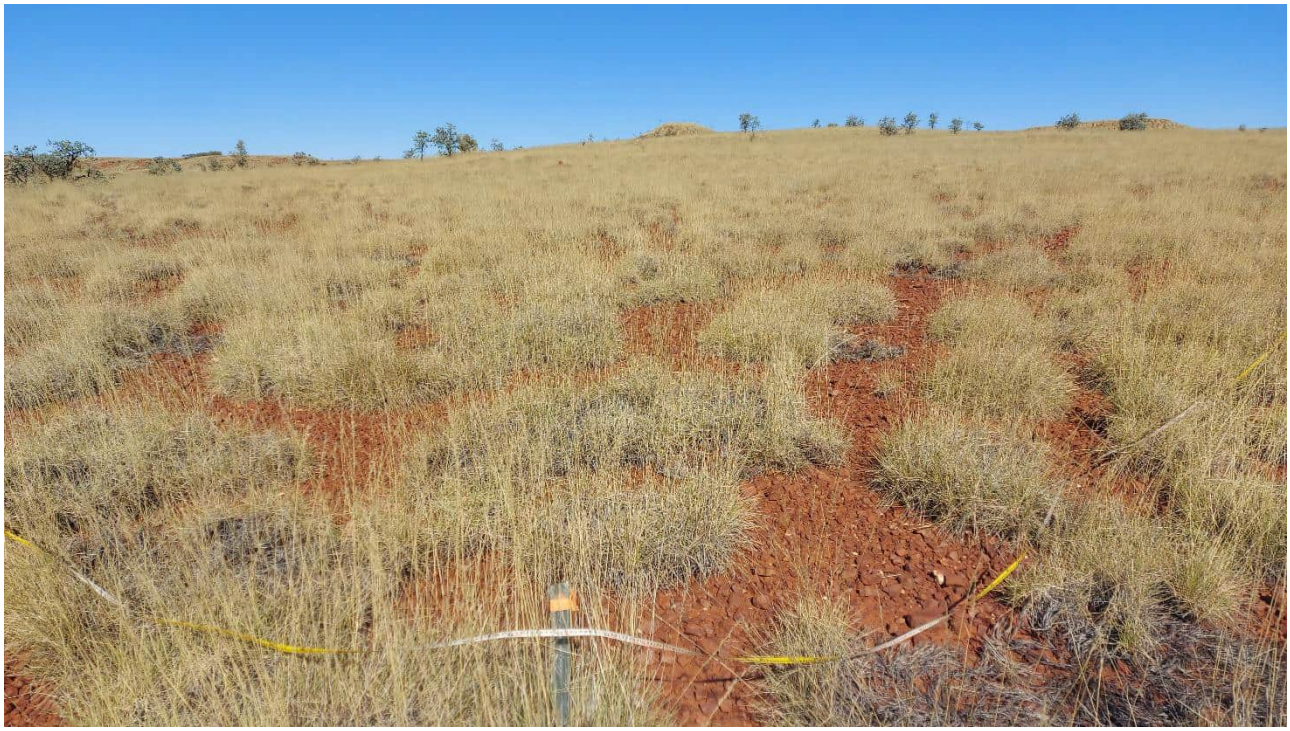
BD_E_019

Date	25/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.97069, 119.95174				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Calcrete, quartzite	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Capparis spinosa subsp. *nummularia*	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Grevillea pyramidalis subsp. *leucadendron*	Shrub (0.5-1 m)	< 1
Scaevola spinescens	Shrub (0.5-1 m)	< 1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	5 – 9
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna ?artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_020

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.06094, 119.93045				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia synchronicia	Shrub (1-2 m)	1 – 4
Eremophila longifolia	Shrub (1-2 m)	Assoc.
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_021

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.97233, 119.99993				
Landform	Ridge	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	5 – 9
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Dampiera candicans	Shrub (<0.5 m)	< 1
Ptilotus incanus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_022

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.9768, 120.02843				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	10 – 24
Eucalyptus victrix	Tree (10-30 m)	1 – 4
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	< 1
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Flueggea virosa subsp. *melanthesoides*	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Erythrina vespertilio	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	< 1
Cullen leucanthum	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Plumbago zeylanica	Shrub (<0.5 m)	< 1
Schoenoplectus subulatus	Sedge (1-2 m)	< 1
Cyperus bifax	Sedge (<0.5 m)	< 1
Cyperus difformis	Sedge (<0.5 m)	1 – 4
Cyperus vaginatus	Sedge (<0.5 m)	5 – 9
Sesbania cannabina	Herb (0.5-1 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	1 – 4
Amaranthus undulatus	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	1 – 4
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Basilicum polystachyon	Herb (<0.5 m)	< 1
Bergia pedicellaris	Herb (<0.5 m)	< 1
Bergia trimera	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Centipeda minima subsp. *macrocephala*	Herb (<0.5 m)	5 – 9

Name	Stratum	Percent cover (%)
Euphorbia hirta	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea plebeia	Herb (<0.5 m)	< 1
Lepidium muelleri-ferdinandi	Herb (<0.5 m)	< 1
Lobelia arnhemiaca	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Marsilea exarata	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Nicotiana obliqua/occidentalis	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	1 – 4
Portulaca oleracea	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sonchus oleraceus	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Dichanthium sericeum	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Chloris pectinata	Tussock Grass (<0.5 m)	1 – 4
Cynodon dactylon	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	1 – 4
Echinochloa colona	Tussock Grass (<0.5 m)	1 – 4
Eragrostis cumingii	Tussock Grass (<0.5 m)	1 – 4
Eragrostis tenellula	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (1-2 m)	1 – 4
Najas sp.	Aquatic (<0.5 m)	< 1
Potamogeton tepperi	Aquatic (<0.5 m)	1 – 4

BD_E_023

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.98124, 120.03017				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia colei var. *colei*	Shrub (>2 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	Assoc.
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	Assoc.
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_024

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.98475, 119.84271				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	Assoc.
Grevillea wickhamii	Shrub (1-2 m)	Assoc.
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Tephrosia rosea var. *clementii*	Shrub (0.5-1 m)	Assoc.
Corchorus parviflorus	Shrub (<0.5 m)	Assoc.
Bonamia pilbarensis	Herb (<0.5 m)	Assoc.
Cucumis variabilis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	Assoc.
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	Assoc.
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_025

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.05958, 119.93792				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Acacia monticola	Shrub (>2 m)	5 – 9
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	10 – 24
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	5 – 9
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Seringia ?exastia	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (0.5-1 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_026

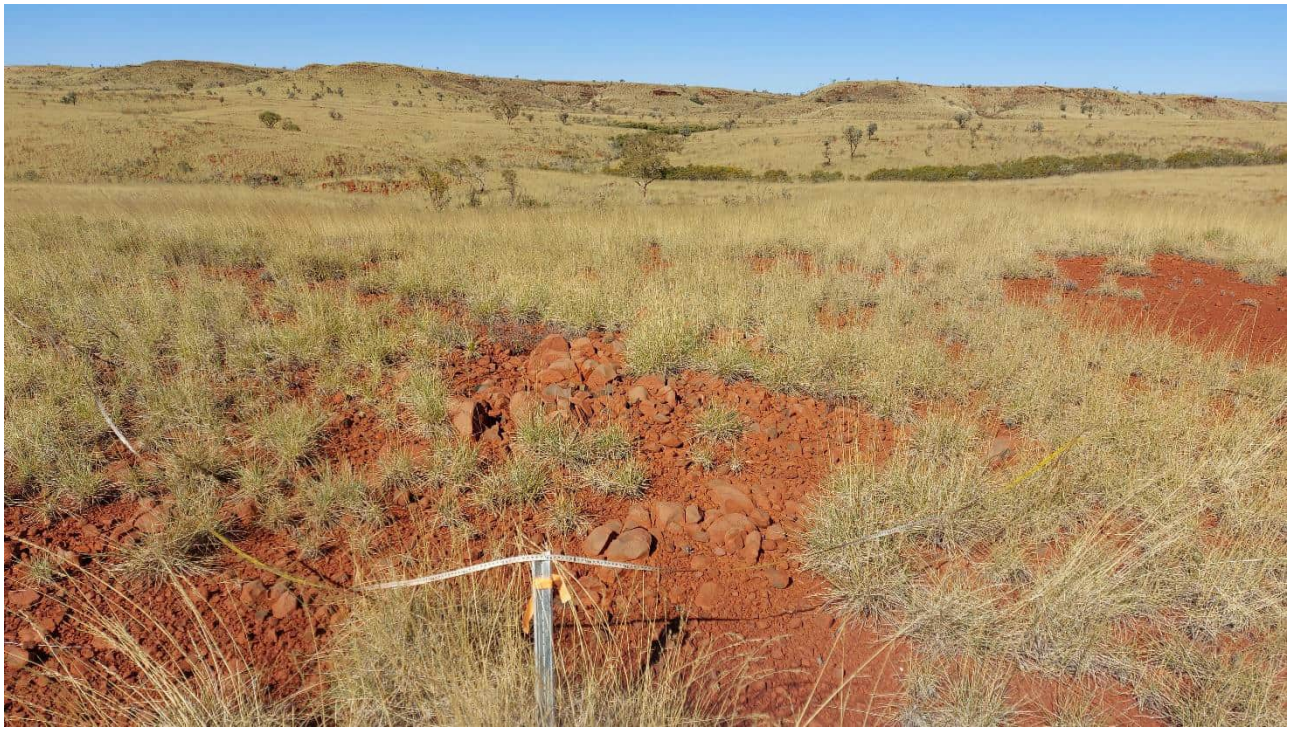
Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.96817, 120.02053				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	1 – 4
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Acacia pyrifolia	Shrub (>2 m)	< 1
Acacia trachycarpa	Shrub (>2 m)	5 – 9
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Gossypium australe	Shrub (1-2 m)	< 1
Grevillea wickhamii subsp. *aprica*	Shrub (1-2 m)	< 1
Cullen leucanthum	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Solanum diversiflorum	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	5 – 9
Cyperus difformis	Sedge (<0.5 m)	< 1
Fimbristylis microcarya	Sedge (<0.5 m)	< 1
Sesbania cannabina	Herb (0.5-1 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	1 – 4
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Basilicum polystachyon	Herb (<0.5 m)	< 1
Bergia pedicellaris	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Bergia trimera	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Cathetus exilis	Herb (<0.5 m)	< 1
Centipeda minima subsp. *macrocephala*	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ludwigia perennis	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Marsilea exarata	Herb (<0.5 m)	5 – 9
Pluchea rubelliflora	Herb (<0.5 m)	1 – 4
Polymeria calycina	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Rotala diandra	Herb (<0.5 m)	< 1
Scleromitrion galioides	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Waltheria indica	Herb (<0.5 m)	< 1
Dichanthium sericeum	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Echinochloa colona	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis cumingii	Tussock Grass (<0.5 m)	1 – 4
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1

BD_E_027

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.99116, 119.83156				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia orthocarpa	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (>2 m)	1 – 4
Dodonaea coriacea	Shrub (1-2 m)	< 1
Acacia colei var. *colei*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	5 – 9
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

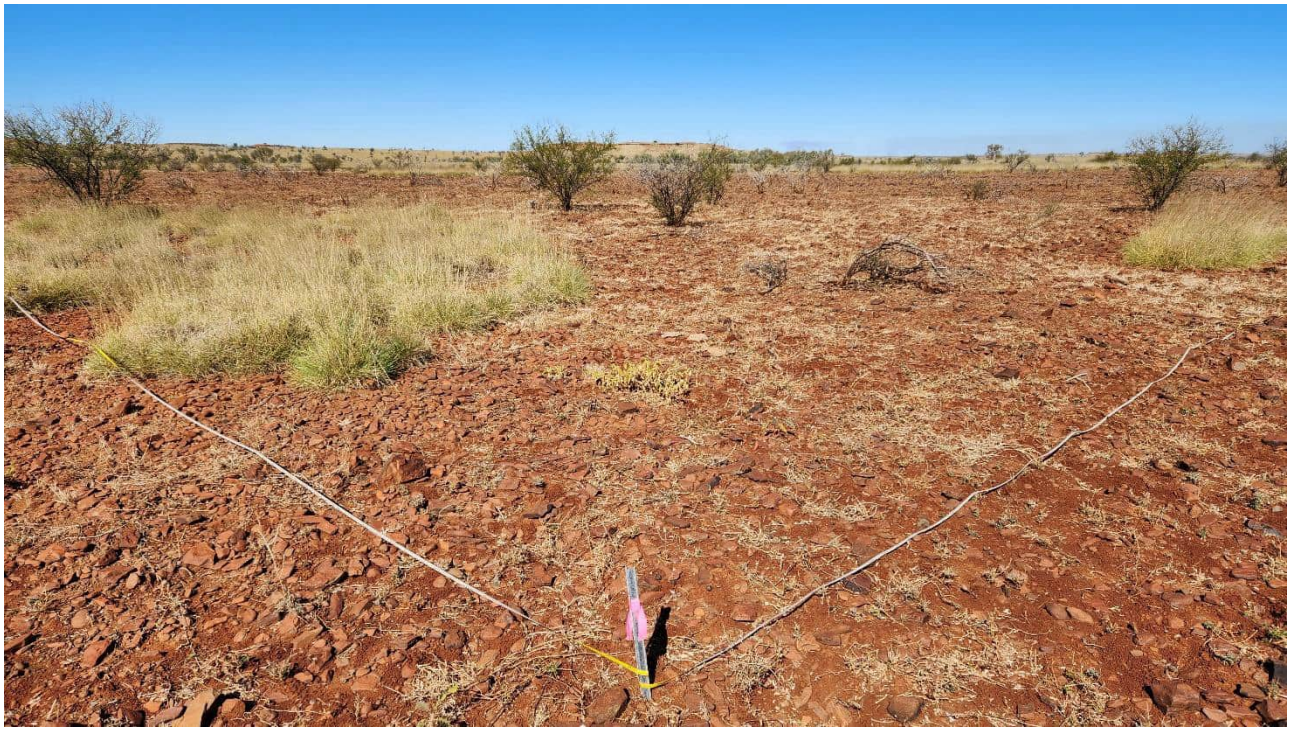
BD_E_028

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.98887, 119.99515				
Landform	Low hill	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Boulders [> 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_029

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.99787, 119.85186				
Landform	Plain (clay)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

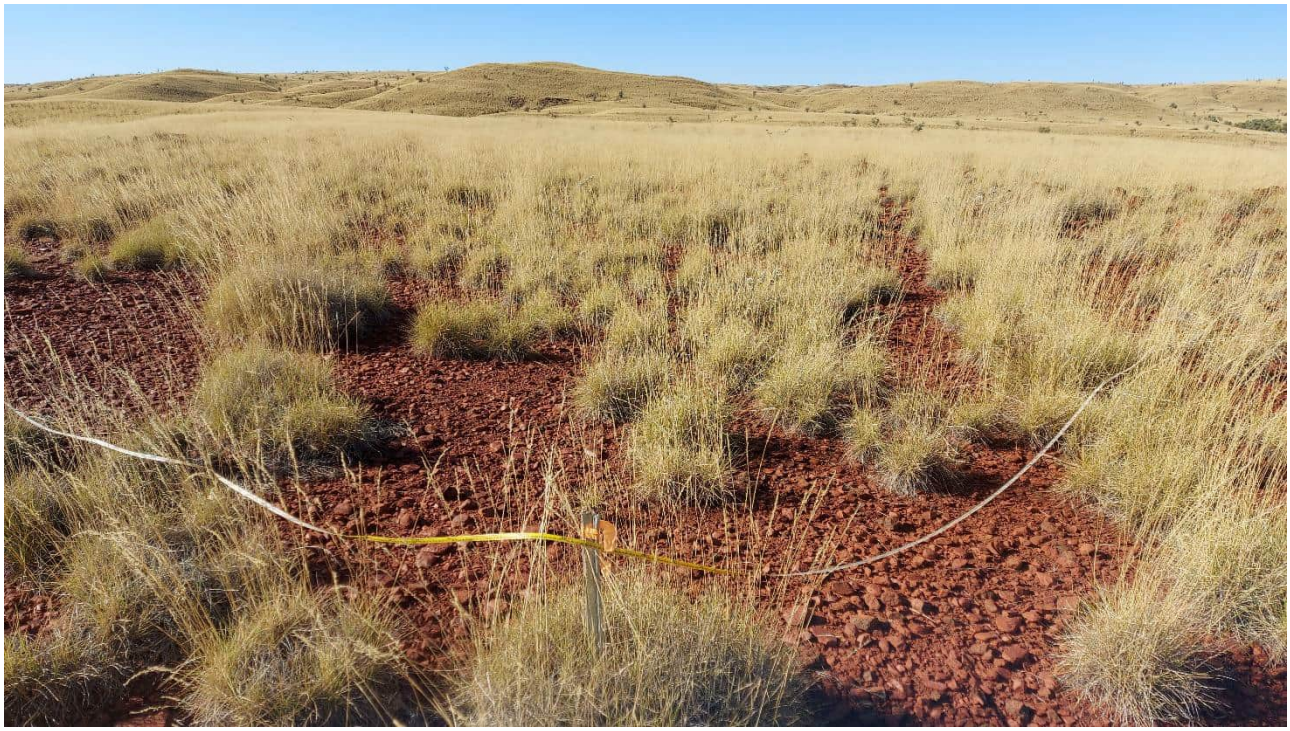


Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Capparis spinosa subsp. *nummularia*	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
?*Glycine falcata*	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Austrobryonia pilbarensis	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Corchorus trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	1 – 4
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia ?*boophthona*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	5 – 9
Ipomoea muelleri	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	10 – 24
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Paspalidium retiglume	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_030

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.00097, 119.98862				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	Assoc.
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Fimbristylis dichotoma	Sedge (<0.5 m)	1 – 4
Euphorbia careyi	Herb (<0.5 m)	< 1
Euphorbia tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_031

Date	23/06/2023	**Site type**	Flora: Releve	**Botanist**	RS
Location	-22.00314, 119.98574				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Eucalyptus victrix	Tree (<10 m)	10 – 24
Acacia ampliceps	Shrub (1-2 m)	1 – 4
Acacia colei var. *colei*	Shrub (1-2 m)	< 1
Acacia trachycarpa	Shrub (1-2 m)	1 – 4
Cullen ?leucanthum	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Acacia pyrifolia	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	10 – 24
Stemodia grossa	Herb (0.5-1 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Swainsona stenodonta	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1

Name	Stratum	Percent cover (%)
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_032

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.0697, 119.91626				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia synchronicia	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena ?eriacantha	Herb (<0.5 m)	< 1
Tephrosia ?sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (<0.5 m)	10 – 24

BD_E_033

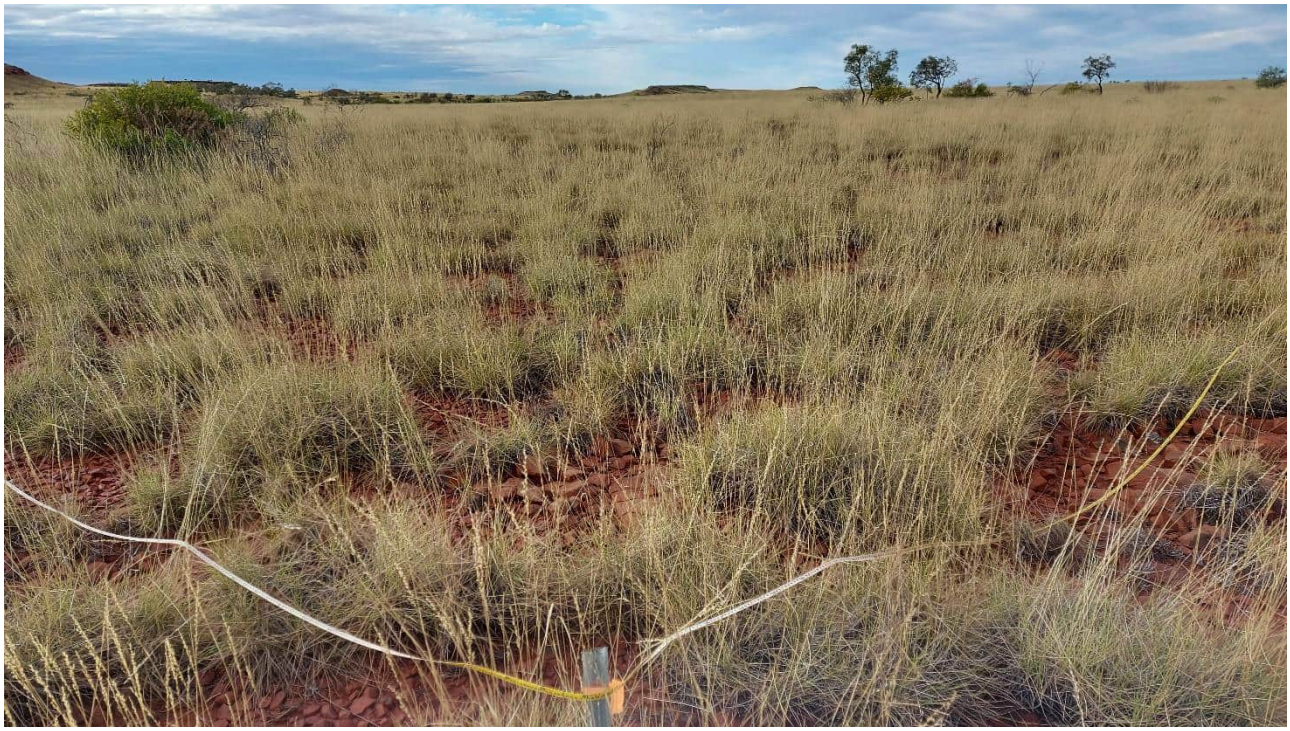
Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.03018, 119.96877				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Loam		
Rock type	Mixed river alluvium	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	1 – 4
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia ampliceps	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Vachellia farnesiana	Shrub (1-2 m)	< 1
Cullen leucanthum	Shrub (0.5-1 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Melhania oblongifolia	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Cyperus difformis	Sedge (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	5 – 9
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	Herb (1-2 m)	< 1
Sesbania cannabina	Herb (1-2 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Amaranthus cuspidifolius	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Centipeda minima subsp. *macrocephala*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Marsilea exarata	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Nicotiana obliqua/occidentalis	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	1 – 4
Polycarpaea longiflora	Herb (<0.5 m)	< 1
Polymeria calycina	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Sonchus oleraceus	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Trianthema portulacastrum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	25 – 32
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Cynodon dactylon	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Diplachne fusca	Tussock Grass (<0.5 m)	< 1
Echinochloa colona	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon lindleyanus	Tussock Grass (<0.5 m)	< 1
Eragrostis exigua	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	1 – 4
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Potamogeton tepperi	Aquatic (<0.5 m)	< 1

BD_E_034

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.02295, 119.86421				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia bivenosa	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	Assoc.
Hakea lorea subsp. *lorea*	Shrub (>2 m)	Assoc.
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Cucumis variabilis	Herb (<0.5 m)	< 1
Pentalepis trichodesmoides subsp. *trichodesmoides*	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_035

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.0225, 119.96681				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Loam		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	1 – 4
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia ampliceps	Shrub (>2 m)	5 – 9
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	< 1
Cullen leucanthum	Shrub (>2 m)	< 1
Melaleuca glomerata	Shrub (>2 m)	10 – 24
Melaleuca linophylla	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Capparis spinosa subsp. *nummularia*	Shrub (0.5-1 m)	< 1
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	10 – 24
Alternanthera nana	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	1 – 4
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Lobelia arnhemiaca	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Peplidium sp. E Evol. Fl. Fauna Arid Aust. (A.S. Weston 12768)	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	1 – 4
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	1 – 4
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Diplachne fusca	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Echinochloa colona	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon lindleyanus	Tussock Grass (<0.5 m)	1 – 4
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	5 – 9
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

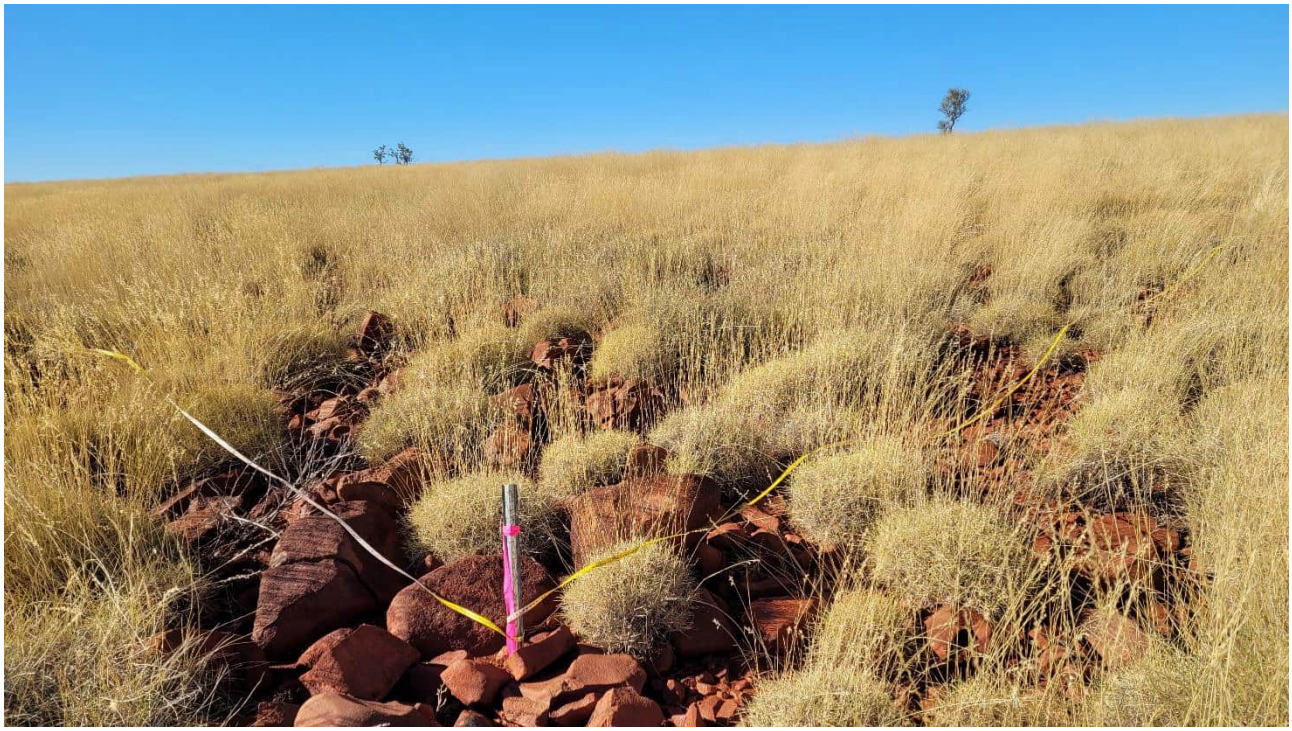
BD_E_036

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.02351, 119.90624				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ancistrocarpa	Shrub (>2 m)	10 – 24
Acacia bivenosa	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	1 – 4
Eremophila latrobei ?subsp. *glabra*	Shrub (0.5-1 m)	1 – 4
Senna ?artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Sida ?arenicola	Shrub (<0.5 m)	< 1
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Dysphania ?sphaerosperma	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Vincetoxicum lineare	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_037

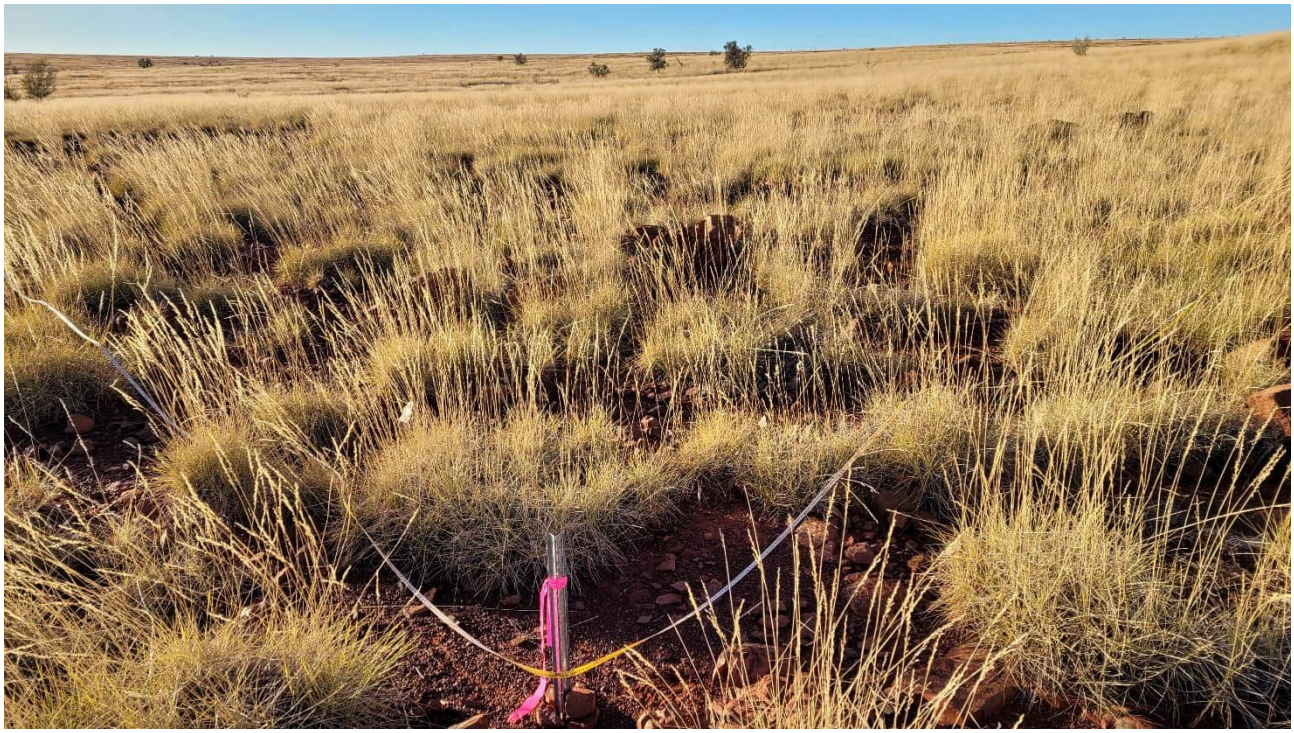
Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.02877, 119.96314				
Landform	Low hill	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Swainsona stenodonta	Herb (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_038

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.028, 119.97746				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Polygala glaucifolia	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

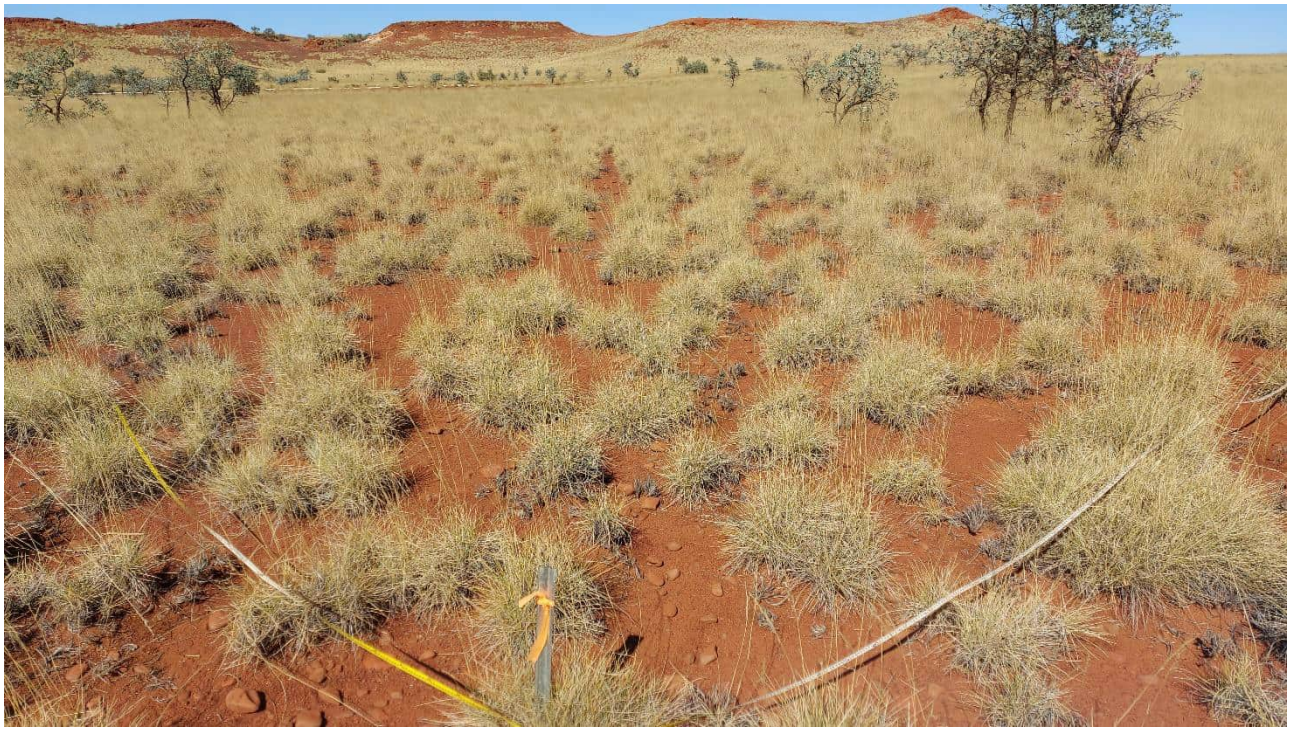
BD_E_039

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.02424, 119.85868				
Landform	Low hill	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	< 1
Ficus brachypoda	Shrub (>2 m)	Assoc.
Grevillea pyramidalis subsp. *leucadendron*	Shrub (1-2 m)	Assoc.
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna venusta	Shrub (1-2 m)	< 1
Capparis spinosa subsp. *nummularia*	Shrub (0.5-1 m)	Assoc.
Eremophila latrobei subsp. *glabra*	Shrub (0.5-1 m)	5 – 9
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Hibiscus coatesii	Herb (1-2 m)	Assoc.
Amaranthus cuspidifolius	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Maireana villosa	Herb (<0.5 m)	< 1
Polycarpaea involucrata	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_040

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.03582, 119.93366				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	< 10%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (>2 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Triodia epactia	Hummock Grass (1-2 m)	25 – 32

BD_E_041

Date	21/06/2023	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.03385, 119.92766				
Landform	Major creek (5-30 m)	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (>2 m)	< 1
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Acacia inaequilatera	Shrub (0.5-1 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	5 – 9
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus setiger	Tussock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (0.5-1 m)	1 – 4

BD_E_042

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.0204, 119.86016				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	10 – 30%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Acacia ampliceps	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (>2 m)	< 1
Melaleuca bracteata	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	1 – 4
Amaranthus undulatus	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Polymeria calycina	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa decurrens	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis dielsii	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Amyema ?sanguinea	Parasitic/Epiphytic (<0.5 m)	< 1

BD_E_043

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.04114, 119.9384				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia ?aptaneura	Shrub (>2 m)	Assoc.
Acacia monticola	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_044

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.04731, 119.94107				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia ?aptaneura	Shrub (>2 m)	Assoc.
Acacia monticola	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (>2 m)	Assoc.
Grevillea wickhamii	Shrub (>2 m)	Assoc.
Santalum lanceolatum	Shrub (1-2 m)	Assoc.
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_045

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.07187, 119.91283				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Streptoglossa ?adscendens	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_046

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.06074, 119.92189				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Quartz, ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Eremophila longifolia	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Abutilon lepidum	Herb (<0.5 m)	< 1
Abutilon macrum	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Corchorus trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Pterocaulon sphacelatum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9

Name	Stratum	Percent cover (%)
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	Assoc.
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_047

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.05451, 119.89212				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Clerodendrum tomentosum	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Achyranthes aspera	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_048

Date	20/06/2023	**Site type**	Flora: Releve	**Botanist**	AC
Location	-22.14802, 119.8905				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	10 – 30%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia eriopoda	Shrub (>2 m)	5 – 9
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Acacia monticola	Shrub (1-2 m)	< 1
Acacia tenuissima	Shrub (1-2 m)	1 – 4
Cullen leucochaites	Shrub (1-2 m)	< 1
Dodonaea lanceolata var. *lanceolata*	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Sida fibulifera	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Salsola australis	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Chrysopogon fallax	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4

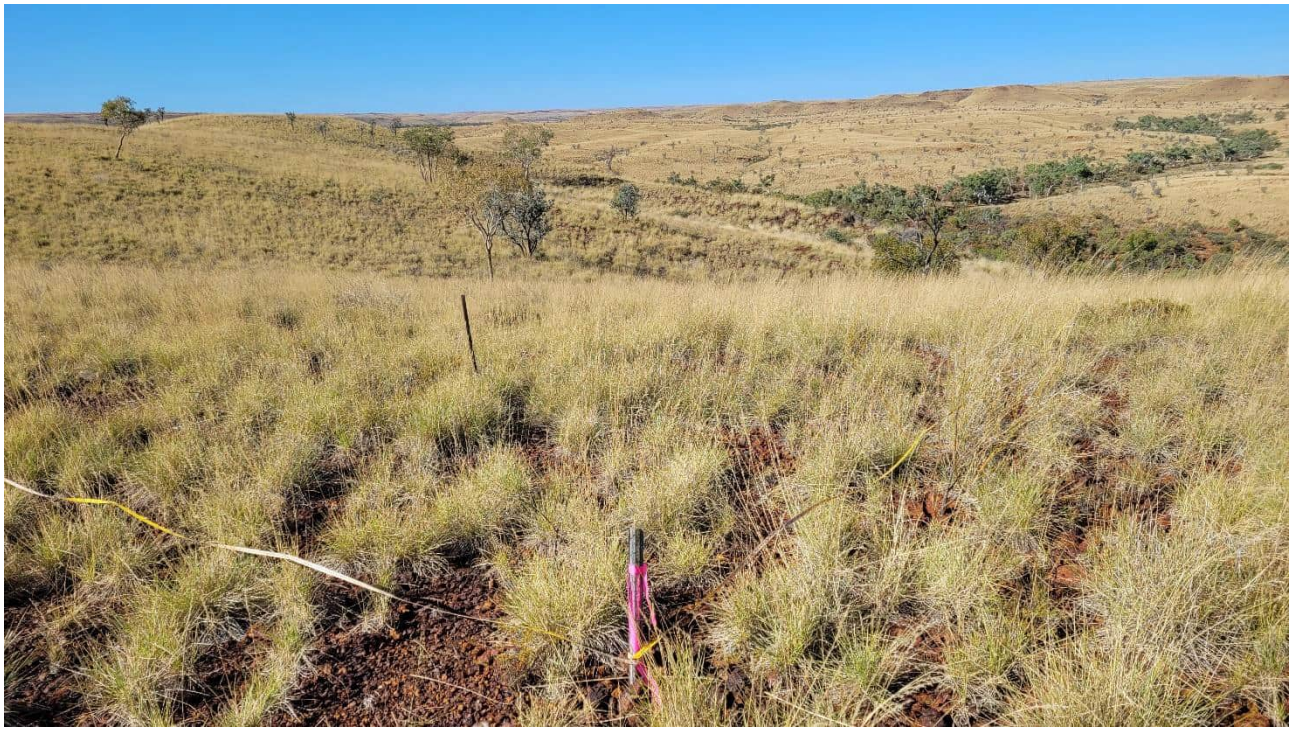
BD_E_049

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.05644, 119.92407				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, laterite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ancistrocarpa	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	Assoc.
Capparis umbonata	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Seringia ?exastia	Shrub (0.5-1 m)	< 1
Sida ?arenicola	Shrub (0.5-1 m)	< 1
Acacia bivenosa	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	1 – 4
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_050

Date	24/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.97359, 120.00678				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Dampiera candicans	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	1 – 4
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_051

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.12738, 119.87865				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	10 – 24
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Grevillea wickhamii	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Psydrax suaveolens	Shrub (<0.5 m)	< 1
Seringia ?exastia	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Sida sp. *S049 (sterile)*	Shrub (<0.5 m)	< 1
Cynanchum viminale	Herb (0.5-1 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Aristida holathera var. *holathera*	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_052

Date	21/06/2023	**Site type**	Flora: Releve	**Botanist**	LE
Location	-22.06607, 119.91769				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Corymbia hamersleyana	Tree (<10 m)	10 – 24
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ancistrocarpa	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (>2 m)	1 – 4
Acacia colei var. *colei*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Grevillea wickhamii subsp. *aprica*	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (1-2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	5 – 9
Gossypium australe	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Androcalva luteiflora	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Achyranthes aspera	Herb (0.5-1 m)	< 1
Abutilon fraseri subsp. *fraseri*	Herb (<0.5 m)	< 1
Aerva javanica	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum	Tussock Grass (<0.5 m)	< 1
Echinochloa colona	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (<0.5 m)	1 – 4

BD_E_053

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.06818, 119.857				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Silty clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	Assoc.
Tephrosia rosea var. *clementii*	Shrub (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_054

Date	22/06/2023	**Site type**	Flora: Releve	**Botanist**	RS
Location	-22.06347, 119.89706				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	33 – 49
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Capparis umbonata	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (1-2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	1 – 4
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Acacia pyrifolia	Shrub (0.5-1 m)	< 1
Achyranthes aspera	Shrub (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1

BD_E_055

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.0686, 119.90898				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Dark brown	**Soil texture**	Loam		
Rock type	Calcrete, ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ancistrocarpa	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	1 – 4
Ptilotus incanus	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (0.5-1 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	5 – 9
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Stackhousia muricata subsp. annual (W.R. Barker 2172)	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_056

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.07225, 119.87046				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sandy clay loam		
Rock type	Quartz	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eremophila longifolia	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (>2 m)	< 1
Acacia synchronicia	Shrub (1-2 m)	1 – 4
Vachellia farnesiana	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	< 1
Maireana georgei	Herb (<0.5 m)	< 1
Sclerolaena ?eriacantha	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	33 – 49
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_057

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.074, 119.88972				
Landform	Plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia bivenosa	Shrub (0.5-1 m)	Assoc.
Acacia inaequilatera	Shrub (<0.5 m)	< 1
Grevillea wickhamii	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	Assoc.
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49
Triodia wiseana	Hummock Grass (<0.5 m)	< 1

BD_E_058

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.07519, 119.87915				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Calcrete, ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Eucalyptus socialis subsp. *eucentrica*	Mallee (<10 m)	5 – 9
Capparis umbonata	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	1 – 4
Acacia arrecta	Shrub (<0.5 m)	5 – 9
Senna symonii	Shrub (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_059

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.07686, 119.85291				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	< 1
Acacia pyrifolia var. *morrisonii*	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Senna venusta	Shrub (0.5-1 m)	< 1
Tephrosia rosea var. *clementii*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_060

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.07939, 119.89116				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Pterocaulon serrulatum var. *velutinum*	Herb (<0.5 m)	< 1
Streptoglossa adscendens	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	50 – 74
Triodia epactia	Hummock Grass (0.5-1 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32

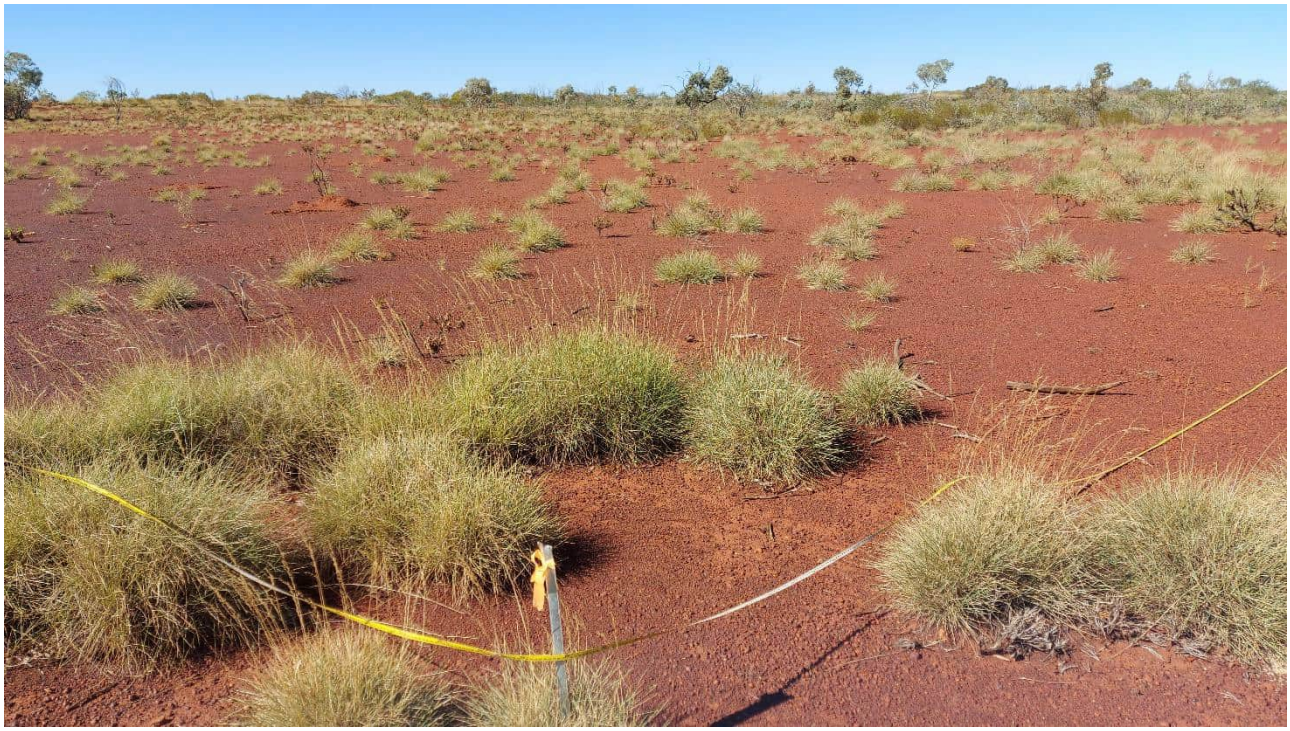
BD_E_061

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.08647, 119.89241				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	10 – 30%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	Assoc.
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (1-2 m)	< 1
Cynanchum viminale	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32

BD_E_062

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.08538, 119.92051				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (<0.5 m)	< 1
Seringia ?exastia	Shrub (<0.5 m)	< 1
Sida ?arenicola	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	5 – 9
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Aristida holathera var. *holathera*	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_063

Date	23/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.07692, 119.91799				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca ?pachyphylla	Shrub (<0.5 m)	< 1
Euploca heterantha	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	< 1
Abutilon otocarpum	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Minuria integerrima	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *pulchella*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32

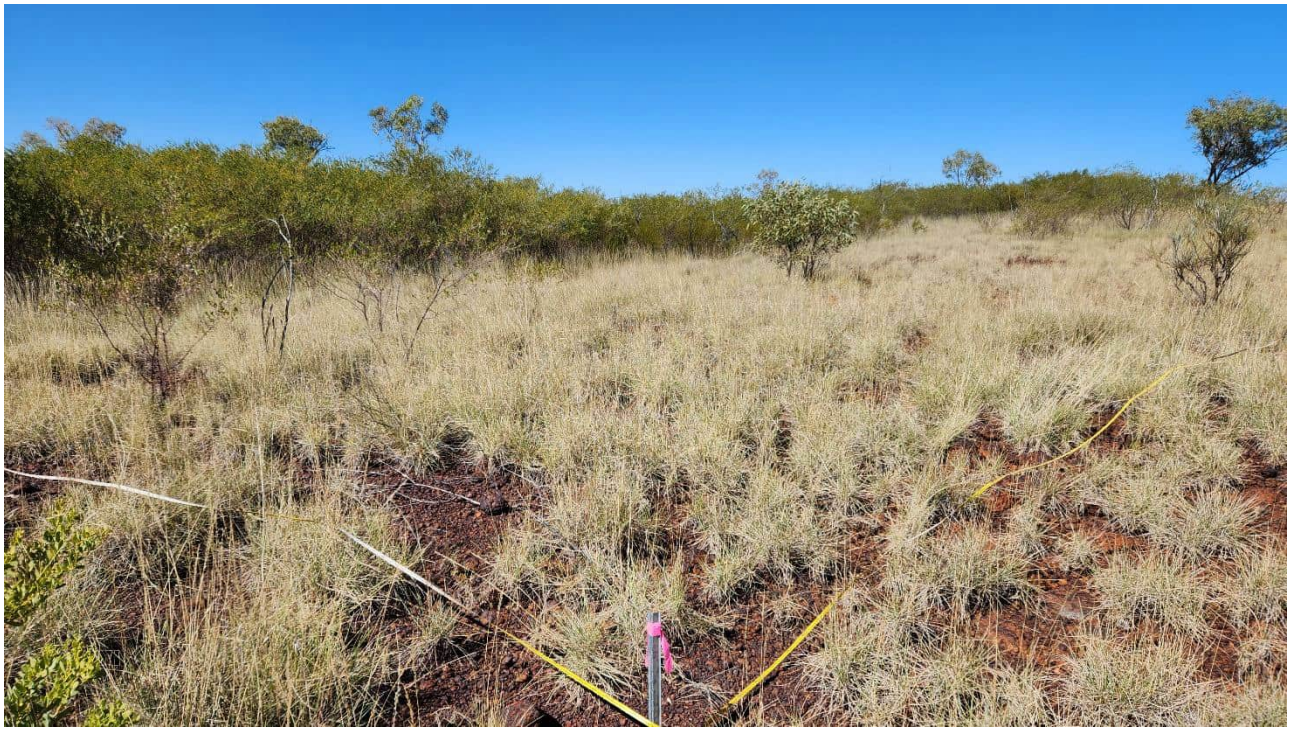
BD_E_064

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.08771, 119.81947				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Eremophila longifolia	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida ?echinocarpa	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_065

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.09233, 119.85062				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia ancistrocarpa	Shrub (>2 m)	5 – 9
Acacia monticola	Shrub (>2 m)	10 – 24
Acacia bivenosa	Shrub (1-2 m)	5 – 9
Acacia pyrifolia	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Petalostylis labicheoides	Shrub (1-2 m)	< 1
Acacia trachycarpa	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Senna ?artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Seringia ?exastia	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_066

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.09086, 119.89886				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia ?*aptaneura*	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	1 – 4
Senna ?*stricta*	Shrub (1-2 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Rhagodia eremaea	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (0.5-1 m)	< 1
Abutilon ?sp. Dioicum (A.A. Mitchell PRP 1618)	Herb (<0.5 m)	< 1
Abutilon macrum	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	50 – 74

BD_E_067

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.0862, 119.89325				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Corchorus tridens	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	1 – 4
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	1 – 4
Heliotropium crispatum	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	1 – 4
Indigofera colutea	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Pterocaulon serrulatum var. *velutinum*	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	5 – 9
Ptilotus carinatus	Herb (<0.5 m)	1 – 4
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa adscendens	Herb (<0.5 m)	< 1
Swainsona thompsoniana	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Aristida latifolia	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Chloris pectinata	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eragrostis xerophila	Tussock Grass (<0.5 m)	< 1
Panicum decompositum	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1

BD_E_068

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.09277, 119.86895				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ancistrocarpa	Shrub (>2 m)	5 – 9
Gossypium robinsonii	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (1-2 m)	1 – 4
Acacia tenuissima	Shrub (1-2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Maireana melanocoma	Herb (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	< 1

BD_E_069

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.09915, 119.84596				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Dark brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	1 – 4
Acacia arrecta	Shrub (<0.5 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_070

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.09733, 119.83887				
Landform	Plain	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	10 – 30%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	< 1
Eremophila longifolia	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	1 – 4
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Citrullus colocynthis	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	5 – 9
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa adscendens	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Aristida latifolia	Tussock Grass (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	1 – 4
Eragrostis xerophila	Tussock Grass (<0.5 m)	1 – 4
Eriachne benthamii	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9

BD_E_071

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.09497, 119.92643				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ?aptaneura	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Acacia ancistrocarpa	Shrub (1-2 m)	< 1
Capparis umbonata	Shrub (1-2 m)	Assoc.
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_072

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.09703, 119.9155				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ?aptaneura	Shrub (>2 m)	10 – 24
Acacia ?sibirica	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (>2 m)	< 1
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	< 1
Grevillea wickhamii	Shrub (>2 m)	5 – 9
Santalum lanceolatum	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_073

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.10088, 119.82842				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone, calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Senna ?artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_074

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.10034, 119.90243				
Landform	Plain (clay)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	5 – 9
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Abutilon otocarpum	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	5 – 9
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cullen graveolens	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	1 – 4
Indigofera linifolia	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Ptilotus carinatus	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	10 – 24
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Trianthema triquetrum	Herb (<0.5 m)	1 – 4
Aristida latifolia	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eragrostis xerophila	Tussock Grass (<0.5 m)	1 – 4
Eriachne benthamii	Tussock Grass (<0.5 m)	10 – 24
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_075

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.10394, 119.85378				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	< 1
Capparis umbonata	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena densiflora	Herb (<0.5 m)	< 1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	5 – 9
Triodia brizoides	Hummock Grass (<0.5 m)	33 – 49
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_076

Date	22/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.10598, 119.83127				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone, quartz	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Acacia synchronicia	Shrub (0.5-1 m)	1 – 4
Sida ?trichopoda	Shrub (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	1 – 4
Cullen graveolens	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	1 – 4
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Chloris pectinata	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1

BD_E_077

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.11272, 119.90262				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone, quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Capparis umbonata	Shrub (1-2 m)	< 1
Grevillea wickhamii subsp. *hispidula*	Shrub (1-2 m)	1 – 4
Acacia monticola	Shrub (0.5-1 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Jasminum didymum subsp. *lineare*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_078

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.138, 119.90326				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_079

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.13849, 119.89966				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Quartz, dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_080

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.14905, 119.88842				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Stackhousia muricata subsp. annual (W.R. Barker 2172)	Herb (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_081

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.15259, 119.85507				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Capparis umbonata	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Senna sericea	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Acacia ptychophylla	Shrub (0.5-1 m)	5 – 9
Acacia tenuissima	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	1 – 4
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Solanum elatius	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia brizoides	Hummock Grass (<0.5 m)	50 – 74

BD_E_082

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.0256, 119.85077				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (1-2 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	Assoc.
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	Assoc.
Malvastrum americanum	Herb (<0.5 m)	Assoc.
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_083

Date	19/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC/LE
Location	-22.16191, 119.928				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	Assoc.
Acacia synchronicia	Shrub (>2 m)	1 – 4
Acacia ?coriacea subsp. *pendens*	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (<0.5 m)	Assoc.
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Melhania oblongifolia	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Sida fibulifera	Shrub (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia ?tenuiloba	Herb (<0.5 m)	< 1
Goodenia forrestii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Perotis rara	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32
Triodia wiseana	Hummock Grass (<0.5 m)	< 1

BD_E_084

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.16611, 119.83876				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Capparis umbonata	Shrub (>2 m)	< 1
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Acacia ptychophylla	Shrub (0.5-1 m)	5 – 9
Dampiera candicans	Shrub (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4

BD_E_085

Date	19/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.16595, 119.93828				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Melaleuca linophylla	Shrub (>2 m)	10 – 24
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Solanum phlomoides	Shrub (0.5-1 m)	< 1
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Ptilotus incanus	Shrub (<0.5 m)	1 – 4
Sida echinocarpa	Shrub (<0.5 m)	1 – 4
Solanum diversiflorum	Shrub (<0.5 m)	< 1
Triumfetta clementii	Shrub (<0.5 m)	< 1
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	Herb (0.5-1 m)	1 – 4
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Bonamia pannosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	1 – 4
Cucumis variabilis	Herb (<0.5 m)	< 1
Dysphania rhadinostachya subsp. *rhadinostachya*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	1 – 4
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus auriculifolius	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	1 – 4
Sclerolaena costata	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	10 – 24
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	1 – 4
Solanum horridum	Herb (<0.5 m)	< 1
Swainsona stenodonta	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Paraneurachne muelleri	Tussock Grass (0.5-1 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_086

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.1826, 119.80583				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Loam		
Rock type	NA	**Rock size**	NA	**Rock cover**	NA
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Eucalyptus victrix	Tree (<10 m)	5 – 9
Acacia ampliceps	Shrub (>2 m)	< 1
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Melaleuca bracteata	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Cullen ?leucanthum	Shrub (<0.5 m)	< 1
Achyranthes aspera	Herb (<0.5 m)	5 – 9
Alternanthera nana	Herb (<0.5 m)	< 1
Alternanthera nodiflora	Herb (<0.5 m)	5 – 9
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Chenopodium murale	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea racemigera	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nicotiana obliqua/occidentalis	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Solanum nigrum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Echinochloa colona	Tussock Grass (<0.5 m)	< 1

BD_E_087

Date	21/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.18757, 119.79917				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulus ?terrestris	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_088

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.21799, 119.78951				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Hakea lorea subsp. *lorea*	Shrub (>2 m)	Assoc.
Eremophila forrestii subsp. *forrestii*	Shrub (1-2 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Euploca heterantha	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna ?stricta	Shrub (<0.5 m)	< 1
Sida ?echinocarpa	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Gomphrena canescens subsp. *canescens*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Cymbopogon obtectus	Tussock Grass (0.5-1 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_089

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.21249, 119.7937				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	5 – 9
Eucalyptus victrix	Tree (<10 m)	5 – 9
Eremophila longifolia	Shrub (>2 m)	1 – 4
Cullen ?leucanthum	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (0.5-1 m)	50 – 74
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1

BD_E_090

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.24064, 119.79359				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Calcrete	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	< 10%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Polymeria calycina	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Eragrostis eriopoda	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_091

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.24705, 119.79578				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Eucalyptus victrix	Tree (<10 m)	10 – 24
Acacia bivenosa	Shrub (>2 m)	5 – 9
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Acacia pyrifolia var. *pyrifolia*	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	1 – 4
Corchorus incanus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Boerhavia coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Neptunia xanthonema	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Enteropogon ramosus	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Sporobolus actinocladus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_092

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.25334, 119.79191				
Landform	Low hill	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Senna ?stricta	Shrub (>2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	1 – 4
Ptilotus rotundifolius	Shrub (0.5-1 m)	< 1
Solanum lasiophyllum	Shrub (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

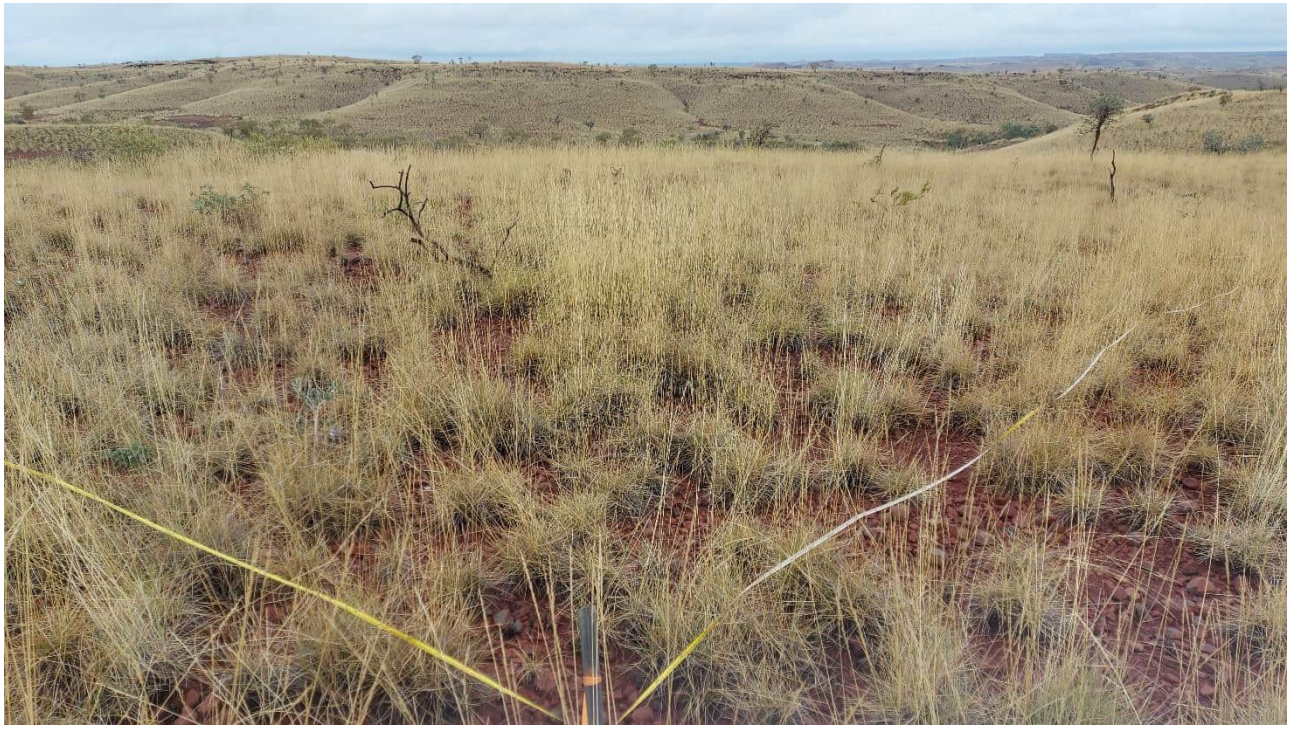
BD_E_093

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.26095, 119.79191				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	10 – 30%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	< 1
Grevillea pyramidalis subsp. *leucadendron*	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Euploca heterantha	Shrub (<0.5 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia australis var. *hispidula*	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	5 – 9
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	50 – 74

BD_E_094

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.26767, 119.79226				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Boulders [> 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia acradenia	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_095

Date	20/06/2023	**Site type**	Flora: Quadrat	**Botanist**	RS
Location	-22.27741, 119.79342				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Senna ?stricta	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	1 – 4
Acacia acradenia	Shrub (0.5-1 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Acacia pruinocarpa	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_096

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.02687, 119.83983				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Eucalyptus victrix	Tree (<10 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (1-2 m)	1 – 4
Acacia inaequilatera	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Senna ?stricta	Shrub (<0.5 m)	< 1
Aerva javanica	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_097

Date	26/06/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.03107, 119.84001				
Landform	Hill (clay)	**Slope**	Gentle		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Capparis spinosa subsp. *nummularia*	Shrub (0.5-1 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	1 – 4
Sida ?trichopoda	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
?Glycine falcata	Herb (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	10 – 24
Austrobryonia pilbarensis	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Corchorus trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia inappendiculata var. *queenslandica*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	5 – 9
Heliotropium crispatum	Herb (<0.5 m)	10 – 24
Hibiscus verdcourtii	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	1 – 4
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Tribulus ?terrestris	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eragrostis desertorum	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	5 – 9
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	1 – 4
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

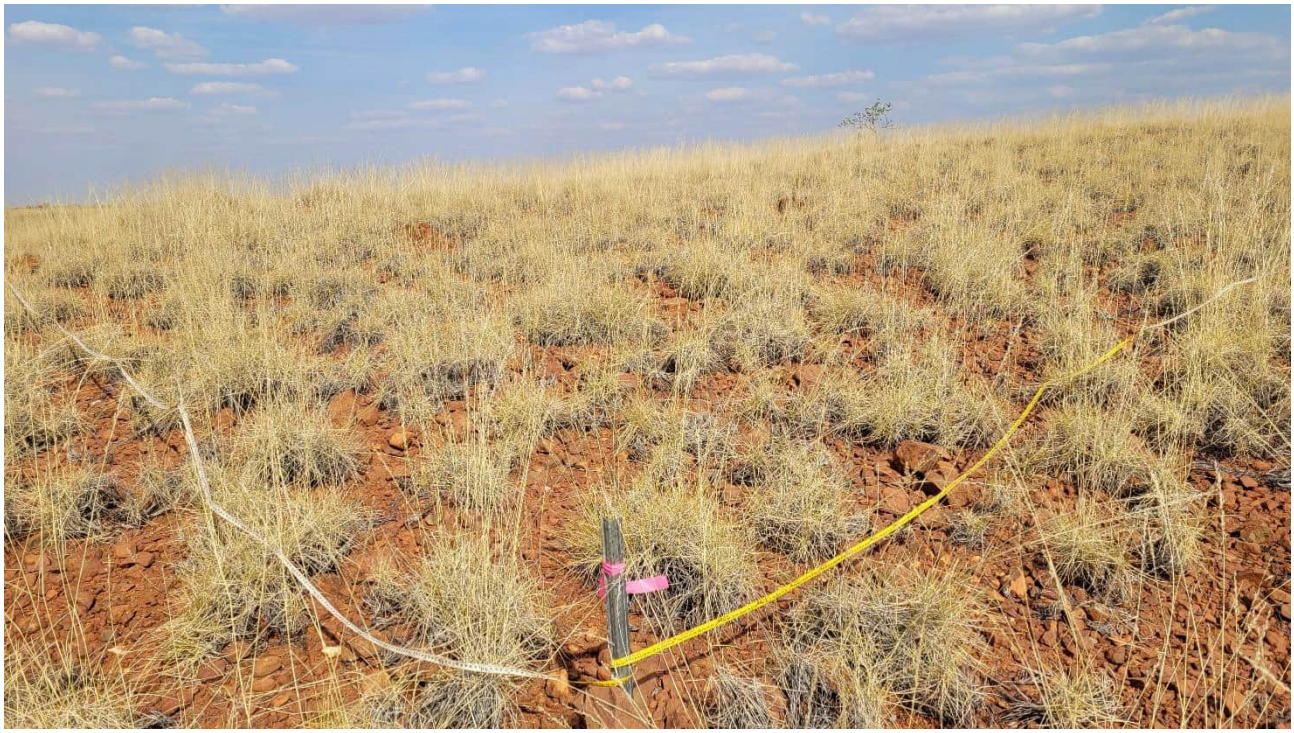
BD_E_098

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.97096, 119.89756				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_099

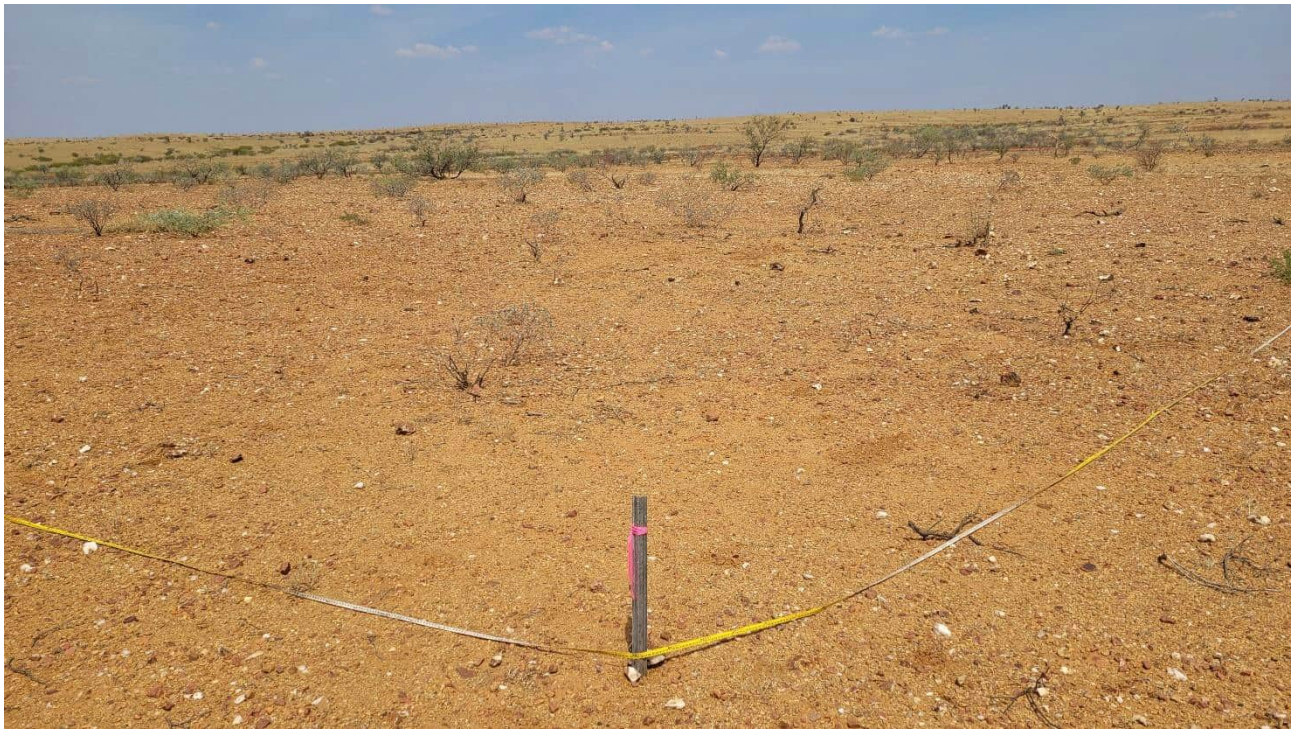
Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.91799, 119.94454				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_100

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.92053, 119.94088				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

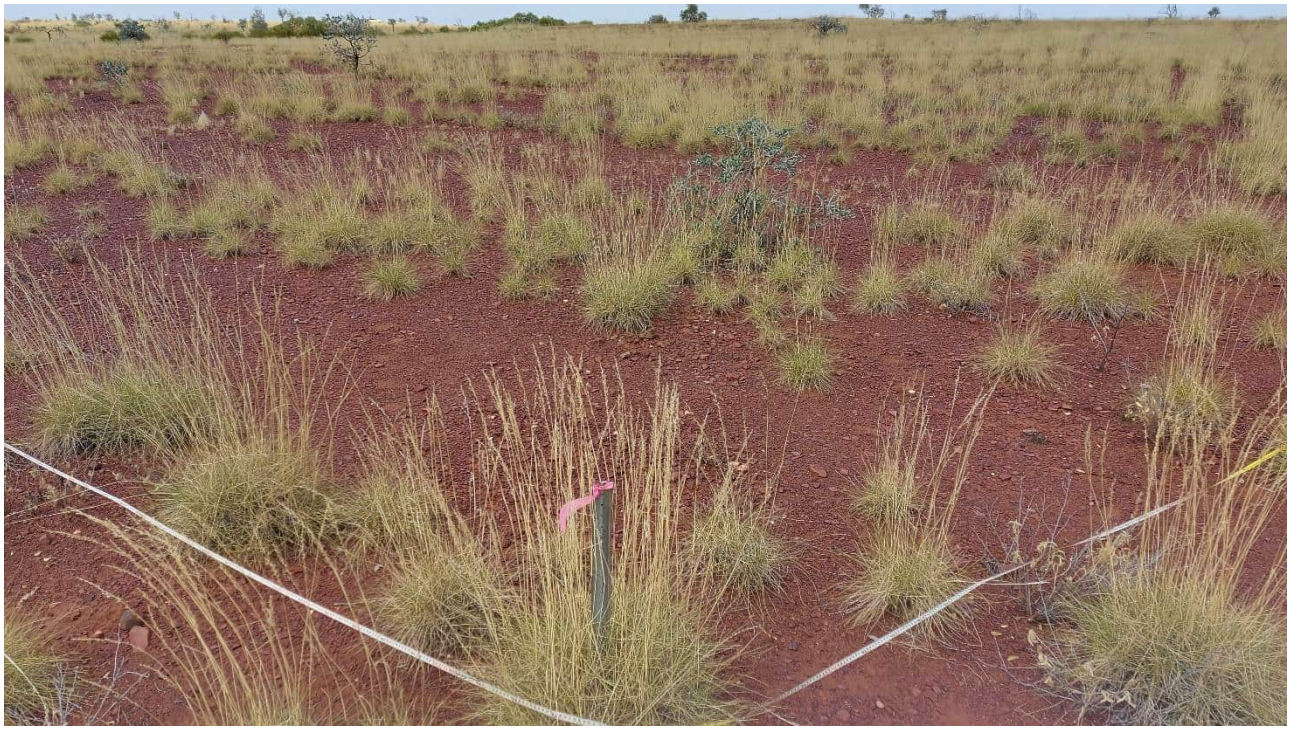


Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	1 – 4
Carissa lanceolata	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	1 – 4
Euploca cunninghamii	Shrub (<0.5 m)	< 1
Sida ?echinocarpa	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Chloris pectinata	Tussock Grass (<0.5 m)	< 1
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis ?tenellula	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Triodia epactia	Hummock Grass (<0.5 m)	< 1

BD_E_101

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.92071, 119.93406				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Pluchea tetranthera	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *×luerssenii*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Sida ?echinocarpa	Shrub (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Peripleura virgata	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_102

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.96106, 119.89079				
Landform	Ridge	**Slope**	Moderate		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia colei var. *colei*	Shrub (>2 m)	< 1
Grevillea wickhamii	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Eremophila longifolia	Shrub (1-2 m)	1 – 4
Gossypium australe	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	1 – 4
Tephrosia rosea var. *clementii*	Shrub (0.5-1 m)	1 – 4
Acacia synchronicia	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Arivela viscosa	Herb (0.5-1 m)	< 1
?*Digitaria ctenantha*	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Rhodanthe margarethae	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum cleistogamum	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
?*Paspalidium clementii*	Tussock Grass (<0.5 m)	< 1
Aristida ?*inaequiglumis*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_103

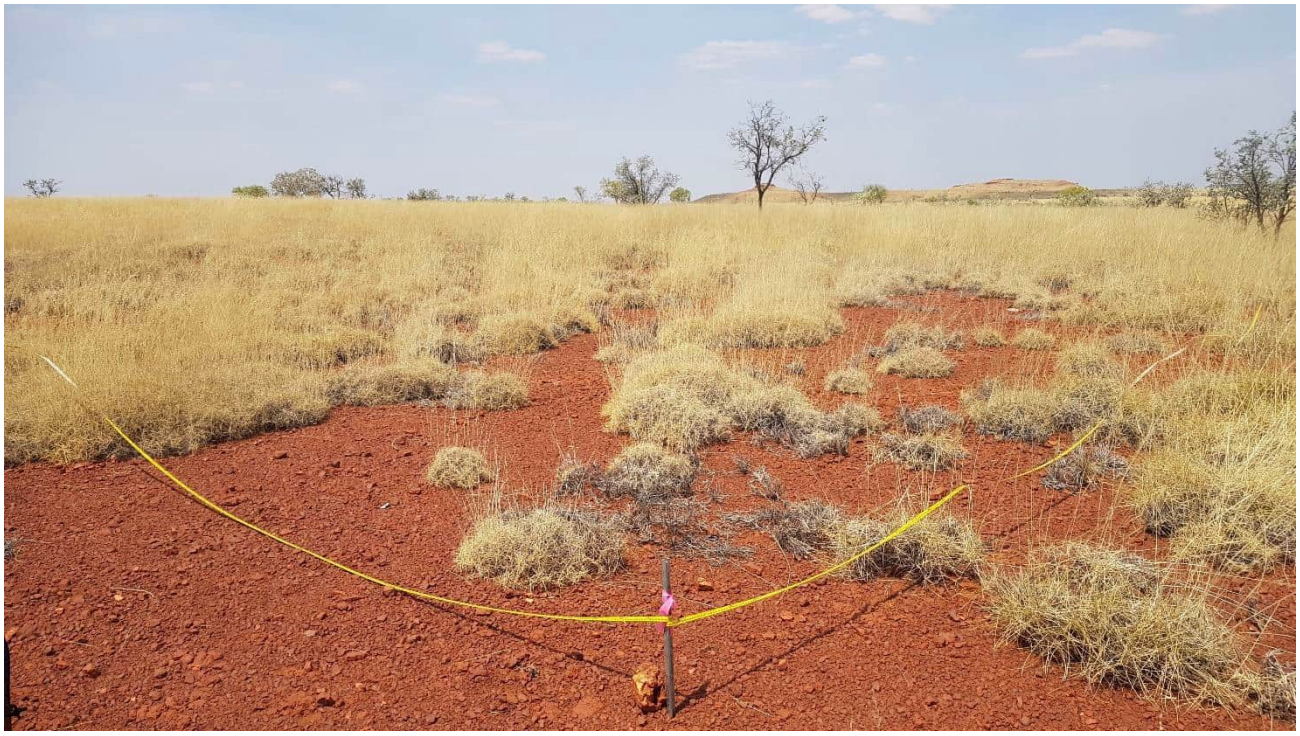
Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.96485, 119.89125				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

No photo.

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Eremophila longifolia	Shrub (0.5-1 m)	< 1
Carissa lanceolata	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Aristida ?inaequiglumis	Tussock Grass (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_104

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.96621, 119.87681				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia ancistrocarpa	Shrub (>2 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia orthocarpa	Shrub (>2 m)	Assoc.
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	Assoc.
Grevillea wickhamii	Shrub (0.5-1 m)	Assoc.
Gossypium australe	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_105

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.96834, 119.90302				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?*aptaneura*	Shrub (>2 m)	25 – 32
Acacia synchronicia	Shrub (>2 m)	Assoc.
Acacia tetragonophylla	Shrub (>2 m)	5 – 9
Carissa lanceolata	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (<0.5 m)	1 – 4
Eremophila latrobei ?subsp. *glabra*	Shrub (<0.5 m)	5 – 9
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida ?*trichopoda*	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Bulbostylis barbata	Sedge (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Abutilon macrum	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Calocephalus knappii	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Euphorbia ?*boophthona*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Maireana planifolia	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tephrosia ?sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Chrysopogon fallax	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Eragrostis cumingii	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_106

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.96947, 119.87264				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	Assoc.
Acacia tenuissima	Shrub (>2 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Pentalepis trichodesmoides subsp. *trichodesmoides*	Herb (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_107

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.97294, 119.90841				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	< 1
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	10 – 24
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Acacia ampliceps	Shrub (0.5-1 m)	< 1
Acacia pyrifolia	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Carissa lanceolata	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Melaleuca bracteata	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Tephrosia rosea var. *clementii*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Bulbostylis barbata	Sedge (<0.5 m)	< 1
Achyranthes aspera	Herb (<0.5 m)	< 1
Alternanthera ?denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Centipeda minima subsp. *macrocephala*	Herb (<0.5 m)	< 1
Corchorus tridens	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Malvastrum americanum	Herb (<0.5 m)	< 1
Polymeria calycina	Herb (<0.5 m)	< 1
Pterocaulon sphacelatum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Wahlenbergia tumidifructa	Herb (<0.5 m)	< 1
Chrysopogon fallax	Tussock Grass (0.5-1 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	25 – 32
Cenchrus setiger	Tussock Grass (<0.5 m)	25 – 32
Dichanthium sericeum	Tussock Grass (<0.5 m)	< 1
Eragrostis cumingii	Tussock Grass (<0.5 m)	< 1
Eragrostis exigua	Tussock Grass (<0.5 m)	< 1
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eriachne benthamii	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	< 1
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1

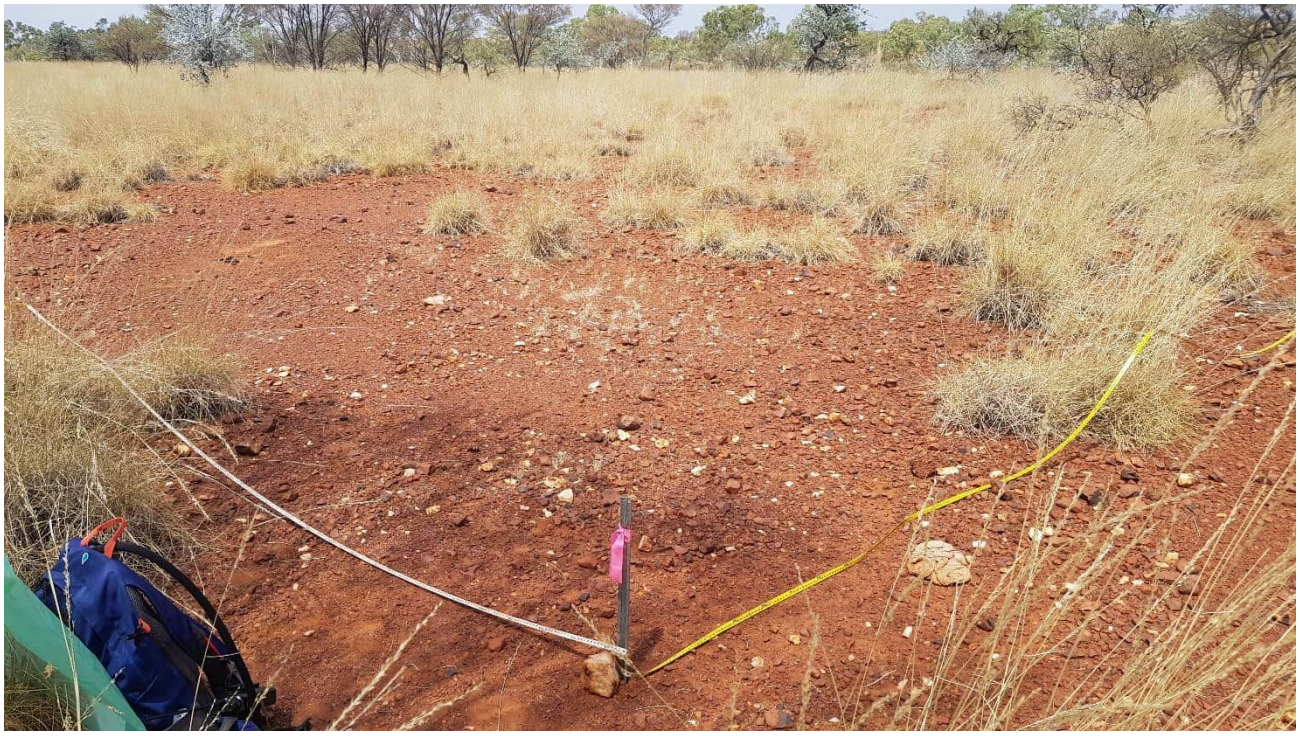
BD_E_108

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.97097, 119.89698				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Eremophila longifolia	Shrub (>2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Eremophila latrobei ?subsp. *glabra*	Shrub (<0.5 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Ptilotus incanus	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_109

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.97088, 119.90925				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (<10 m)	< 1
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Carissa lanceolata	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Pluchea tetranthera	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Melhania oblongifolia	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Solanum phlomoides	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Abutilon macrum	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Digitaria ctenantha	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Chrysopogon fallax	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Urochloa occidentalis var. *occidentalis*	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_110

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.97185, 119.89464				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	< 1
Acacia synchronicia	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Pluchea tetranthera	Shrub (<0.5 m)	1 – 4
Ptilotus incanus	Shrub (<0.5 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_111

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.98092, 119.87415				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_112

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.98255, 119.87176				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Acacia colei var. *colei*	Shrub (>2 m)	< 1
Acacia synchronicia	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (>2 m)	< 1
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Vachellia farnesiana	Shrub (1-2 m)	10 – 24
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Pentalepis trichodesmoides subsp. *trichodesmoides*	Herb (0.5-1 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Eragrostis ?tenellula	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

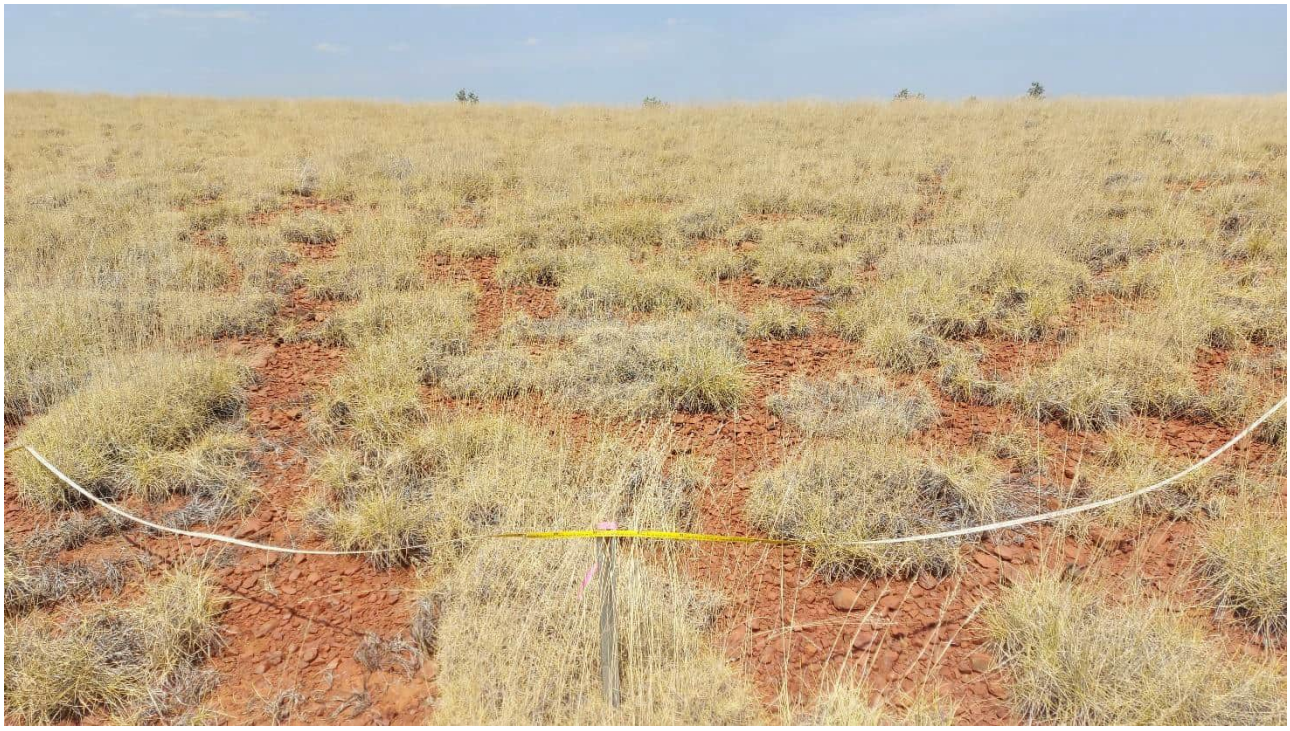
BD_E_113

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-21.98989, 119.8691				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_114

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.99137, 119.87211				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	Assoc.
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_115

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.00255, 119.98147				
Landform	Ridge	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Loamy sand		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	< 1
Acacia ?coriacea subsp. *pendens*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Capparis spinosa subsp. *nummularia*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena ?densiflora	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_116

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.9931, 119.98286				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	1 – 4
Eucalyptus victrix	Tree (10-30 m)	1 – 4
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Acacia ampliceps	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Acacia trachycarpa	Shrub (1-2 m)	1 – 4
Melaleuca linophylla	Shrub (1-2 m)	25 – 32
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (0.5-1 m)	1 – 4
Acacia pyrifolia	Shrub (<0.5 m)	< 1
Atalaya hemiglauca	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Amaranthus undulatus	Herb (0.5-1 m)	< 1
Argemone ochroleuca subsp. *ochroleuca*	Herb (0.5-1 m)	< 1
Sesbania cannabina	Herb (0.5-1 m)	< 1
Achyranthes aspera	Herb (<0.5 m)	< 1
Aerva javanica	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Cyperus vaginatus	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Dysphania rhadinostachya subsp. *rhadinostachya*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Malvastrum americanum	Herb (<0.5 m)	< 1
Marsilea exarata	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Trianthema glossostigmum	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (0.5-1 m)	10 – 24
Cenchrus setiger	Tussock Grass (0.5-1 m)	10 – 24
Eriachne tenuiculmis	Tussock Grass (0.5-1 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Eragrostis cumingii	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	< 1

BD_E_117

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.00051, 119.87367				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Acacia colei var. *colei*	Shrub (0.5-1 m)	< 1
Acacia bivenosa	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca heterantha	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

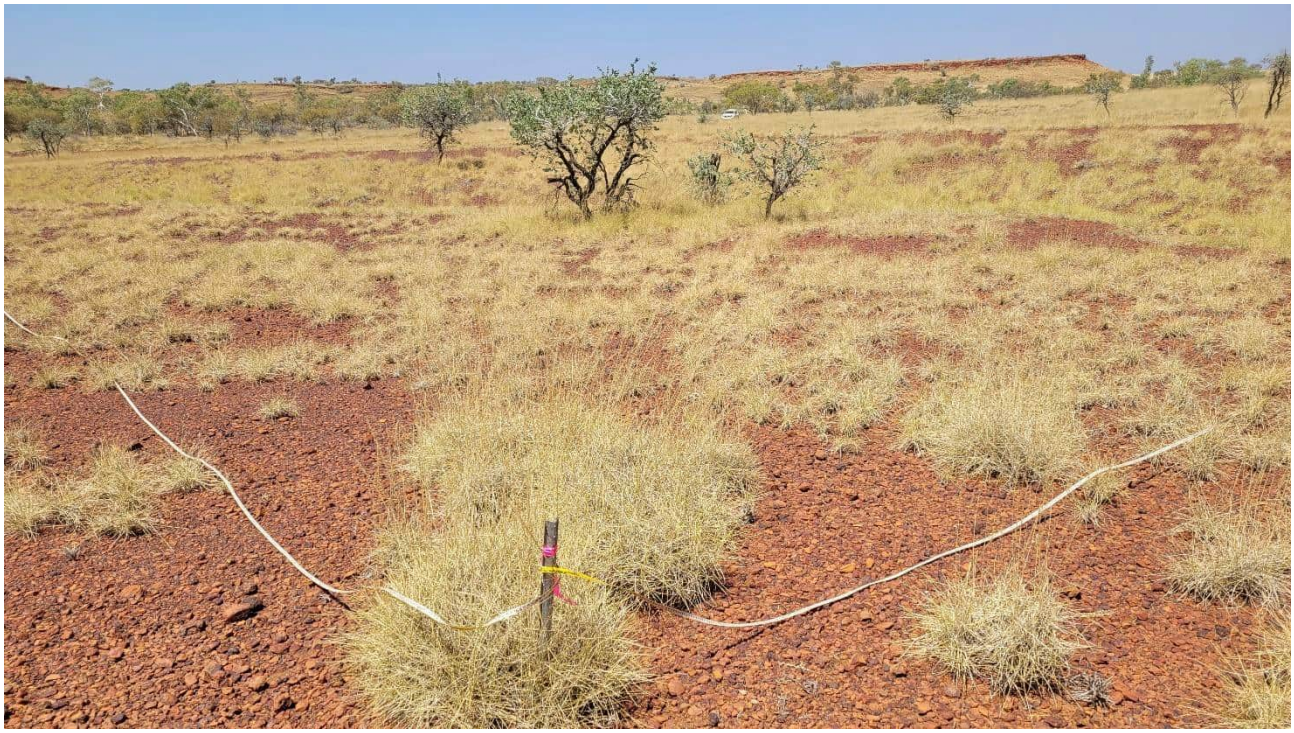
BD_E_118

Date	17/09/2023	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.00208, 119.87482				
Landform	Ridge	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_119

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.01086, 119.87566				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Abutilon lepidum	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

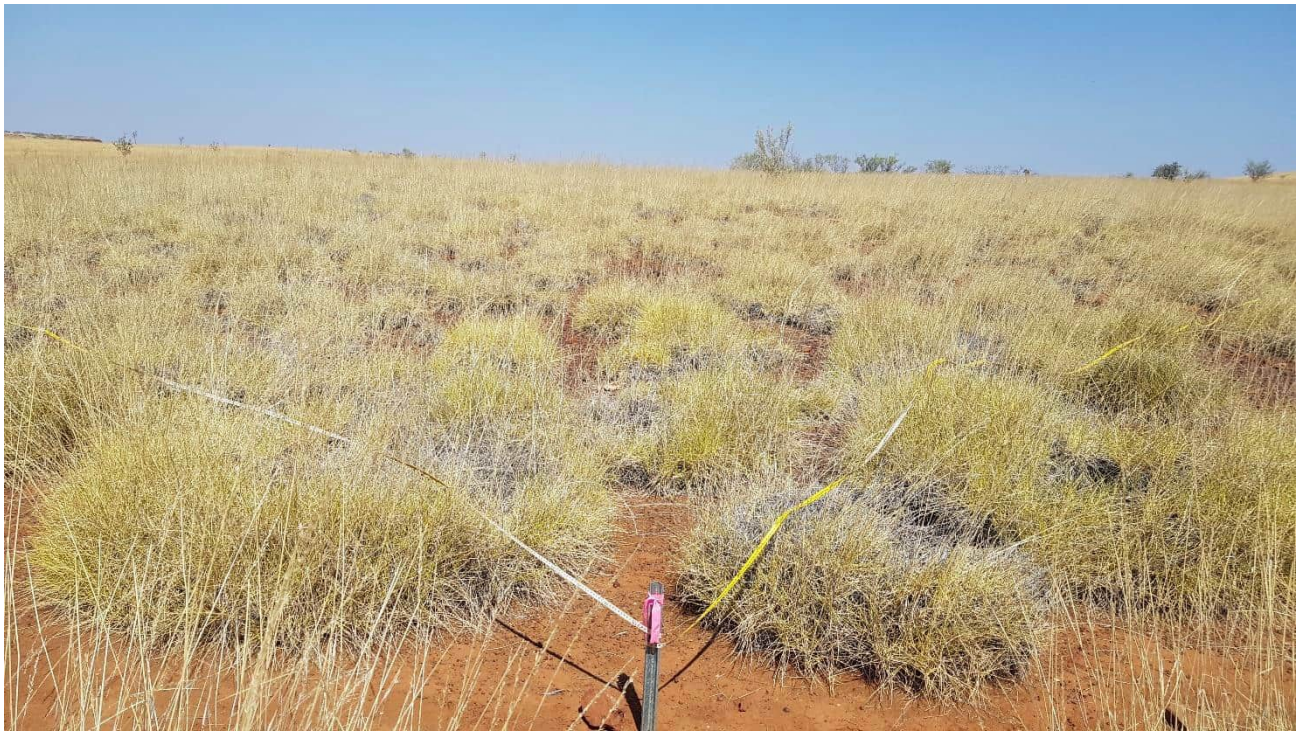
BD_E_120

Date	17/09/2023	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.01168, 119.87459				
Landform	Ridge	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia monticola	Shrub (1-2 m)	1 – 4
Dodonaea coriacea	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	1 – 4
Acacia ancistrocarpa	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_121

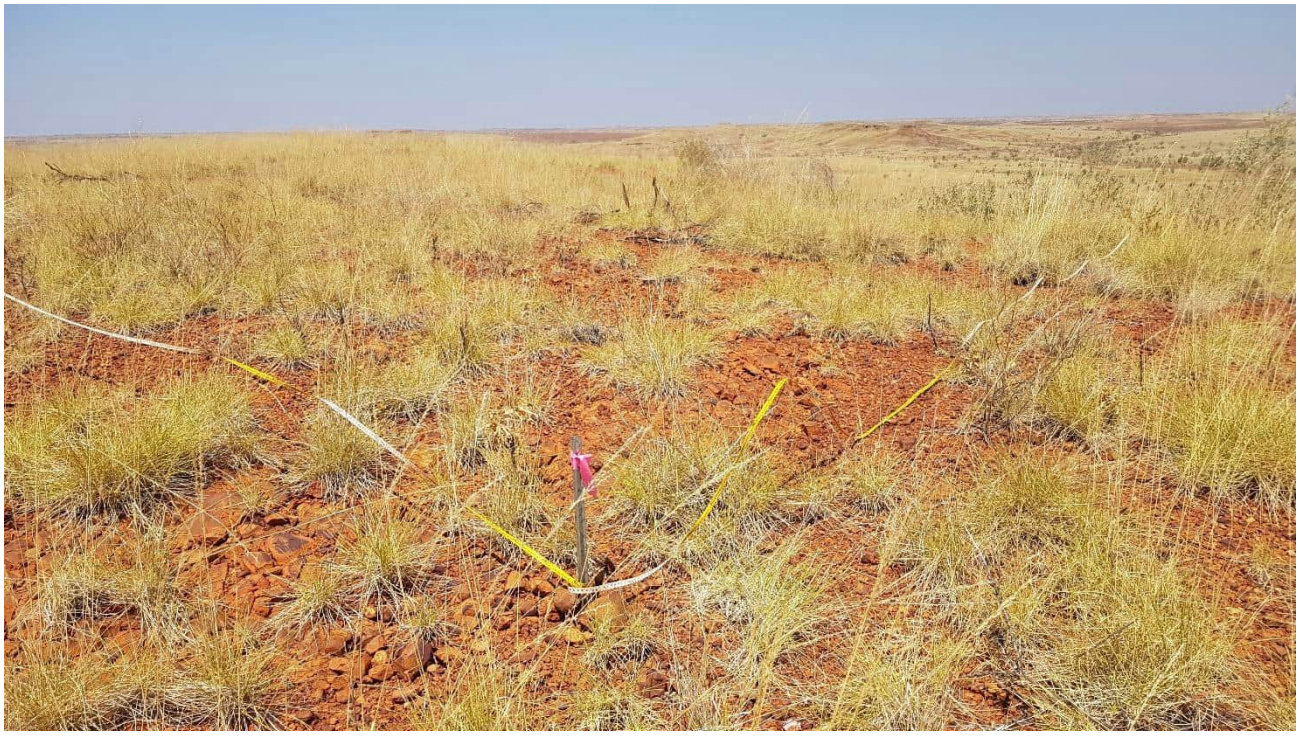
Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.02101, 119.8744				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	Assoc.
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cynodon prostratus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_122

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.02382, 119.87388				
Landform	Ridge	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

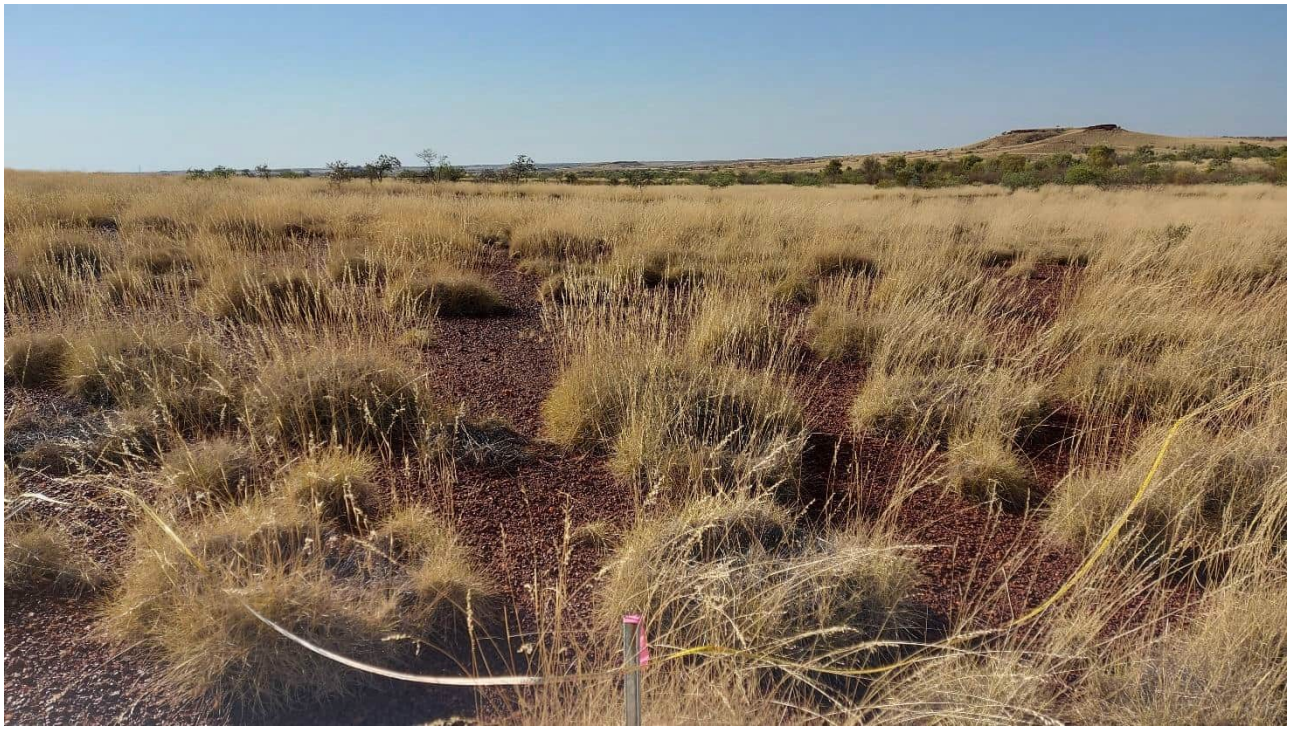


Name	Stratum	Percent cover (%)
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Acacia monticola	Shrub (<0.5 m)	< 1
Capparis umbonata	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Grevillea wickhamii	Shrub (<0.5 m)	5 – 9
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (<0.5 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	1 – 4
Hibiscus coatesii	Herb (<0.5 m)	< 1
Maireana villosa	Herb (<0.5 m)	< 1
Nicotiana benthamiana	Herb (<0.5 m)	< 1
Polycarpaea longiflora	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Rhodanthe margarethae	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32

Name	Stratum	Percent cover (%)
Triodia brizoides	Hummock Grass (<0.5 m)	< 1

BD_E_123

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.02952, 119.88289				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	< 1
Acacia synchronicia	Shrub (>2 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	1 – 4
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

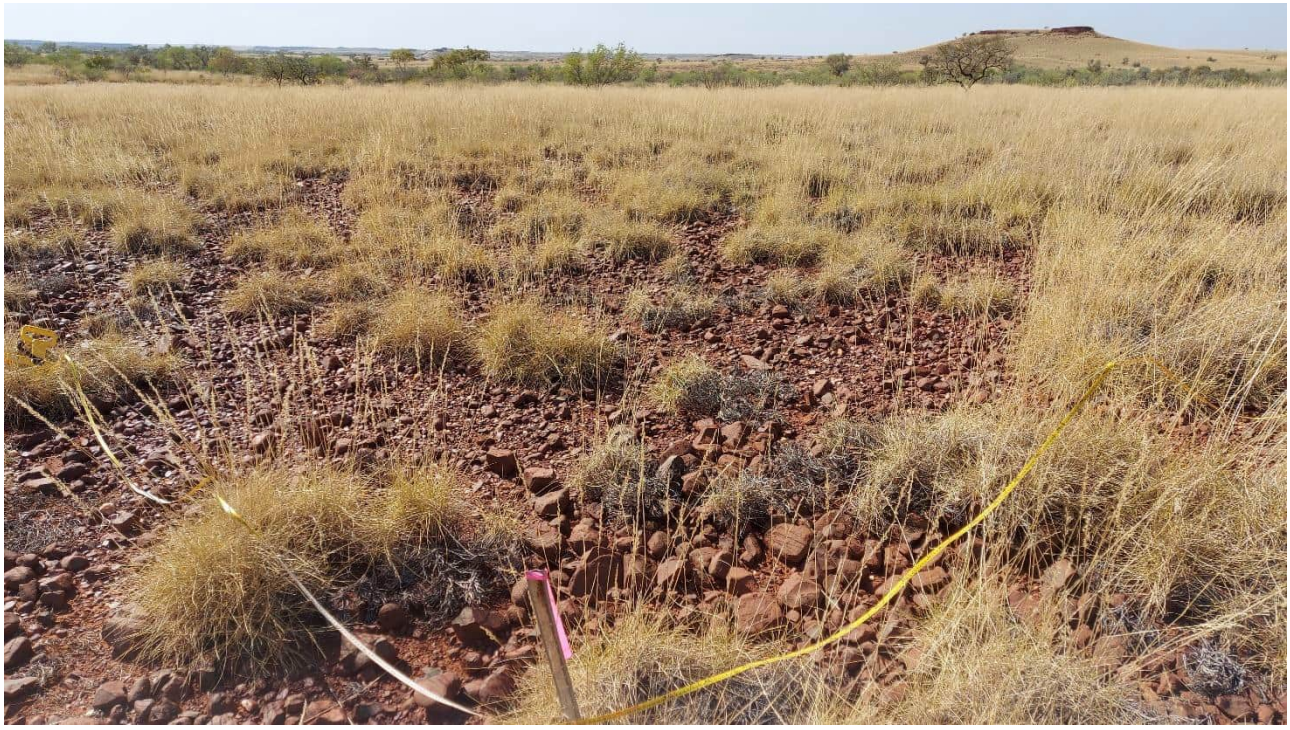
BD_E_124

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.03116, 119.91408				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Acacia ancistrocarpa	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Capparis umbonata	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Cassytha ?capillaris	Herb (<0.5 m)	1 – 4
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	1 – 4
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24
?Amyema preissii	Parasitic/Epiphytic	1 – 4

BD_E_125

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.03242, 119.88236				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (0.5-1 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_126

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.03254, 119.91536				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	< 10%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Tree (<10 m)	10 – 24
Melaleuca linophylla	Shrub (>2 m)	5 – 9
Atalaya hemiglauca	Shrub (1-2 m)	1 – 4
Calotropis procera	Shrub (1-2 m)	< 1
Eremophila longifolia	Shrub (1-2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Plumbago zeylanica	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Achyranthes aspera	Herb (<0.5 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Ammannia baccifera	Herb (<0.5 m)	< 1
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	< 1
Blumea tenella	Herb (<0.5 m)	< 1
Centipeda minima subsp. *macrocephala*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Marsilea exarata	Herb (<0.5 m)	< 1
Pluchea rubelliflora	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Eragrostis ?tenellula	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1

BD_E_127

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.03377, 119.87879				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Acacia bivenosa	Shrub (<0.5 m)	< 1
Acacia synchronicia	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Eremophila longifolia	Shrub (<0.5 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Eragrostis ?tenellula	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Triodia longiceps	Hummock Grass (<0.5 m)	10 – 24

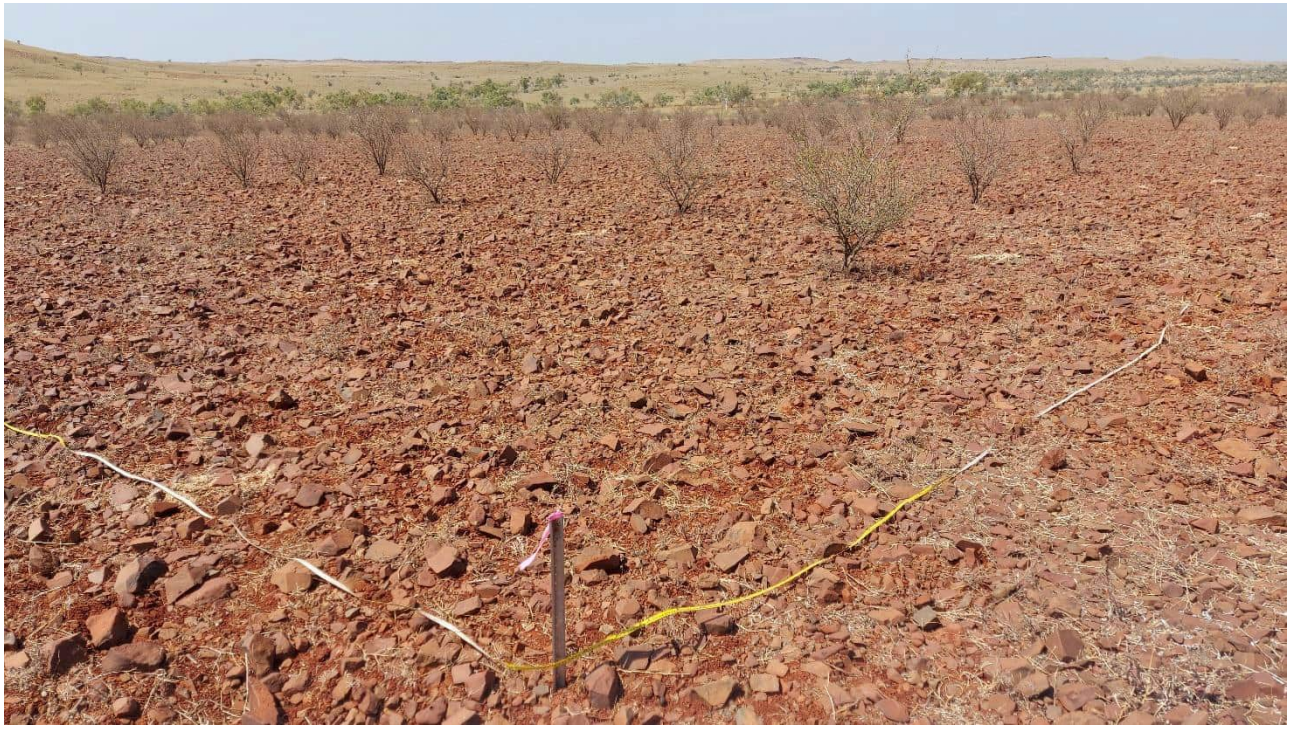
BD_E_128

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.03419, 119.87738				
Landform	Ridge	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Grevillea wickhamii	Shrub (1-2 m)	5 – 9
Gossypium australe	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	< 1
Triumfetta maconochieana	Shrub (0.5-1 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	1 – 4
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_129

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.03782, 119.84292				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	10 – 24
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	< 1
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	5 – 9
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	1 – 4
Cynodon convergens	Tussock Grass (<0.5 m)	1 – 4

BD_E_130

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.0454, 119.84988				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Swainsona decurrens	Herb (0.5-1 m)	1 – 4
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_131

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.05122, 119.85164				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	10 – 24
Eucalyptus victrix	Tree (<10 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Atalaya hemiglauca	Shrub (1-2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	1 – 4
Capparis spinosa subsp. *nummularia*	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cullen leucanthum	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
?*Sida* sp. *(indet.)*	Herb (<0.5 m)	< 1
Boerhavia ?*coccinea*	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Dysphania rhadinostachya subsp. *rhadinostachya*	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulus astrocarpus	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Cenchrus setiger	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eragrostis ?tenellula	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_132

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.05195, 119.84055				
Landform	Plain (clay)	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (>2 m)	10 – 24
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Sida trichopoda	Shrub (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	1 – 4
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	25 – 32
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1

BD_E_133

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.0909, 119.84978				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	1 – 4
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Eucalyptus victrix	Tree (<10 m)	5 – 9
Acacia bivenosa	Shrub (>2 m)	5 – 9
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	5 – 9
Gossypium robinsonii	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (0.5-1 m)	1 – 4
Androcalva luteiflora	Shrub (0.5-1 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Atalaya hemiglauca	Shrub (<0.5 m)	< 1
Jasminum didymum subsp. *lineare*	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Themeda triandra	Tussock Grass (0.5-1 m)	5 – 9
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_134

Date	18/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.07055, 119.85274				
Landform	Ridge	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	< 1
Gossypium australe	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Clerodendrum floribundum	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Eremophila longifolia	Shrub (<0.5 m)	< 1
Jasminum didymum subsp. *lineare*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Triumfetta maconochieana	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Amaranthus undulatus	Herb (<0.5 m)	< 1
Bidens bipinnata	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Dysphania rhadinostachya subsp. *rhadinostachya*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32
Tinospora smilacina	Vine (<0.5 m)	< 1

BD_E_135

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.07393, 119.89451				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ?aptaneura	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Acacia tenuissima	Shrub (1-2 m)	1 – 4
Senna symonii	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Acacia tetragonophylla	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Trianthema glossostigmum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_136

Date	17/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.07468, 119.89948				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Calcrete	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Senna symonii	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Senna ?stricta	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Abutilon ?lepidum	Herb (<0.5 m)	< 1
Dysphania sphaerosperma	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis ?eriopoda	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_137

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.10525, 119.87552				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Senna ?stricta	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna sericea	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Gossypium australe	Shrub (0.5-1 m)	< 1
Acacia ancistrocarpa	Shrub (<0.5 m)	< 1
Acacia synchronicia	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9

BD_E_138

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.10954, 119.87013				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ?aptaneura	Shrub (>2 m)	10 – 24
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Anthobolus leptomerioides	Shrub (0.5-1 m)	< 1
Psydrax suaveolens	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_139

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.11609, 119.92237				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Calcrete, quartz, ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	10 – 24
Eucalyptus victrix	Tree (<10 m)	5 – 9
Acacia synchronicia	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_140

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.11696, 119.88112				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Quartz, ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	5 – 9
Santalum lanceolatum	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *×luerssenii*	Shrub (0.5-1 m)	1 – 4
Acacia ?sibirica	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Dampiera candicans	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Euploca heterantha	Shrub (<0.5 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	1 – 4
Triumfetta chaetocarpa	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (0.5-1 m)	1 – 4
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Haloragis trigonocarpa	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Triodia brizoides	Hummock Grass (<0.5 m)	33 – 49
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_141

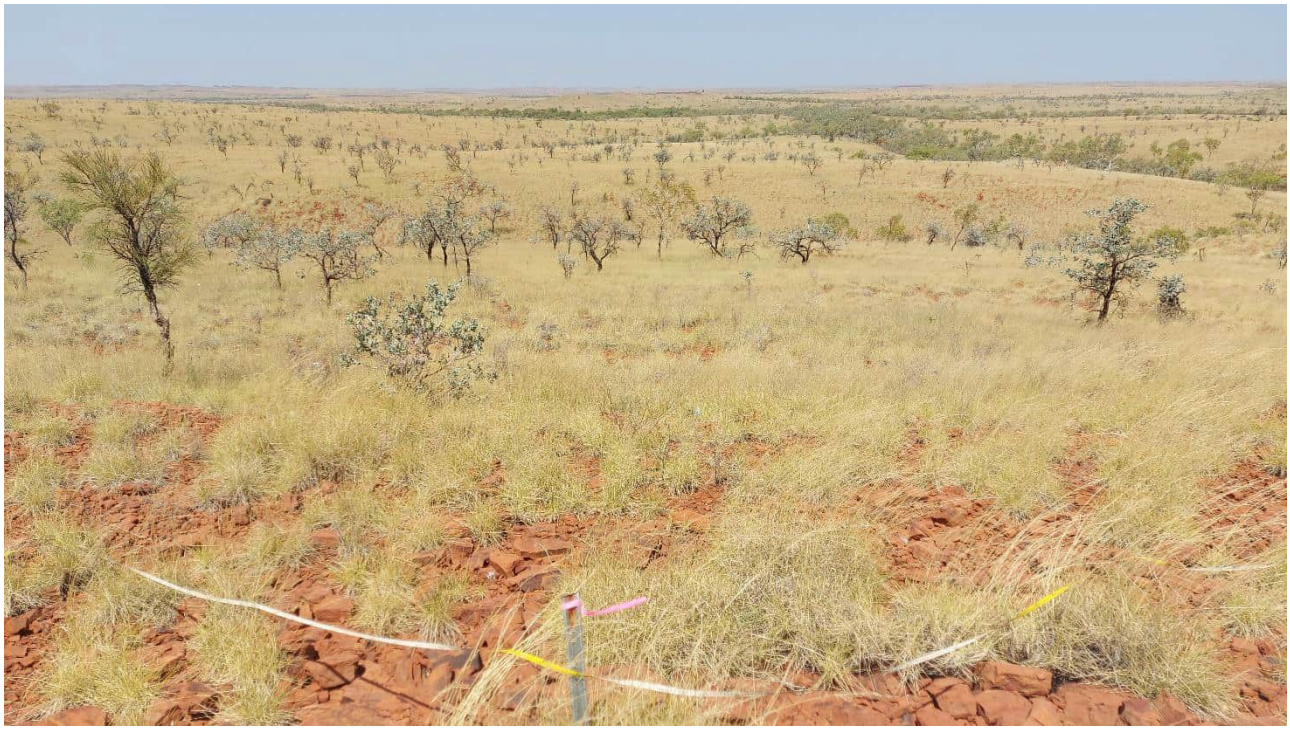
Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.11859, 119.87576				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia aptaneura	Shrub (>2 m)	33 – 49
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Acacia adsurgens	Shrub (1-2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	5 – 9
Acacia tenuissima	Shrub (1-2 m)	1 – 4
Indigofera monophylla	Shrub (1-2 m)	10 – 24
Acacia bivenosa	Shrub (0.5-1 m)	10 – 24
Acacia pyrifolia	Shrub (0.5-1 m)	1 – 4
Anthobolus leptomerioides	Shrub (0.5-1 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	1 – 4
Dodonaea petiolaris	Shrub (0.5-1 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (0.5-1 m)	1 – 4
Jasminum didymum subsp. *lineare*	Shrub (0.5-1 m)	1 – 4
Psydrax suaveolens	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Seringia ?exastia	Shrub (0.5-1 m)	10 – 24
Androcalva luteiflora	Shrub (<0.5 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Abutilon ?lepidum	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Aristida ?inaequiglumis	Tussock Grass (0.5-1 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Paraneurachne muelleri	Tussock Grass (0.5-1 m)	10 – 24
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (1-2 m)	1 – 4

Name	Stratum	Percent cover (%)
Triodia brizoides	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_142

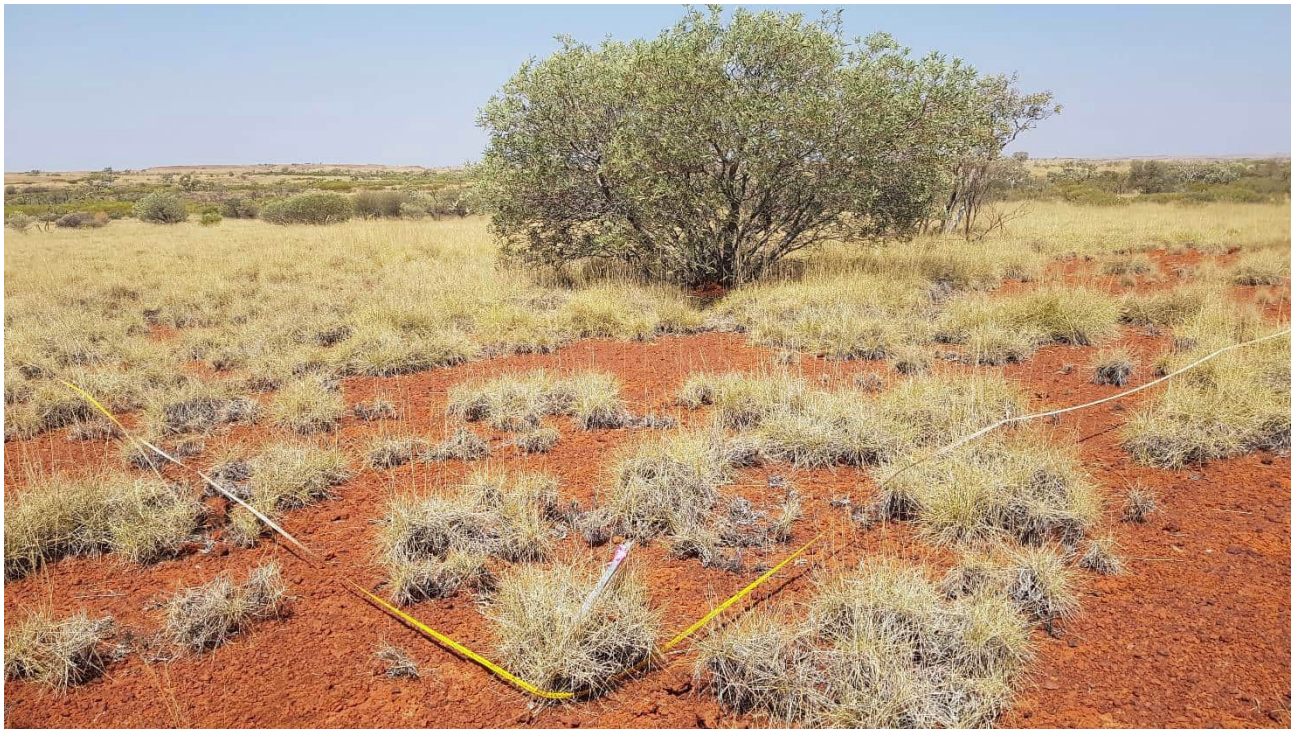
Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.11818, 119.92591				
Landform	Hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	5 – 9
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_143

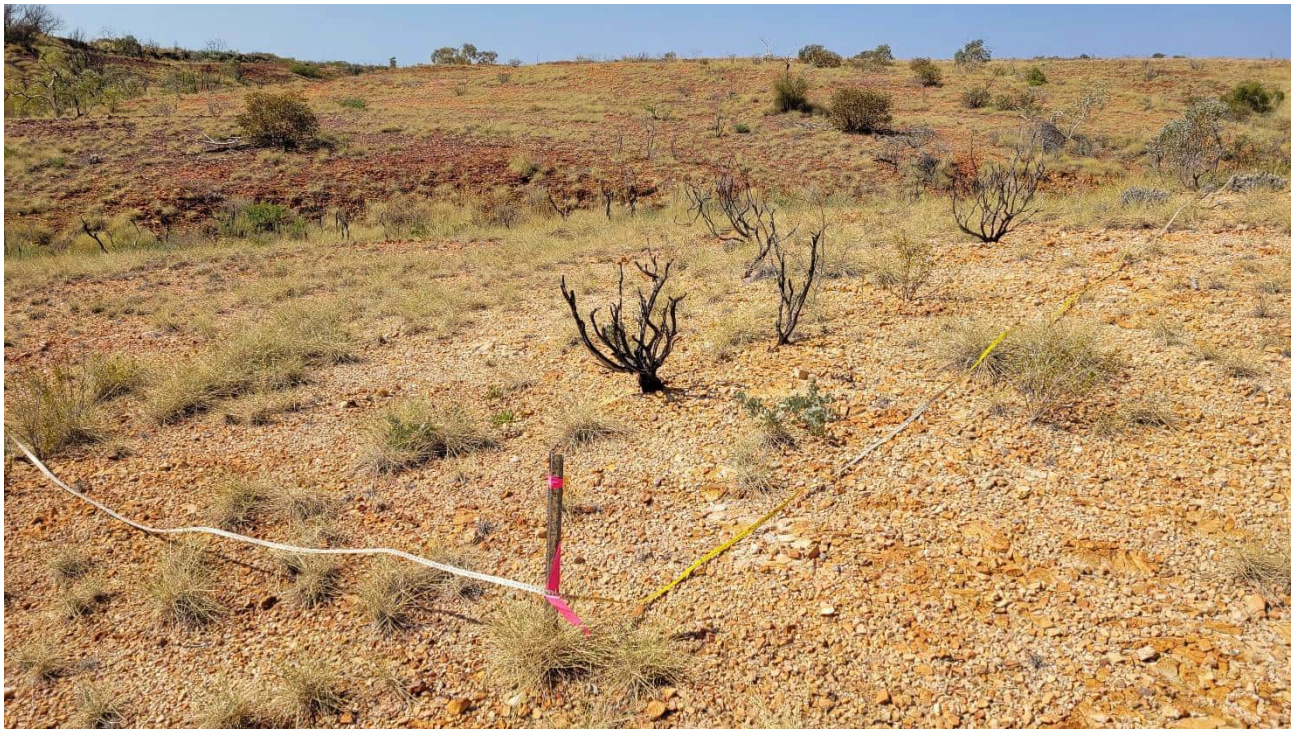
Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.12574, 119.81647				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia tetragonophylla	Shrub (1-2 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_144

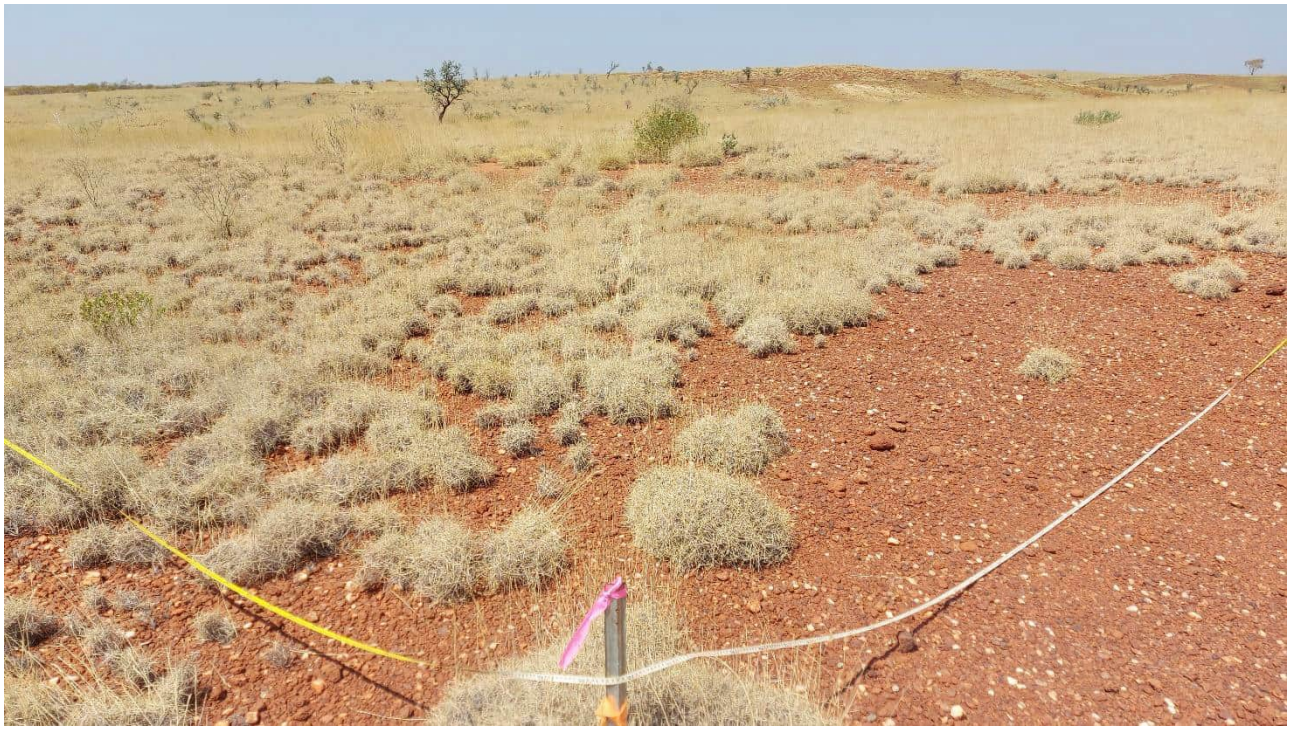
Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.12531, 119.87276				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Grey	**Soil texture**	Loamy sand		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	10 – 24
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	Assoc.
Acacia ?sibirica	Shrub (1-2 m)	< 1
Acacia ancistrocarpa	Shrub (0.5-1 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Androcalva luteiflora	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Lepidium pedicellosum	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Ptilotus incanus	Shrub (<0.5 m)	< 1
Scaevola spinescens	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	1 – 4
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (<0.5 m)	10 – 24

BD_E_145

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.12681, 119.80778				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	5 – 9
Acacia tenuissima	Shrub (0.5-1 m)	1 – 4
Capparis umbonata	Shrub (0.5-1 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia brizoides	Hummock Grass (<0.5 m)	33 – 49
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_146

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.1285, 119.81568				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	10 – 30%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	10 – 24
Acacia ancistrocarpa	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (>2 m)	< 1
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	< 1
Senna ?stricta	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (>2 m)	< 1
Acacia tenuissima	Shrub (1-2 m)	5 – 9
Eremophila latrobei ?subsp. *glabra*	Shrub (0.5-1 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Seringia ?exastia	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_147

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.1281, 119.87124				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Light grey	**Soil texture**	Sandy clay loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus socialis subsp. *eucentrica*	Mallee (<10 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Melaleuca eleuterostachya	Shrub (1-2 m)	10 – 24
Petalostylis labicheoides	Shrub (1-2 m)	1 – 4
Santalum lanceolatum	Shrub (1-2 m)	5 – 9
Senna ?stricta	Shrub (1-2 m)	1 – 4
Acacia ?sibirica	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Anthobolus leptomerioides	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	5 – 9
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_148

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.13025, 119.8102				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32

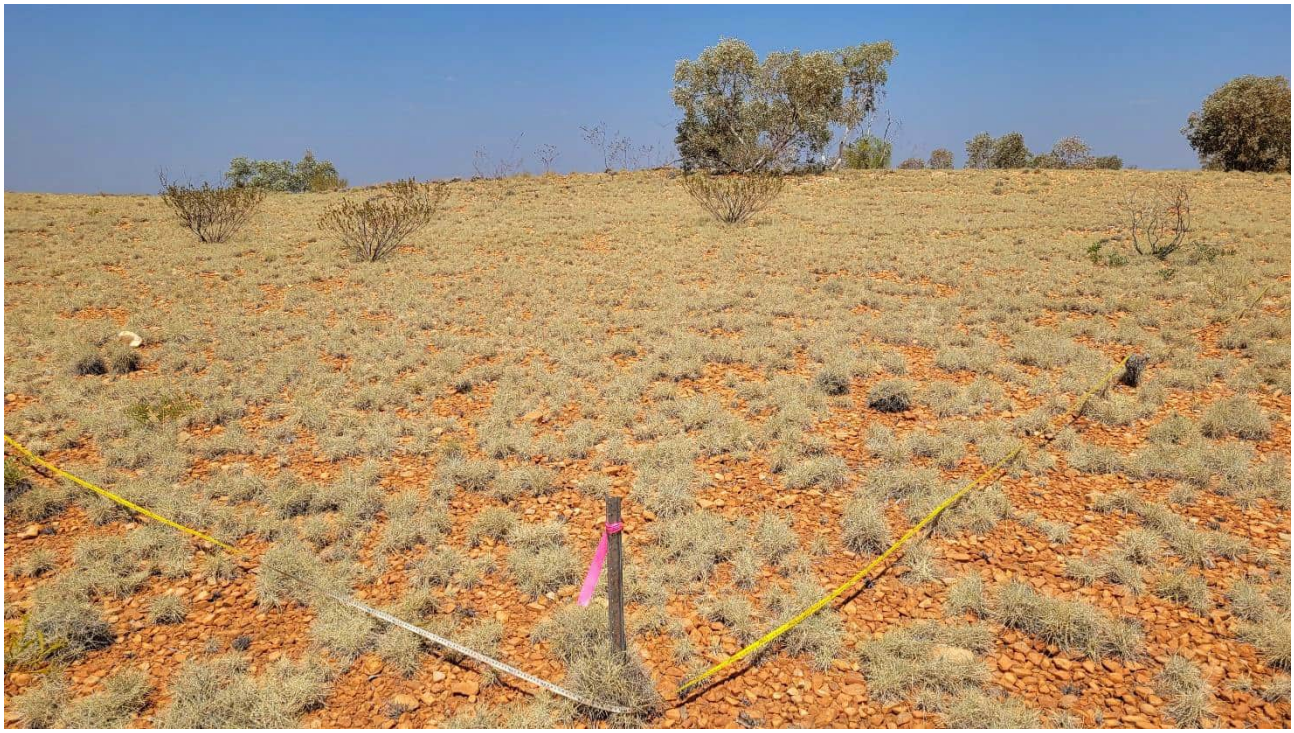
BD_E_149

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.13353, 119.81267				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ancistrocarpa	Shrub (1-2 m)	10 – 24
Acacia bivenosa	Shrub (1-2 m)	< 1
Petalostylis labicheoides	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Abutilon ?lepidum	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Paraneurachne muelleri	Tussock Grass (0.5-1 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_150

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.13323, 119.88011				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	10 – 24
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Acacia pruinocarpa	Shrub (0.5-1 m)	< 1
Acacia tenuissima	Shrub (0.5-1 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Capparis umbonata	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna sericea	Shrub (0.5-1 m)	1 – 4
Acacia ?aptaneura	Shrub (<0.5 m)	< 1
Acacia ancistrocarpa	Shrub (<0.5 m)	< 1
Acacia ptychophylla	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	1 – 4
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Abutilon ?fraseri	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9

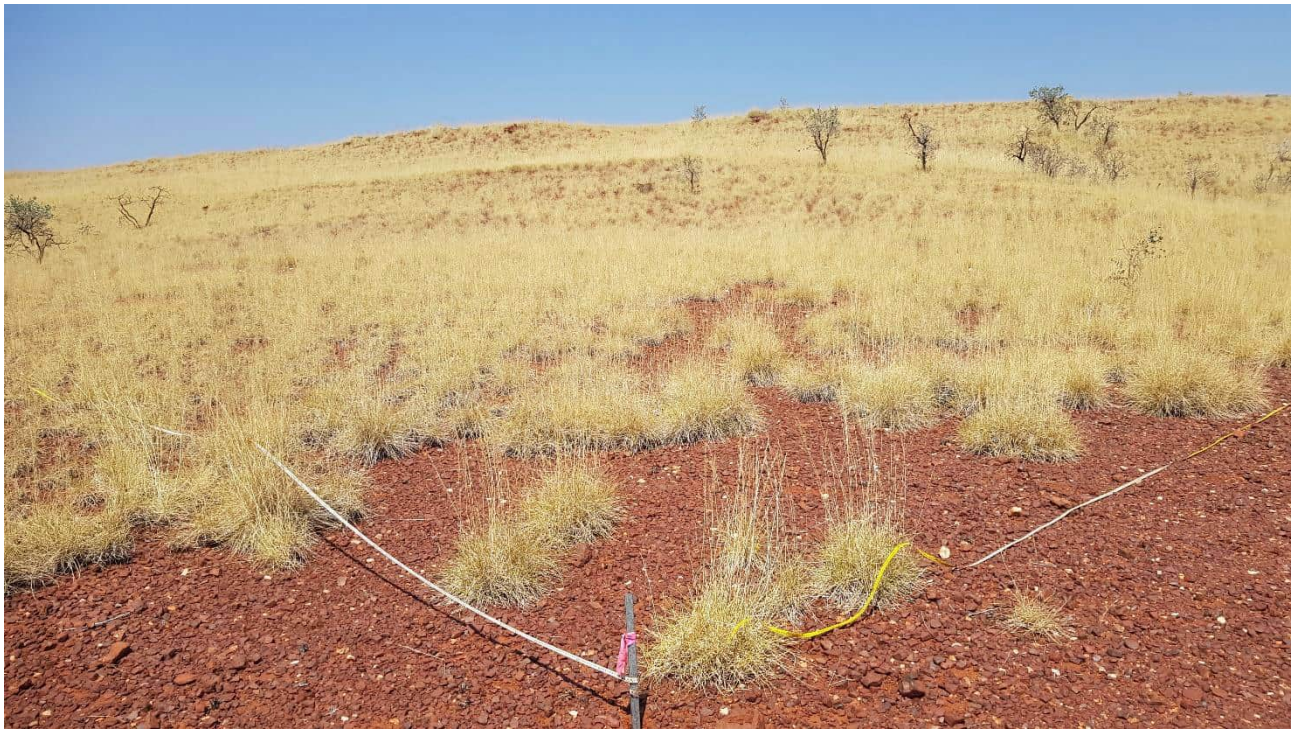
BD_E_151

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.13505, 119.81752				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia tenuissima	Shrub (0.5-1 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_152

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.13598, 119.89186				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	Assoc.
Corchorus incanus	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

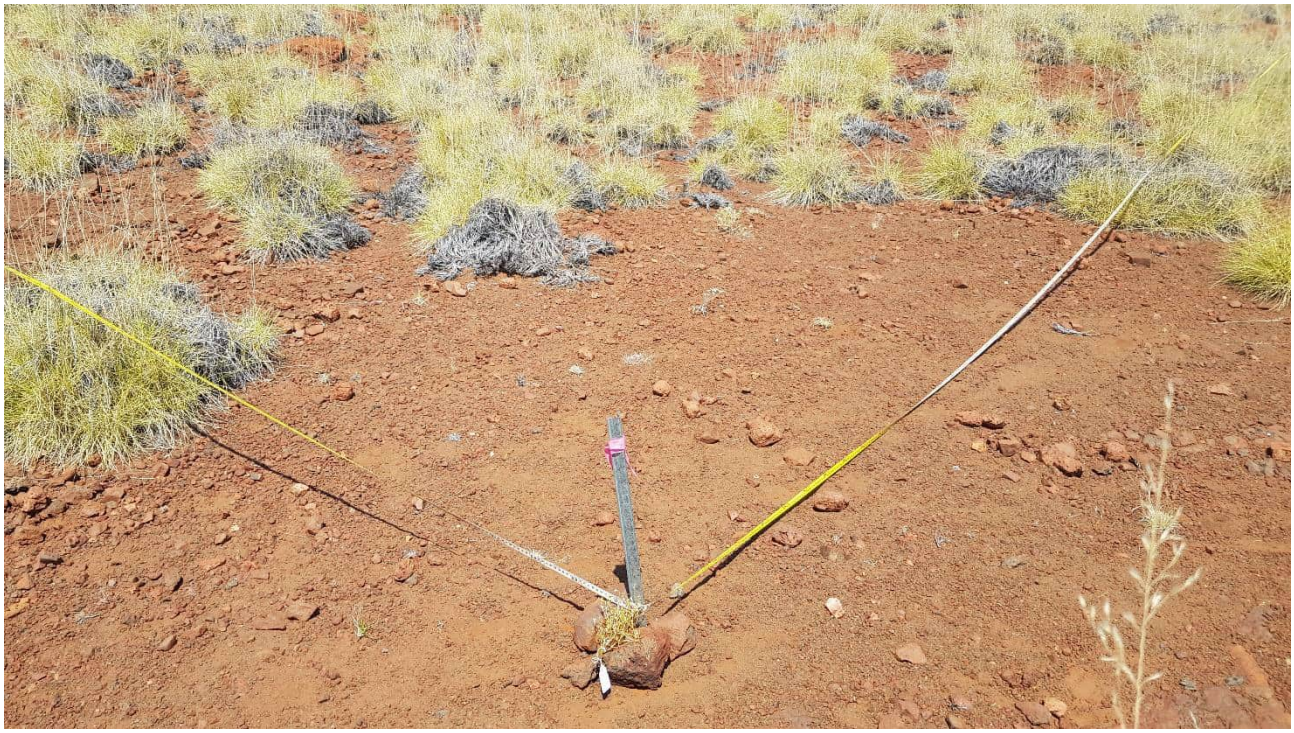
BD_E_153

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.13624, 119.88943				
Landform	Ridge	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Clerodendrum floribundum	Shrub (>2 m)	1 – 4
Capparis umbonata	Shrub (1-2 m)	< 1
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	1 – 4
Acacia ancistrocarpa	Shrub (<0.5 m)	< 1
Acacia ptychophylla	Shrub (<0.5 m)	5 – 9
Dampiera candicans	Shrub (<0.5 m)	< 1
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (<0.5 m)	< 1
Ptilotus incanus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Nicotiana benthamiana	Herb (0.5-1 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	1 – 4
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Hibiscus coatesii	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Tephrosia ?sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (0.5-1 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_154

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.1357, 119.92716				
Landform	Ridge	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	1 – 4
Pentalepis trichodesmoides subsp. *trichodesmoides*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Swainsona stenodonta	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_155

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.13947, 119.80282				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Sida ?echinocarpa	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

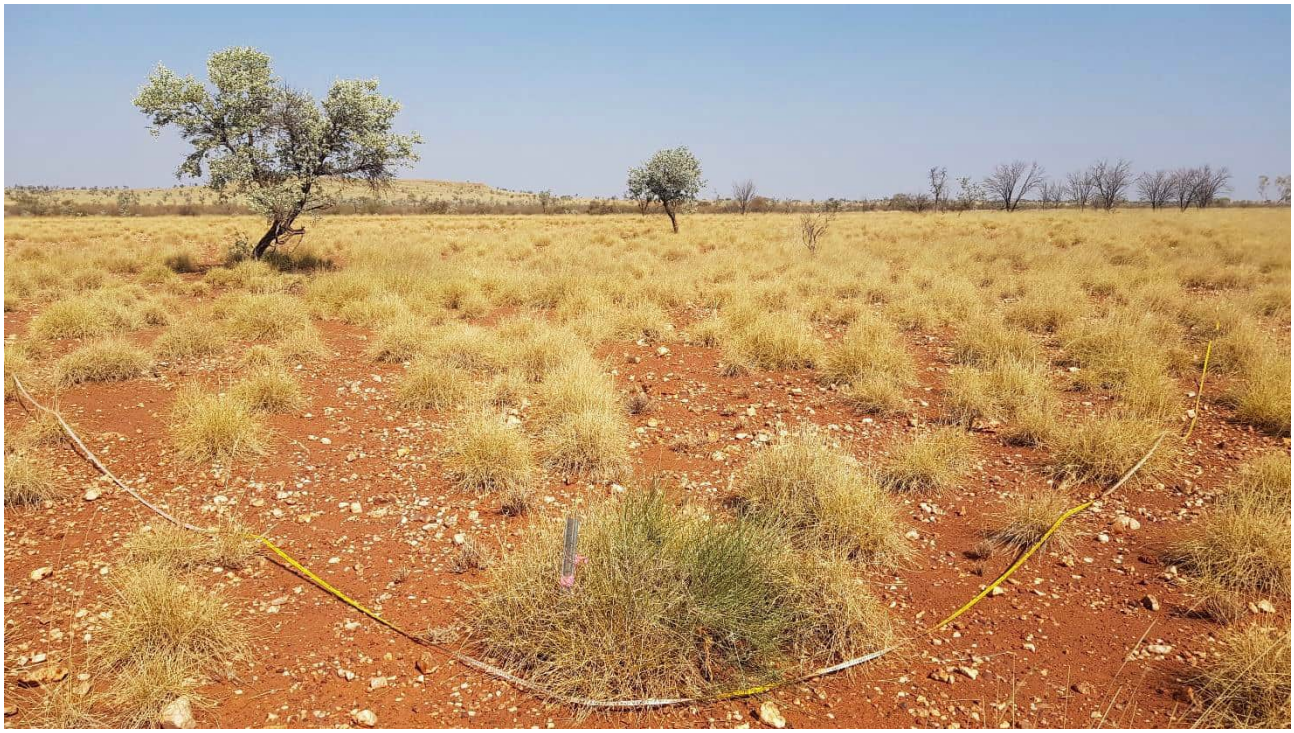
BD_E_156

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.13961, 119.87471				
Landform	Hill	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Dampiera candicans	Shrub (<0.5 m)	1 – 4
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	1 – 4
Goodenia stobbsiana	Herb (<0.5 m)	1 – 4
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Trianthema glossostigmum	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (0.5-1 m)	10 – 24
Eriachne lanata	Tussock Grass (<0.5 m)	10 – 24
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_157

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.13145, 119.92203				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Calocephalus knappii	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	1 – 4
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_158

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.14101, 119.818				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Mixed	**Rock cover**	10 – 30%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (0.5-1 m)	1 – 4
Eremophila longifolia	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32
Triodia brizoides	Hummock Grass (<0.5 m)	33 – 49

BD_E_159

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.14594, 119.80938				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Calcrete, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Capparis umbonata	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Corchorus ?incanus	Shrub (<0.5 m)	1 – 4
Euploca chrysocarpa	Shrub (<0.5 m)	1 – 4
Hibiscus sturtii	Shrub (<0.5 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	1 – 4
Abutilon ?lepidum	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	10 – 24
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4

BD_E_160

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.14718, 119.8136				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sandy clay loam		
Rock type	Mixed river alluvium	**Rock size**	Mixed	**Rock cover**	10 – 30%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	10 – 24
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Eucalyptus victrix	Tree (<10 m)	1 – 4
Acacia eriopoda	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Gossypium robinsonii	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Acacia pyrifolia	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (1-2 m)	1 – 4
Androcalva luteiflora	Shrub (1-2 m)	1 – 4
Capparis lasiantha	Shrub (0.5-1 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Jasminum didymum subsp. *lineare*	Shrub (<0.5 m)	< 1
Sida ?trichopoda	Shrub (<0.5 m)	< 1
Solanum phlomoides	Shrub (<0.5 m)	< 1
Tephrosia rosea var. *clementii*	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	1 – 4
Sida rohlenae subsp. *rohlenae*	Herb (0.5-1 m)	1 – 4
Alternanthera nana	Herb (<0.5 m)	< 1
Bonamia pannosa	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Goodenia ?tenuiloba	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	33 – 49
Cenchrus setiger	Tussock Grass (<0.5 m)	33 – 49
Dichanthium sericeum	Tussock Grass (<0.5 m)	1 – 4
Eragrostis exigua	Tussock Grass (<0.5 m)	1 – 4
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (1-2 m)	5 – 9

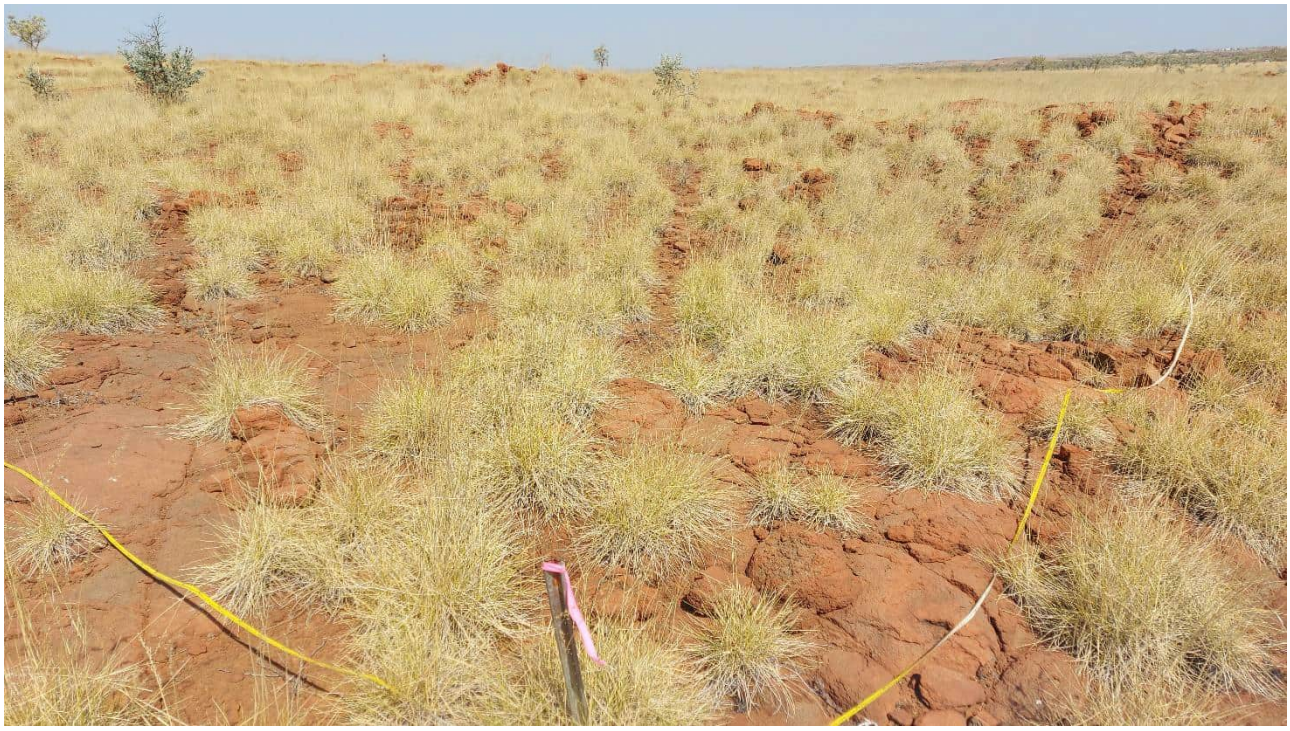
BD_E_161

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.15061, 119.86372				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Dodonaea coriacea	Shrub (0.5-1 m)	< 1
Acacia ptychophylla	Shrub (<0.5 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	5 – 9
Senna symonii	Shrub (<0.5 m)	< 1
Seringia ?exastia	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (0.5-1 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	1 – 4
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	5 – 9
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_162

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.14965, 119.93249				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_163

Date	14/09/2023	**Site type**	Flora: Releve	**Botanist**	SN
Location	-22.15115, 119.86725				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia eriopoda	Shrub (>2 m)	< 1
Acacia ptychophylla	Shrub (1-2 m)	10 – 24
Acacia pyrifolia	Shrub (1-2 m)	< 1
Acacia tenuissima	Shrub (1-2 m)	10 – 24
Acacia tetragonophylla	Shrub (1-2 m)	< 1
Capparis umbonata	Shrub (1-2 m)	1 – 4
Senna symonii	Shrub (1-2 m)	5 – 9
Acacia ancistrocarpa	Shrub (0.5-1 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Dodonaea coriacea	Shrub (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Shrub (<0.5 m)	< 1
Corchorus incanus	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (<0.5 m)	< 1
Solanum phlomoides	Shrub (<0.5 m)	< 1
Tephrosia rosea var. *clementii*	Shrub (<0.5 m)	< 1
Cassytha ?capillaris	Herb (0.5-1 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	1 – 4
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Cymbopogon obtectus	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (<0.5 m)	< 1

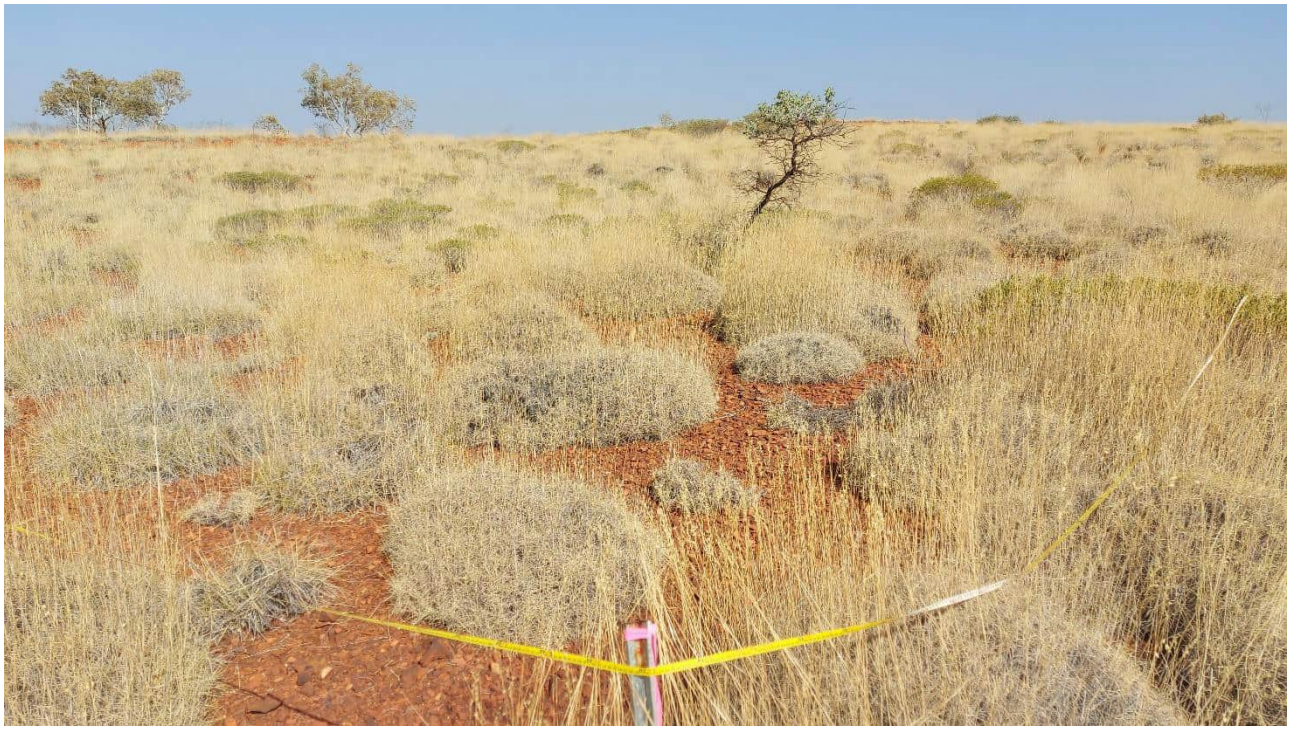
BD_E_164

Date	16/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.1562, 119.9293				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Isolated outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia coriacea subsp. *pendens*	Tree (<10 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	Assoc.
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_165

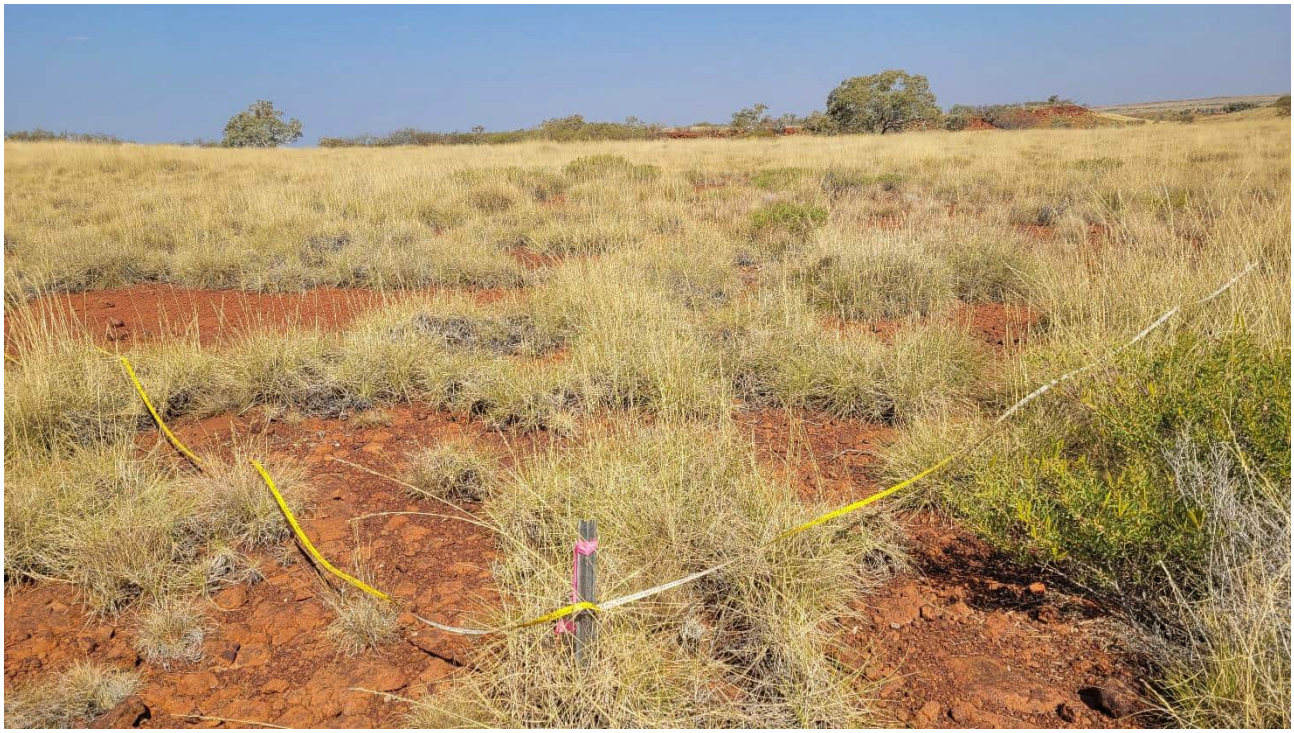
Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.15826, 119.84167				
Landform	Undulating plain	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Senna symonii	Shrub (1-2 m)	< 1
Acacia ancistrocarpa	Shrub (0.5-1 m)	< 1
Acacia ptychophylla	Shrub (<0.5 m)	10 – 24
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Senna sericea	Shrub (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia wiseana	Hummock Grass (0.5-1 m)	33 – 49

BD_E_166

Date	14/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.16099, 119.83558				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Grevillea wickhamii	Shrub (>2 m)	Assoc.
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Acacia ptychophylla	Shrub (0.5-1 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_167

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.15881, 119.94532				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	Assoc.
Senna ?stricta	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Senna symonii	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Acacia tetragonophylla	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_168

Date	15/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.16601, 119.94805				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Calcrete	**Rock size**	Fine gravel/pebbles	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	10 – 24
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Acacia pyrifolia	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Anthobolus leptomerioides	Shrub (0.5-1 m)	< 1
Acacia sclerosperma subsp. *sclerosperma*	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (<0.5 m)	1 – 4

BD_E_169

Date	19/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.93308, 119.93784				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ancistrocarpa	Shrub (>2 m)	Assoc.
Acacia tetragonophylla	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Eremophila latrobei ?subsp. *glabra*	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	5 – 9
Chrysopogon fallax	Tussock Grass (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *pulchella*	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_170

Date	20/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.04436, 119.94784				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	1 – 4
Indigofera trita subsp. *trita*	Shrub (<0.5 m)	1 – 4
Sida trichopoda	Shrub (<0.5 m)	1 – 4
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Grona muelleri	Herb (<0.5 m)	1 – 4
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	10 – 24
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Cynodon convergens	Tussock Grass (<0.5 m)	10 – 24
Eriachne mucronata	Tussock Grass (<0.5 m)	5 – 9
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	5 – 9
Panicum decompositum	Tussock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_171

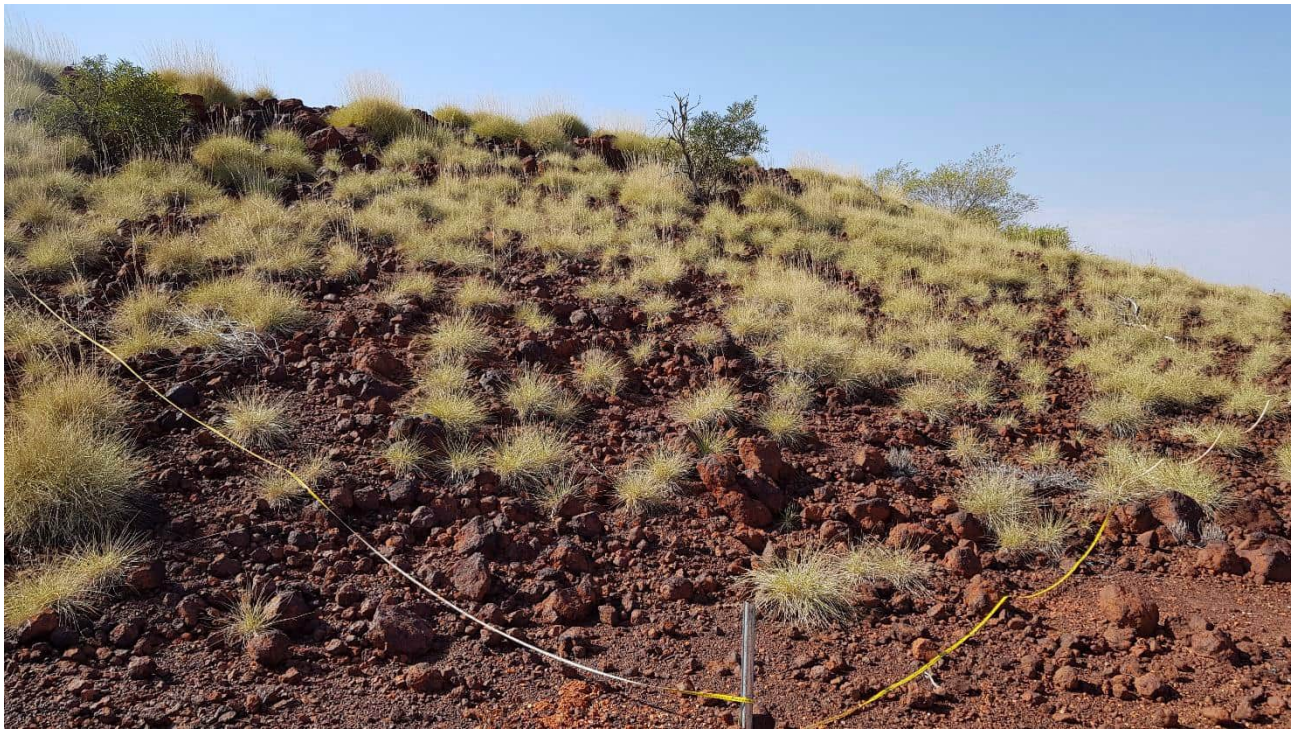
Date	20/09/2023	**Site type**	Flora: Quadrat	**Botanist**	LE
Location	-22.05398, 119.9472				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca tanythrix	Shrub (<0.5 m)	< 1
Senna ?hamersleyensis	Shrub (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Goodenia ?muelleriana	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Hibiscus brachysiphonius	Herb (<0.5 m)	< 1
Hibiscus burtonii	Herb (<0.5 m)	1 – 4
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	1 – 4
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sida spinosa	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Streptoglossa bubakii	Herb (<0.5 m)	1 – 4
Streptoglossa odora	Herb (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Herb (<0.5 m)	< 1
Aristida ?inaequiglumis	Tussock Grass (0.5-1 m)	1 – 4
Aristida contorta	Tussock Grass (<0.5 m)	10 – 24
Chloris pectinata	Tussock Grass (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Panicum decompositum	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_172

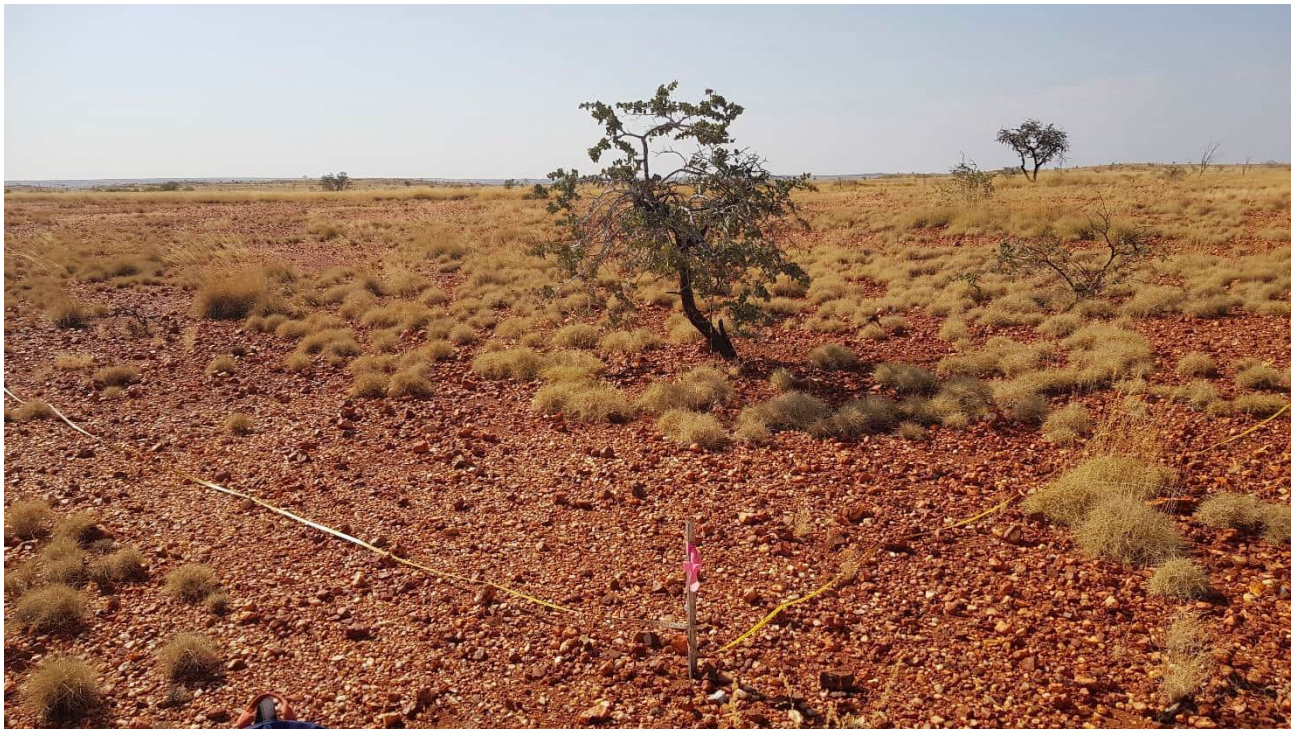
Date	20/09/2023	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.07009, 119.9439				
Landform	Ridge	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia monticola	Shrub (1-2 m)	1 – 4
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Seringia ?exastia	Shrub (0.5-1 m)	< 1
Acacia ptychophylla	Shrub (<0.5 m)	1 – 4
Dampiera candicans	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	< 1
Ptilotus clementii	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_173

Date	20/09/2023	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.0819, 119.93783				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna ?stricta	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Ptilotus calostachyus	Herb (<0.5 m)	Assoc.
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_174

Date	10/03/2024	**Site type**	Flora: Releve	**Botanist**	BN
Location	-21.8918, 119.7722				
Landform	Crest/hill top	**Slope**	NA		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia monticola	Shrub (1-2 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_175

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.88916, 119.78493				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Clay loam		
Rock type	Calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia orthocarpa	Shrub (0.5-1 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Abutilon ?sp. Dioicum (A.A. Mitchell PRP 1618)	Shrub (<0.5 m)	1 – 4
Capparis spinosa subsp. *nummularia*	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca cunninghamii	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	< 1
Senna notabilis	Shrub (<0.5 m)	< 1
Senna symonii	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Solanum diversiflorum	Herb (0.5-1 m)	1 – 4
Tribulus ?hirsutus	Herb (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia ?australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Hibiscus sp.	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Sida ?fibulifera	Herb (<0.5 m)	< 1
Sida rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_176

Date	10/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-21.89359, 119.80419				
Landform	Ridge	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Dolerite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia maitlandii	Shrub (1-2 m)	1 – 4
Acacia pyrifolia var. *pyrifolia*	Shrub (1-2 m)	1 – 4
Grevillea wickhamii	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_177

Date	10/03/2024	**Site type**	Flora: Mapping Notes	**Botanist**	BN
Location	-21.89988, 119.88354				
Landform	Gorge	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia cyperophylla var. *omearana*	Shrub (>2 m)	25 – 32
Melaleuca linophylla	Shrub (>2 m)	< 1
Dodonaea petiolaris	Shrub (1-2 m)	10 – 24
Ficus brachypoda	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Prostanthera albiflora	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Tinospora smilacina	Shrub (<0.5 m)	< 1
Cynanchum viminale	Herb (1-2 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_178

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.90065, 119.97243				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay loam		
Rock type	Calcrete, quartz, basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	< 1
Capparis umbonata	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_179

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.9013, 119.85167				
Landform	Midslope	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Acacia orthocarpa	Shrub (1-2 m)	5 – 9
Grevillea wickhamii	Shrub (1-2 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_180

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.90276, 120.00596				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone, quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia arrecta	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	5 – 9
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	1 – 4
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sida ?fibulifera	Herb (<0.5 m)	< 1
Streptoglossa sp.	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_181

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.90265, 119.80827				
Landform	Crest/hill top	**Slope**	Steep		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia retivenea subsp. *clandestina*	Shrub (1-2 m)	5 – 9
Grevillea wickhamii	Shrub (1-2 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_182

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.90275, 119.90497				
Landform	Crest/hill top	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia ?adsurgens	Shrub (1-2 m)	< 1
Acacia maitlandii	Shrub (1-2 m)	1 – 4
Acacia orthocarpa	Shrub (1-2 m)	10 – 24
Acacia adoxa var. *adoxa*	Shrub (0.5-1 m)	1 – 4
Grevillea wickhamii	Shrub (0.5-1 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	5 – 9
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9

BD_E_183

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.90583, 119.83024				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	75 – 94

BD_E_184

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.90595, 119.81167				
Landform	Hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia ?adsurgens	Shrub (1-2 m)	10 – 24
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia sp. (indet.)	Shrub (1-2 m)	1 – 4
Acacia arrecta	Shrub (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_185

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.17109, 119.80096				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	5 – 9
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia ?adsurgens	Shrub (>2 m)	1 – 4
Acacia ancistrocarpa	Shrub (>2 m)	1 – 4
Acacia aptaneura	Shrub (>2 m)	< 1
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	5 – 9
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Gossypium robinsonii	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Melaleuca ?linophylla	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Acacia sclerosperma subsp. *sclerosperma*	Shrub (1-2 m)	< 1
Androcalva luteiflora	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (1-2 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Corchorus lasiocarpus subsp. *parvus*	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Amaranthus ?undulatus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Ipomoea plebeia	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Pluchea dentex	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Rutidosis helichrysoides subsp. *helichrysoides*	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Sclerolaena costata	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_186

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.90761, 119.95875				
Landform	Low hill	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Senna symonii	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (<0.5 m)	1 – 4
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_187

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.90884, 119.98638				
Landform	Low hill	**Slope**	Steep		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Senna symonii	Shrub (1-2 m)	< 1
Sida ?sp. *Golden calyces glabrous (H.N. Foote 32)*	Shrub (0.5-1 m)	< 1
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Dampiera candicans	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia longiceps	Hummock Grass (<0.5 m)	10 – 24

BD_E_188

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.91051, 119.8731				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sand		
Rock type	Quartz, mixed ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia ?adsurgens	Shrub (>2 m)	5 – 9
Acacia orthocarpa	Shrub (>2 m)	10 – 24
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Paraneurachne muelleri	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_189

Date	8/03/2024	**Site type**	Flora: Releve	**Botanist**	AC
Location	-21.91447, 120.01468				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	< 1
Corymbia candida subsp. *candida*	Tree (<10 m)	1 – 4
Acacia cyperophylla var. *omearana*	Shrub (>2 m)	5 – 9
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	< 1
Santalum lanceolatum	Shrub (>2 m)	< 1
Acacia spondylophylla	Shrub (0.5-1 m)	< 1
Cyperus hesperius	Sedge (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cathetus exilis	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Goodenia lamprosperma	Herb (<0.5 m)	< 1
Pluchea dentex	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	10 – 24
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (1-2 m)	5 – 9
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9

BD_E_190

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.91036, 120.01066				
Landform	Hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia colei var. *colei*	Shrub (1-2 m)	1 – 4
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Acacia spondylophylla	Shrub (0.5-1 m)	< 1
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (<0.5 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	1 – 4
Salsola australis	Herb (<0.5 m)	< 1
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_191

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.9103, 119.8501				
Landform	Ridge	**Slope**	Moderate		
Soil colour	Brown	**Soil texture**	Sandy loam		
Rock type	Granite, quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Acacia ?adsurgens	Shrub (>2 m)	5 – 9
Acacia orthocarpa	Shrub (1-2 m)	1 – 4
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

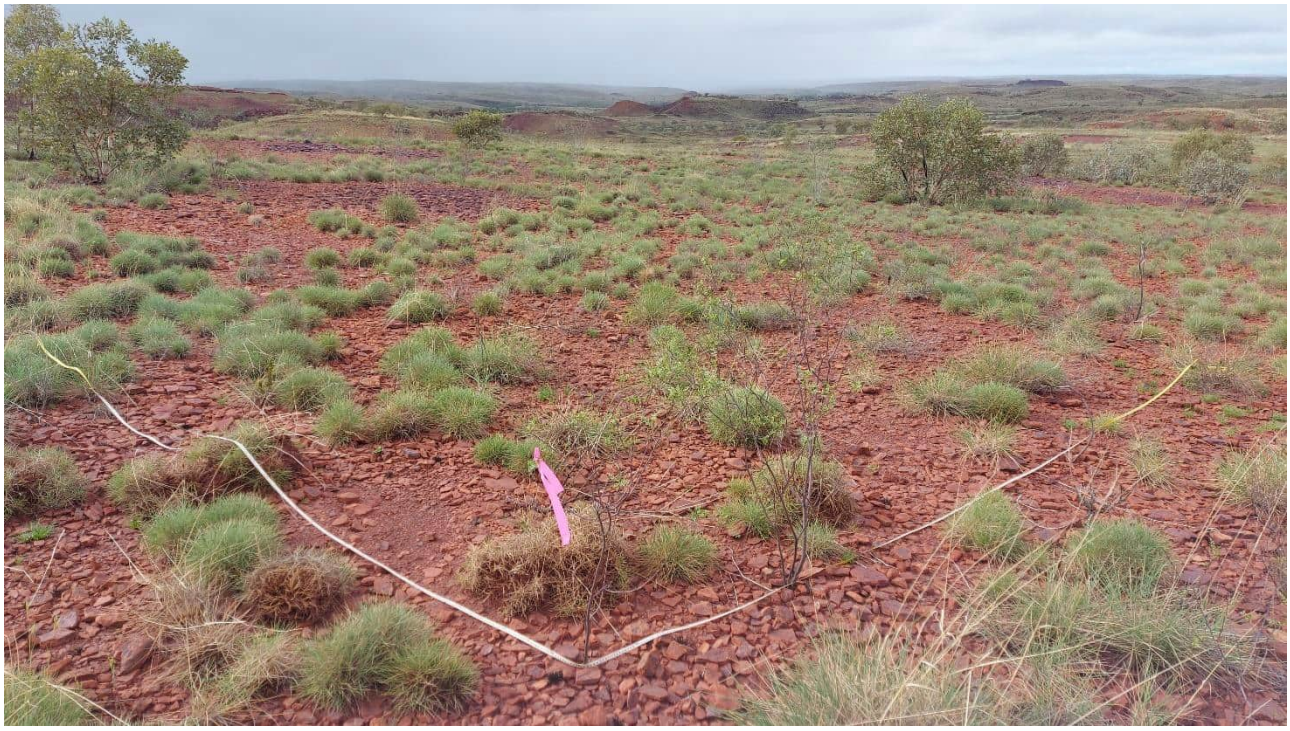
BD_E_192

Date	9/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-21.90972, 119.86522				
Landform	Gorge	**Slope**	NA		
Soil colour	Light brown	**Soil texture**	Sand		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	5 – 9
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Corymbia ?ferriticola	Tree (<10 m)	1 – 4
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Ficus brachypoda	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Acacia pyrifolia	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_193

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.91601, 120.00415				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
?*Enchylaena tomentosa*	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_194

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.91711, 119.98406				
Landform	Plain	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia bivenosa	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_195

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.91875, 119.87708				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	5 – 9
Afrohybanthus aurantiacus	Herb (<0.5 m)	5 – 9
Arivela viscosa	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_196

Date	10/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-21.92025, 119.76551				
Landform	Crest/hill top	**Slope**	Steep		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Pentalepis trichodesmoides subsp. *trichodesmoides*	Shrub (<0.5 m)	1 – 4
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_197

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.92051, 119.98789				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia cyperophylla var. *omearana*	Shrub (>2 m)	5 – 9
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Vachellia farnesiana	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	< 1
?*Malvastrum americanum*	Herb (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Cathetus exilis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Euphorbia ?*trigonosperma*	Herb (<0.5 m)	< 1
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	1 – 4
Paspalidium rarum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_198

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.92238, 119.80167				
Landform	Footslope	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Loamy sand		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia orthocarpa	Shrub (>2 m)	10 – 24
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Acacia adoxa var. *adoxa*	Shrub (<0.5 m)	< 1
Waltheria virgata	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cassytha ?capillaris	Herb (<0.5 m)	1 – 4
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_199

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.92298, 119.91599				
Landform	Hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Granite, quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Senna symonii	Shrub (0.5-1 m)	1 – 4
Acacia adoxa var. *adoxa*	Shrub (<0.5 m)	< 1
Acacia arrecta	Shrub (<0.5 m)	1 – 4
Acacia maitlandii	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Dodonaea coriacea	Shrub (<0.5 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Portulaca ?cyclophylla	Herb (<0.5 m)	< 1
Sida ?echinocarpa	Herb (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Tripogonella loliiformis	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

BD_E_200

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.92459, 119.75219				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Calcrete	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Hakea chordophylla	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	< 1
Acacia tumida var. *pilbarensis*	Shrub (1-2 m)	1 – 4
Grevillea wickhamii	Shrub (1-2 m)	< 1
Acacia pyrifolia	Shrub (0.5-1 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Corchorus walcottii	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cassytha ?capillaris	Herb (<0.5 m)	1 – 4
Euphorbia careyi	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia wiseana	Hummock Grass (0.5-1 m)	33 – 49

BD_E_201

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.92396, 119.75713				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Senna symonii	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	< 1
Euploca cunninghamii	Shrub (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (0.5-1 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	25 – 32

BD_E_202

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.92259, 119.79685				
Landform	Ridge	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia monticola	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Grevillea wickhamii	Shrub (0.5-1 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (<0.5 m)	< 1
Dampiera candicans	Herb (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	50 – 74

BD_E_203

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.92663, 120.00612				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia monticola	Shrub (1-2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_204

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.93138, 119.82977				
Landform	Ridge	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

No photo.

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Grevillea wickhamii	Shrub (>2 m)	5 – 9
Acacia retivenea subsp. *clandestina*	Shrub (0.5-1 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_205

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.92901, 120.01525				
Landform	Hill	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_206

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.05323, 119.83067				
Landform	Upland plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Heavy clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca ?cunninghamii	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	5 – 9
Boerhavia coccinea	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	< 1
Desmodiopsis campylocaulon	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Panicum decompositum	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	< 1
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Tribulus terrestris	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Cynodon prostratus	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9

BD_E_207

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.93514, 119.80175				
Landform	Midslope	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	5 – 9
Grevillea wickhamii	Shrub (1-2 m)	< 1
Acacia adoxa var. *adoxa*	Shrub (<0.5 m)	5 – 9
Acacia arrecta	Shrub (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_208

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.93742, 119.76078				
Landform	Hill	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	33 – 49

BD_E_209

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.94292, 119.77098				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Sandy clay		
Rock type	Basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	5 – 9
Senna symonii	Shrub (0.5-1 m)	1 – 4
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	10 – 24
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	75 – 94

BD_E_210

Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.94182, 119.81821				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				

Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4

BD_E_211

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.94477, 119.98493				
Landform	Hill	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_212

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.9529, 119.76469				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	10 – 24
Atalaya hemiglauca	Shrub (>2 m)	< 1
Gossypium australe	Shrub (1-2 m)	< 1
Petalostylis labicheoides	Shrub (1-2 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	1 – 4
Ipomoea muelleri	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9

BD_E_213

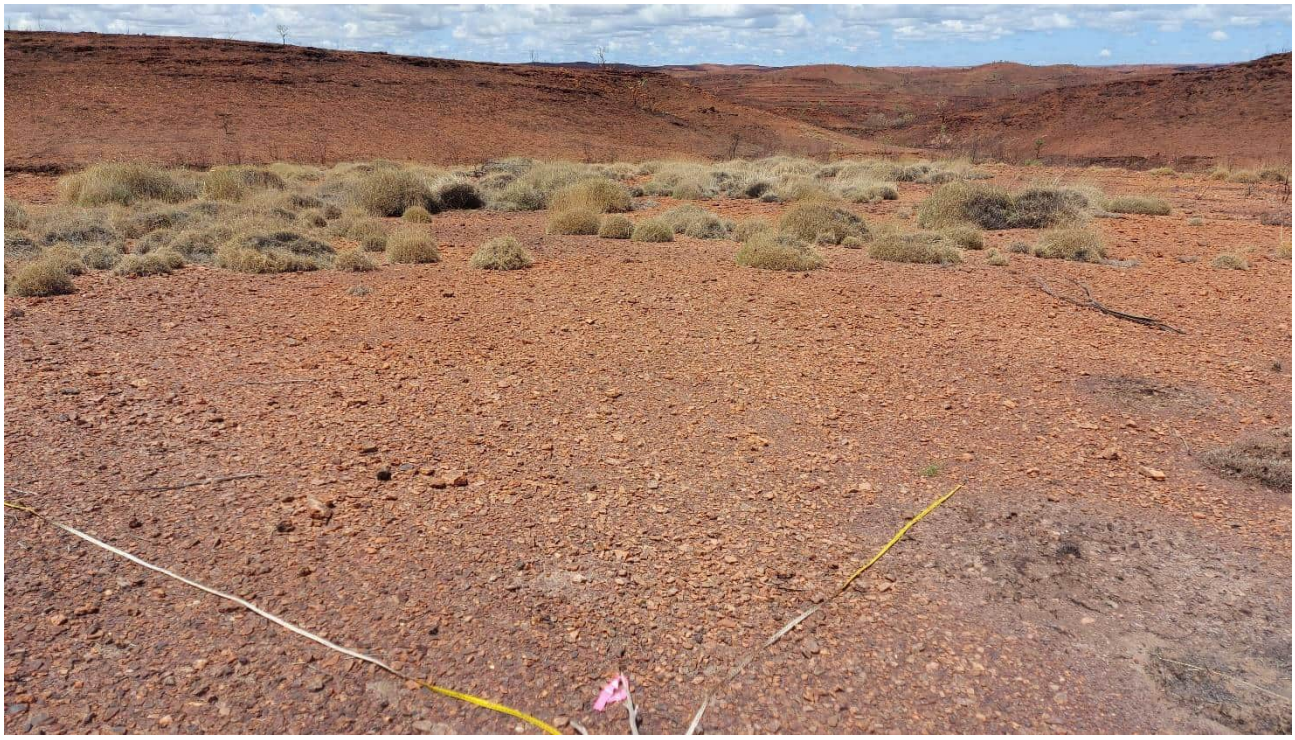
Date	9/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.95562, 119.84149				
Landform	Upland plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Heavy clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca ?cunninghamii	Shrub (<0.5 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia coccinea	Herb (<0.5 m)	< 1
Boerhavia paludosa	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	1 – 4
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Desmodiopsis campylocaulon	Herb (<0.5 m)	< 1
Euphorbia ?tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Gomphrena cunninghamii	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Portulaca filifolia	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	1 – 4
Trichodesma zeylanicum var. *zeylanicum*	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_214

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.9562, 119.81113				
Landform	Midslope	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Very recent (< 1 yr)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia maitlandii	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_215

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.96002, 119.97458				
Landform	Midslope	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_216

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.96219, 119.75456				
Landform	Ridge	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	1 – 4
Tephrosia rosea var. *clementii*	Shrub (0.5-1 m)	1 – 4
Dampiera candicans	Herb (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia ?australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	75 – 94

BD_E_217

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-21.96325, 119.97147				
Landform	Hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	1 – 4
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_218

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.96848, 119.77332				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Dark brown	**Soil texture**	Sandy clay loam		
Rock type	Quartz, ironstone, basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (>2 m)	< 1
Senna symonii	Shrub (>2 m)	1 – 4
Eremophila longifolia	Shrub (1-2 m)	< 1
Indigofera monophylla	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Triodia wiseana	Hummock Grass (0.5-1 m)	33 – 49

BD_E_219

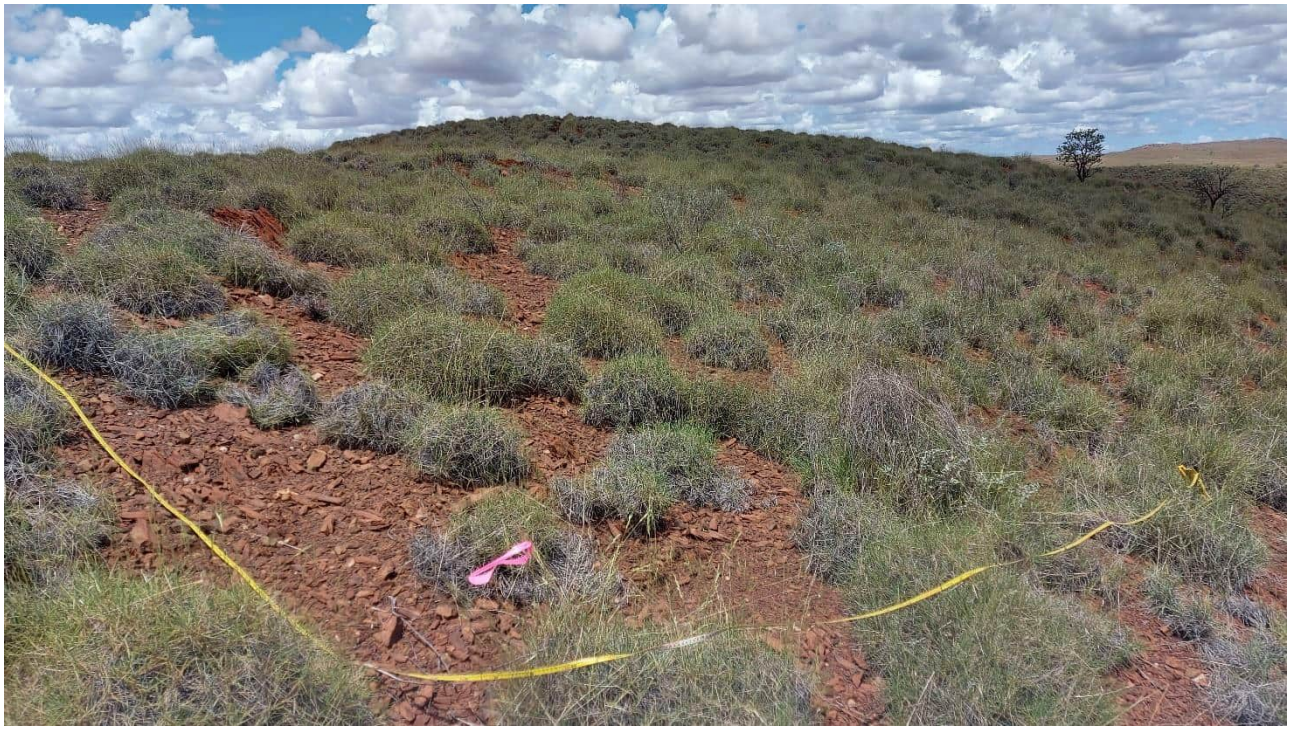
Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-21.9428, 119.78654				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	30 – 70%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	10 – 24
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Melaleuca linophylla	Shrub (>2 m)	5 – 9
Acacia trachycarpa	Shrub (1-2 m)	1 – 4
Ehretia saligna var. *saligna*	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	1 – 4
Grevillea wickhamii	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Cullen leucanthum	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea racemigera	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	< 1

BD_E_220

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-21.98884, 119.75704				
Landform	Crest/hill top	**Slope**	Steep		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Shale	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	1 – 4
Tribulus suberosus	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Triodia wiseana	Hummock Grass (<0.5 m)	33 – 49

BD_E_221

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-21.99432, 119.94039				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Grevillea wickhamii	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (0.5-1 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	5 – 9
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_222

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-21.99542, 119.76397				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia orthocarpa	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	< 1
Indigofera deserticola	Shrub (<0.5 m)	< 1
Ptilotus auriculifolius	Shrub (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_223

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.00349, 119.95505				
Landform	Hill	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Corchorus parviflorus	Shrub (1-2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Acacia colei var. *colei*	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Tribulus ?hirsutus	Herb (0.5-1 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	33 – 49

BD_E_224

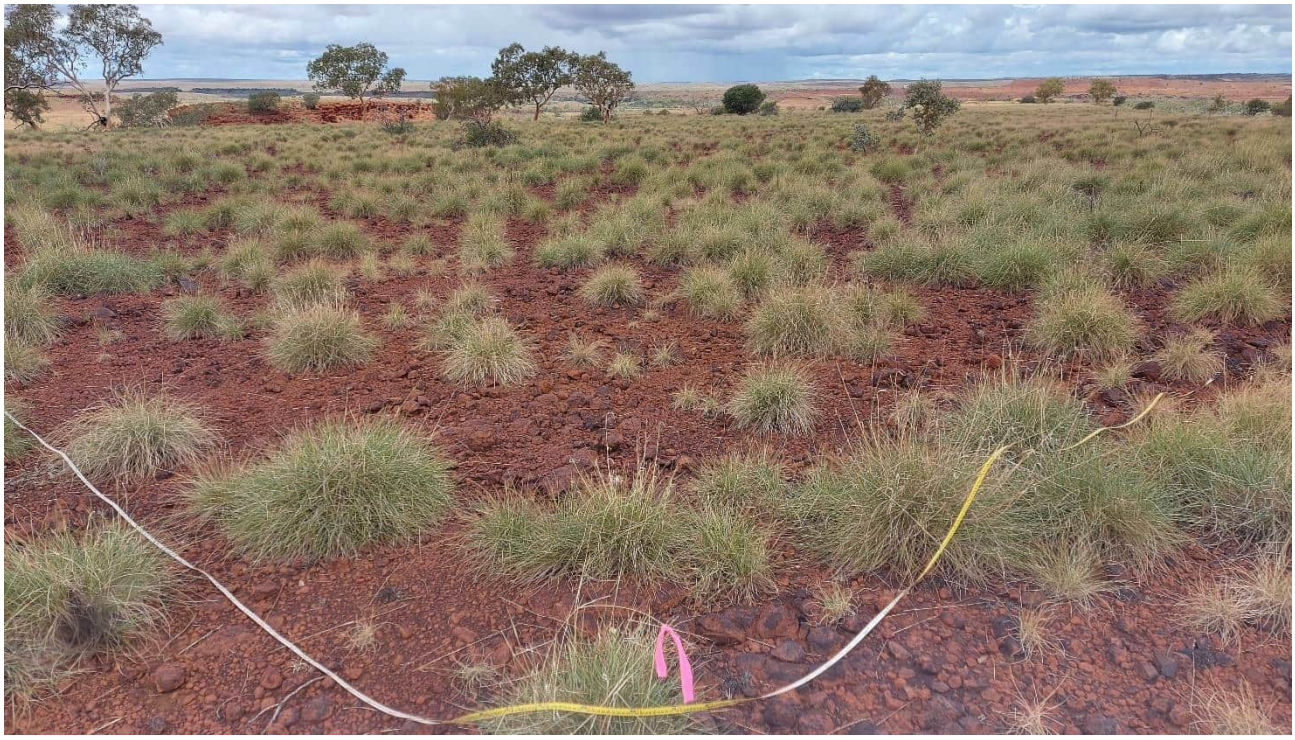
Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.00569, 120.00908				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

No photo.

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Citrullus amarus	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Josephinia eugeniae	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Sida ?sp. L (A.M. Ashby 4202)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	5 – 9
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_225

Date	8/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.00667, 119.928				
Landform	Ridge	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (10-30 m)	5 – 9
Acacia pruinocarpa	Shrub (0.5-1 m)	1 – 4
Ptilotus calostachyus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Dampiera candicans	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_226

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.02808, 119.80317				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	1 – 4
Fimbristylis dichotoma	Sedge (<0.5 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_227

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.02818, 119.8295				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	> 70%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (<10 m)	1 – 4
Eucalyptus victrix	Tree (<10 m)	1 – 4
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	< 1
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Melaleuca glomerata	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (1-2 m)	< 1
Acacia trachycarpa	Shrub (1-2 m)	< 1
Melaleuca linophylla	Shrub (1-2 m)	10 – 24
Vachellia farnesiana	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	1 – 4
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Goodenia microptera	Herb (<0.5 m)	< 1
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Marsilea ?exarata	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Tribulus hirsutus	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Cynodon dactylon	Tussock Grass (<0.5 m)	1 – 4
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_228

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.02921, 119.99591				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Heavy clay		
Rock type	Ironstone	**Rock size**	Boulders [> 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Arivela viscosa	Herb (<0.5 m)	5 – 9
Boerhavia paludosa	Herb (<0.5 m)	1 – 4
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Cucumis melo	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia inappendiculata var. *queenslandica*	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Ipomoea lonchophylla	Herb (<0.5 m)	< 1
Josephinia eugeniae	Herb (<0.5 m)	1 – 4
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	1 – 4
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Sida ?rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	1 – 4
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Cynodon convergens	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	5 – 9

BD_E_229

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.02329, 119.82777				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_230

Date	11/03/2024	**Site type**	Flora: Mapping Notes	**Botanist**	BN
Location	-22.03664, 119.80756				
Landform	Crest/hill top	**Slope**	NA		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia ?coriacea subsp. *pendens*	Shrub (>2 m)	< 1
Atalaya hemiglauca	Shrub (>2 m)	< 1
Eremophila longifolia	Shrub (>2 m)	1 – 4
Capparis spinosa subsp. *nummularia*	Shrub (1-2 m)	< 1
Dodonaea petiolaris	Shrub (1-2 m)	1 – 4
Ficus brachypoda	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Hibiscus goldsworthii	Herb (0.5-1 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Eriachne tenuiculmis	Tussock Grass (<0.5 m)	5 – 9
Triodia longiceps	Hummock Grass (0.5-1 m)	33 – 49

BD_E_231

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.04074, 119.79607				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone, quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Atalaya hemiglauca	Shrub (1-2 m)	5 – 9
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Abutilon ?sp. Dioicum (A.A. Mitchell PRP 1618)	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	Assoc.
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_232

Date	10/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.0414, 119.81126				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	5 – 9
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia ampliceps	Shrub (>2 m)	< 1
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Melaleuca linophylla	Shrub (>2 m)	5 – 9
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Flueggea virosa subsp. *melanthesoides*	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	5 – 9
Afrohybanthus aurantiacus	Herb (1-2 m)	< 1
Alternanthera ?nana	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	1 – 4
Euphorbia australis var. *hispidula*	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Sida ?rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	< 1
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Tribulus terrestris	Herb (<0.5 m)	1 – 4
?*Eulalia aurea*	Tussock Grass (0.5-1 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (0.5-1 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_233

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.05044, 119.82111				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	< 1
Corchorus parviflorus	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Aristida holathera var. *holathera*	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_234

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.05059, 119.96991				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Heavy clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Euploca ?cunninghamii	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Abutilon malvifolium	Herb (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Austrobryonia pilbarensis	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Commicarpus australis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Josephinia eugeniae	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia xanthonema	Herb (<0.5 m)	< 1
Operculina aequisepala	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Sida ?trichopoda	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_235

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.05255, 119.99668				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy loam		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	10 – 24
Eucalyptus victrix	Tree (<10 m)	1 – 4
Acacia ampliceps	Shrub (>2 m)	1 – 4
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	1 – 4
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Petalostylis labicheoides	Shrub (>2 m)	< 1
Vachellia farnesiana	Shrub (>2 m)	< 1
Adriana tomentosa var. *tomentosa*	Shrub (1-2 m)	< 1
Flueggea virosa subsp. *melanthesoides*	Shrub (1-2 m)	< 1
Erythrina vespertilio	Shrub (0.5-1 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	5 – 9
Schoenoplectus subulatus	Sedge (0.5-1 m)	< 1
Sesbania cannabina	Herb (0.5-1 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Amaranthus ?undulatus	Herb (<0.5 m)	< 1
Argemone ochroleuca subsp. *ochroleuca*	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	5 – 9
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Citrullus colocynthis	Herb (<0.5 m)	< 1
Cucumis melo	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia hirta	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Plumbago zeylanica	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Vigna lanceolata var. *lanceolata*	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Cynodon dactylon	Tussock Grass (<0.5 m)	5 – 9
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Potamogeton tepperi	Aquatic (<0.5 m)	< 1

BD_E_236

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.05173, 119.83045				
Landform	Midslope	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	< 1
Grevillea wickhamii	Shrub (>2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Pentalepis trichodesmoides subsp. *trichodesmoides*	Shrub (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_237

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.05766, 119.99276				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Sandy clay		
Rock type	Calcrete	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Indigofera deserticola	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Acacia bivenosa	Shrub (<0.5 m)	1 – 4
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (<0.5 m)	1 – 4
Sida echinocarpa	Shrub (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_238

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.06025, 119.79839				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia adsurgens	Shrub (1-2 m)	1 – 4
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Sida ?sp. L (A.M. Ashby 4202)	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
?*Eriachne pulchella*	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_239

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.06064, 119.99018				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Alysicarpus muelleri	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia ?gardneri	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Sida ?sp. L (A.M. Ashby 4202)	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_240

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.09448, 119.96133				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Indigofera colutea	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Ptilotus ?axillaris	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	1 – 4
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_241

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.07476, 119.98299				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Heavy clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Tribulus suberosus	Shrub (0.5-1 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Bulbostylis turbinata	Sedge (<0.5 m)	1 – 4
Abutilon malvifolium	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	5 – 9
Austrobryonia pilbarensis	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia paludosa	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	1 – 4
Cucumis variabilis	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Euphorbia inappendiculata var. *queenslandica*	Herb (<0.5 m)	< 1
Goodenia muelleriana	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Josephinia eugeniae	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Neptunia xanthonema	Herb (<0.5 m)	1 – 4
Operculina aequisepala	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	1 – 4
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Streptoglossa ?odora	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Dichanthium sericeum subsp. *humilius*	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	5 – 9
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4

Name	Stratum	Percent cover (%)
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_242

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.07814, 119.81344				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Mixed river alluvium	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (<10 m)	10 – 24
Eucalyptus victrix	Tree (<10 m)	5 – 9
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (>2 m)	1 – 4
Melaleuca glomerata	Shrub (1-2 m)	5 – 9
Melaleuca linophylla	Shrub (1-2 m)	1 – 4
Acacia pyrifolia	Shrub (0.5-1 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	1 – 4
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	50 – 74
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_243

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.08176, 119.79988				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia monticola	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. ×*luerssenii*	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (>2 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	10 – 24
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_244

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.08509, 119.93835				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, quartz	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia ?aptaneura	Shrub (1-2 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	5 – 9
Acacia tenuissima	Shrub (1-2 m)	< 1
Capparis umbonata	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32
Triodia brizoides	Hummock Grass (<0.5 m)	< 1

BD_E_245

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.08633, 119.9533				
Landform	Crest/hill top	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Pentalepis trichodesmoides subsp. *trichodesmoides*	Shrub (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Euphorbia careyi	Herb (<0.5 m)	< 1
Sida ?sp. L (A.M. Ashby 4202)	Herb (<0.5 m)	< 1
Tribulus ?*hirsutus*	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	33 – 49

BD_E_246

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.08702, 119.80926				
Landform	Upland plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Heavy clay		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (>2 m)	5 – 9
Acacia synchronicia	Shrub (0.5-1 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Tephrosia sp. clay soils (S. van Leeuwen et al. PBS 0273)	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?burbidgeana	Herb (<0.5 m)	1 – 4
Boerhavia coccinea	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Desmodiopsis campylocaulon	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Heliotropium crispatum	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Sida ?rohlenae subsp. *rohlenae*	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	< 1
Enneapogon caerulescens	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	1 – 4
Triodia longiceps	Hummock Grass (<0.5 m)	< 1

BD_E_247

Date	11/03/2024	**Site type**	Flora: Mapping Notes	**Botanist**	BN
Location	-22.08812, 119.79835				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_248

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.33799, 119.72244				
Landform	Undulating plain	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia adsurgens	Shrub (1-2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	33 – 49
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9

BD_E_249

Date	7/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.07359, 119.96593				
Landform	Major creek (5-30 m)	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Rocky with outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	10 – 24
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	5 – 9
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	10 – 24
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Gossypium australe	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (<0.5 m)	1 – 4
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (1-2 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	10 – 24
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9

BD_E_250

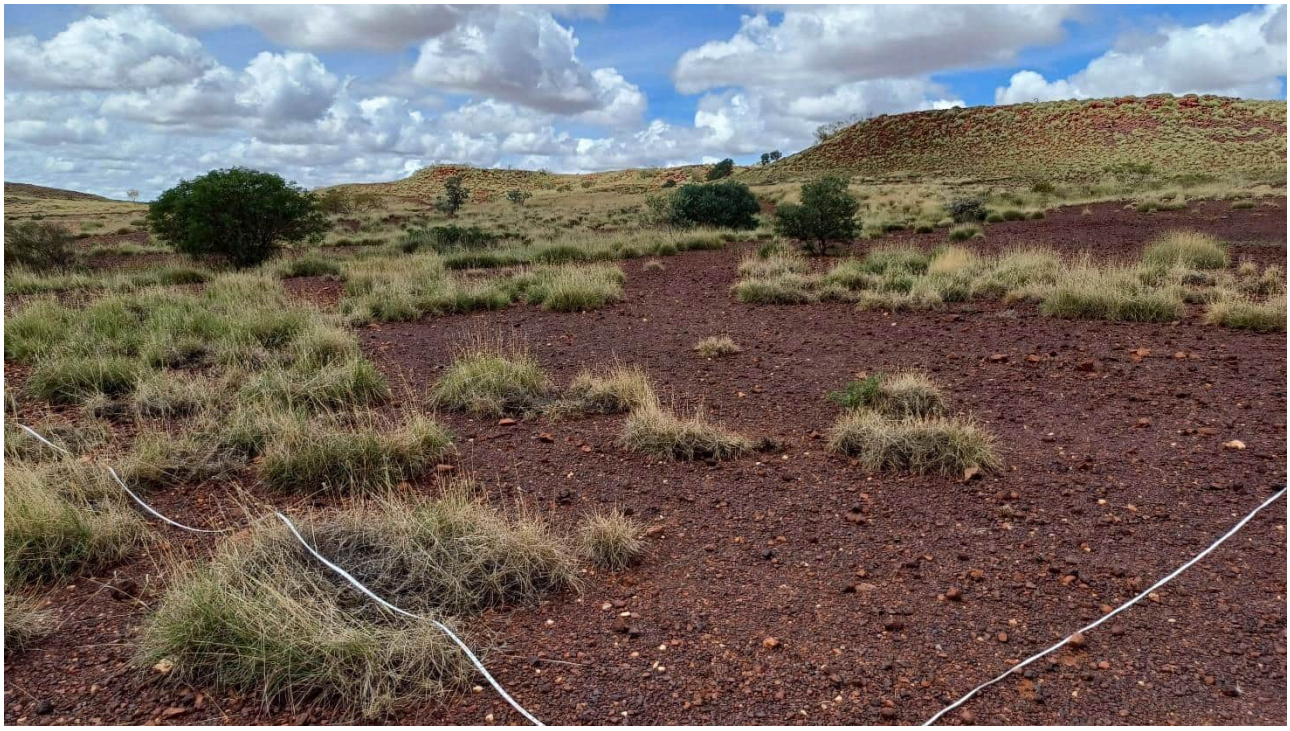
Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.3124, 119.78842				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Loamy sand		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Good	**Disturbance**	Moderate weed cover, minor grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	1 – 4
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia bivenosa	Shrub (>2 m)	< 1
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	5 – 9
Acacia pyrifolia	Shrub (>2 m)	< 1
Acacia trachycarpa	Shrub (>2 m)	5 – 9
Atalaya hemiglauca	Shrub (>2 m)	1 – 4
Gossypium robinsonii	Shrub (>2 m)	< 1
Grevillea wickhamii subsp. *hispidula*	Shrub (>2 m)	< 1
Melaleuca glomerata	Shrub (>2 m)	1 – 4
Melaleuca linophylla	Shrub (>2 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Jasminum didymum subsp. *lineare*	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Corchorus lasiocarpus subsp. *parvus*	Shrub (<0.5 m)	< 1
Tephrosia rosea	Shrub (<0.5 m)	1 – 4
Cyperus vaginatus	Sedge (<0.5 m)	1 – 4
Abutilon ?amplum	Herb (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Amaranthus ?undulatus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Euphorbia ?trigonosperma	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *decumbens*	Herb (<0.5 m)	< 1
Glycine canescens	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Ipomoea plebeia	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Notoleptopus decaisnei	Herb (<0.5 m)	< 1
Polycarpaea longiflora	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Eriachne tenuiculmis	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	5 – 9
Cenchrus setiger	Tussock Grass (<0.5 m)	5 – 9
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Themeda triandra	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_251

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.10209, 119.80935				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia bivenosa	Shrub (>2 m)	< 1
Acacia inaequilatera	Shrub (>2 m)	< 1
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Euploca ?cunninghamii	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Sida echinocarpa	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Euploca heterantha	Herb (<0.5 m)	< 1
Ptilotus obovatus var. *obovatus*	Herb (<0.5 m)	< 1
Sclerolaena ?densiflora	Herb (<0.5 m)	< 1
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4

BD_E_252

Date	15/07/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AS
Location	-22.39745, 119.68915				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Acacia synchronicia	Shrub (>2 m)	5 – 9
Acacia tetragonophylla	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (1-2 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (0.5-1 m)	< 1
Abutilon lepidum	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	5 – 9
Goodenia prostrata	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	1 – 4
Sclerolaena costata	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	5 – 9
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	1 – 4
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1

BD_E_253

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.10532, 119.94294				
Landform	Major creek (5-30 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	Assoc.
Eucalyptus victrix	Tree (10-30 m)	10 – 24
Acacia tumida var. *pilbarensis*	Shrub (>2 m)	5 – 9
Acacia colei var. *colei*	Shrub (1-2 m)	1 – 4
Acacia coriacea subsp. *pendens*	Shrub (1-2 m)	< 1
Acacia pyrifolia var. *pyrifolia*	Shrub (1-2 m)	1 – 4
Melaleuca linophylla	Shrub (1-2 m)	5 – 9
Grevillea wickhamii	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Atalaya hemiglauca	Shrub (<0.5 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Hibiscus coatesii	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)	Shrub (<0.5 m)	1 – 4
Cyperus vaginatus	Sedge (0.5-1 m)	5 – 9
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	1 – 4
Dysphania rhadinostachya	Herb (<0.5 m)	< 1
Euphorbia biconvexa	Herb (<0.5 m)	1 – 4
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	1 – 4
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (0.5-1 m)	25 – 32

Name	Stratum	Percent cover (%)
Cenchrus setiger	Tussock Grass (0.5-1 m)	1 – 4
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Paraneurachne muelleri	Tussock Grass (0.5-1 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_254

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.10792, 119.80081				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	1 – 4
Ipomoea muelleri	Herb (<0.5 m)	< 1
Portulaca cyclophylla	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum cleistogamum/horridum	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	50 – 74

BD_E_255

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.11173, 119.97341				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Grevillea wickhamii subsp. *aprica*	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9

BD_E_256

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.11251, 119.96017				
Landform	Low hill	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Indigofera monophylla	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_257

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.11545, 119.94928				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	< 1
Corchorus lasiocarpus	Shrub (0.5-1 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Euphorbia careyi	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	33 – 49

BD_E_258

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.11994, 119.93828				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Dolichocarpa crouchiana	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	50 – 74

BD_E_259

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.12229, 119.97187				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Acacia ?coriacea subsp. *pendens*	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *platychlamys*	Shrub (<0.5 m)	< 1
Pterocaulon ?sphacelatum	Shrub (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_260

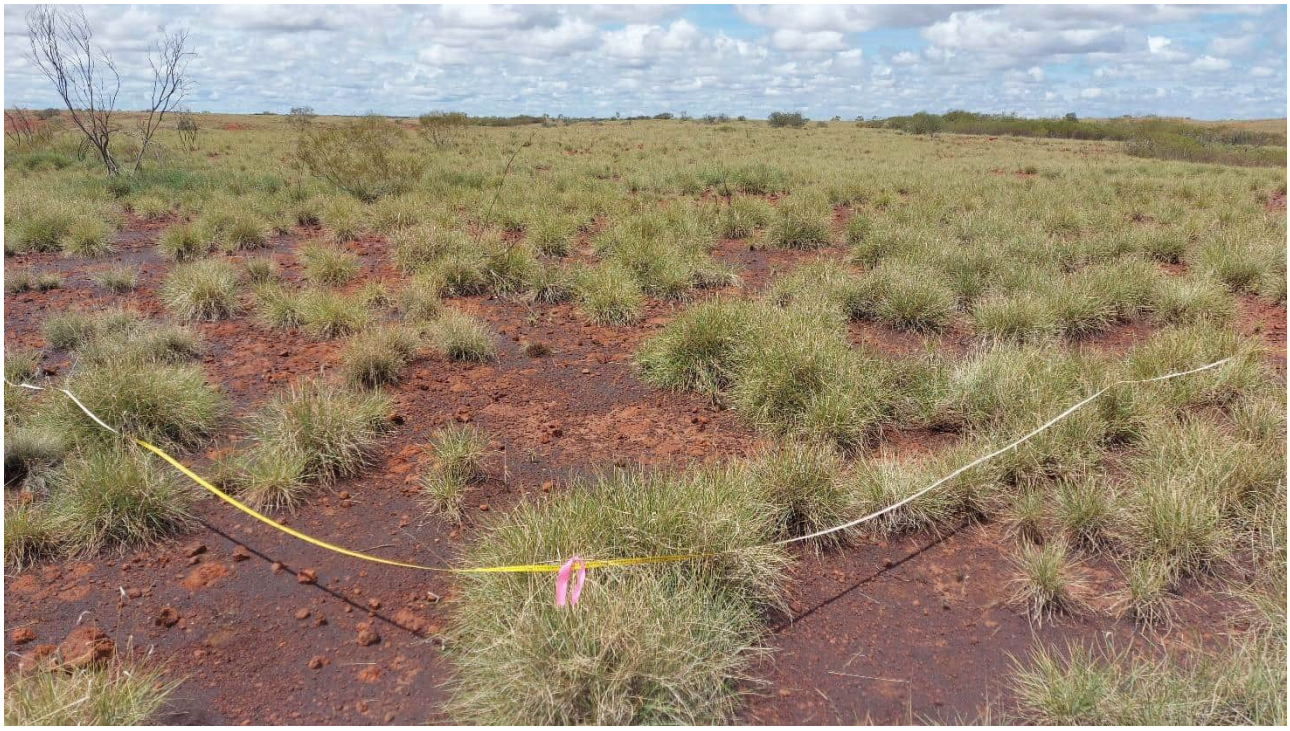
Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC
Location	-22.12214, 119.97323				
Landform	River (> 30 m)	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Mixed river alluvium	**Rock size**	NA	**Rock cover**	NA
Vegetation condition	Degraded	**Disturbance**	High weed cover and heavy grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus camaldulensis	Tree (10-30 m)	5 – 9
Eucalyptus victrix	Tree (10-30 m)	5 – 9
Acacia ampliceps	Shrub (>2 m)	< 1
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	5 – 9
Acacia trachycarpa	Shrub (>2 m)	1 – 4
Atalaya hemiglauca	Shrub (>2 m)	5 – 9
Melaleuca glomerata	Shrub (>2 m)	5 – 9
Melaleuca linophylla	Shrub (>2 m)	5 – 9
Petalostylis labicheoides	Shrub (>2 m)	< 1
Vachellia farnesiana	Shrub (1-2 m)	1 – 4
Acacia pyrifolia	Shrub (0.5-1 m)	< 1
Crotalaria cunninghamii subsp. *sturtii*	Shrub (0.5-1 m)	< 1
Aerva javanica	Shrub (<0.5 m)	< 1
Eremophila longifolia	Shrub (<0.5 m)	< 1
Cyperus vaginatus	Sedge (0.5-1 m)	5 – 9
Alternanthera denticulata var. *denticulata*	Herb (<0.5 m)	< 1
Amaranthus ?undulatus	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia burbidgeana	Herb (<0.5 m)	< 1
Citrullus colocynthis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Euphorbia australis var. *subtomentosa*	Herb (<0.5 m)	< 1
Euphorbia hirta	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Indigofera linnaei	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea plebeia	Herb (<0.5 m)	< 1
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Malvastrum americanum	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Marsilea ?exarata	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sesbania cannabina	Herb (<0.5 m)	< 1
Stemodia grossa	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Trianthema portulacastrum	Herb (<0.5 m)	< 1
Trianthema triquetrum	Herb (<0.5 m)	< 1
Vigna lanceolata var. *lanceolata*	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	75 – 94
Cenchrus setiger	Tussock Grass (<0.5 m)	10 – 24
Cynodon dactylon	Tussock Grass (<0.5 m)	< 1
Dactyloctenium radulans	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (1-2 m)	5 – 9
?Amyema benthamii	Parasitic/Epiphytic	< 1

BD_E_261

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.13049, 119.84303				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Acacia ?adsurgens	Shrub (1-2 m)	1 – 4
Acacia monticola	Shrub (1-2 m)	< 1
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

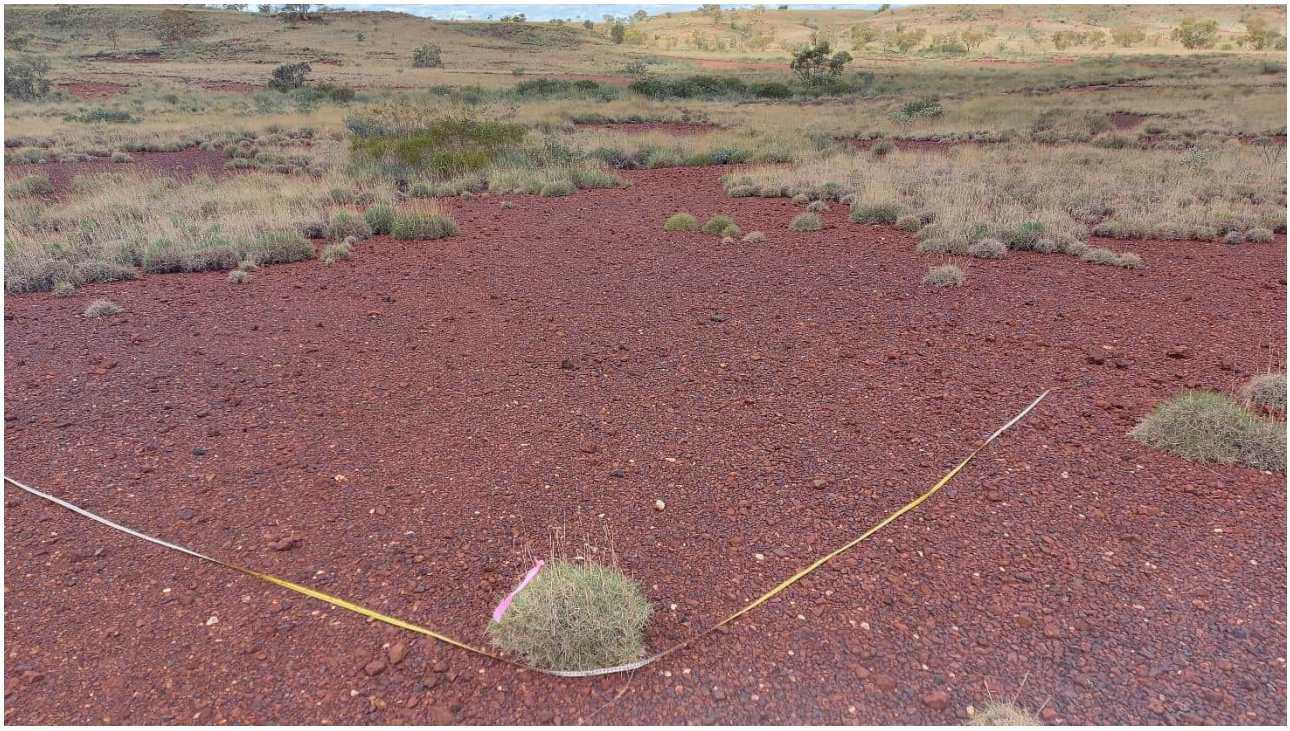
BD_E_262

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.13214, 119.85001				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Pluchea tetranthera	Shrub (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	50 – 74

BD_E_263

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.13573, 119.83468				
Landform	Midslope	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Senna sericea	Shrub (1-2 m)	1 – 4
Acacia ?adsurgens	Shrub (0.5-1 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_264

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.14141, 119.96026				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Light brown	**Soil texture**	Sand		
Rock type	Calcrete	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Moderate (2 – 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Acacia synchronicia	Shrub (0.5-1 m)	1 – 4
Atalaya hemiglauca	Shrub (<0.5 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Solanum phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia gardneri	Herb (<0.5 m)	1 – 4
Euphorbia ?biconvexa	Herb (<0.5 m)	1 – 4
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Senna notabilis	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_265

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.1428, 119.82906				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia monticola	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	5 – 9
Acacia bivenosa	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Dampiera candicans	Herb (<0.5 m)	1 – 4
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Amphipogon sericeus	Tussock Grass (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Eriachne mucronata	Tussock Grass (<0.5 m)	Assoc.
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_266

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.1431, 119.96275				
Landform	Low hill	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_267

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.15199, 119.97054				
Landform	Low hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	Assoc.
Acacia pruinocarpa	Shrub (1-2 m)	< 1
Acacia trachycarpa	Shrub (1-2 m)	1 – 4
Gossypium australe	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (0.5-1 m)	< 1
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia ?tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Polygala glaucifolia	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	50 – 74

BD_E_268

Date	11/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN/AC/SH
Location	-22.15761, 119.80685				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia ?aptaneura	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Senna sericea	Shrub (0.5-1 m)	1 – 4
Acacia synchronicia	Shrub (<0.5 m)	1 – 4
Capparis umbonata	Shrub (<0.5 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	1 – 4
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_269

Date	7/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.16777, 119.96313				
Landform	Plain	**Slope**	Gentle		
Soil colour	Brown	**Soil texture**	Loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	5 – 9
Acacia synchronicia	Shrub (0.5-1 m)	1 – 4
Petalostylis labicheoides	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_270

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.16924, 119.8083				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Acacia orthocarpa	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Senna symonii	Shrub (0.5-1 m)	< 1
Acacia synchronicia	Shrub (<0.5 m)	5 – 9
Euploca chrysocarpa	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia gardneri	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	Assoc.
Rhynchosia minima	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_271

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH/BN
Location	-22.17148, 119.97356				
Landform	Plain	**Slope**	NA		
Soil colour	Orange	**Soil texture**	Clay loam		
Rock type	Quartz	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia synchronicia	Shrub (>2 m)	10 – 24
Acacia inaequilatera	Shrub (1-2 m)	1 – 4
Vachellia farnesiana	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Corchorus parviflorus	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum	Shrub (<0.5 m)	< 1
?*Enchylaena tomentosa*	Herb (<0.5 m)	< 1
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Euphorbia ?*biconvexa*	Herb (<0.5 m)	< 1
Euphorbia vaccaria var. *vaccaria*	Herb (<0.5 m)	< 1
Polymeria ambigua	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida fibulifera	Herb (<0.5 m)	< 1
Solanum horridum	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24

BD_E_272

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.18346, 119.83739				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	Shrub (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_273

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.19009, 119.8116				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	< 1
Acacia adsurgens	Shrub (>2 m)	1 – 4
Eremophila latrobei subsp. *latrobei*	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (1-2 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Indigofera trita subsp. *trita*	Herb (0.5-1 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	25 – 32
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24

BD_E_274

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.247, 119.8133				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Acacia bivenosa	Shrub (0.5-1 m)	< 1
Grevillea pyramidalis subsp. *leucadendron*	Shrub (0.5-1 m)	< 1
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	75 – 94

BD_E_275

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.25276, 119.81924				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Granite	**Rock size**	Mixed	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	1 – 4
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (>2 m)	1 – 4
Hakea lorea subsp. *lorea*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (1-2 m)	< 1
Corchorus parviflorus	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Gossypium australe	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Paspalidium clementii	Tussock Grass (<0.5 m)	< 1
Paspalidium rarum	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	50 – 74

BD_E_276

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.25397, 119.81087				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Heavy clay		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	30 – 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Euploca cunninghamii	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	10 – 24
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia ?coccinea	Herb (<0.5 m)	1 – 4
Boerhavia ?gardneri	Herb (<0.5 m)	1 – 4
Boerhavia ?schomburgkiana	Herb (<0.5 m)	< 1
Crotalaria dissitiflora subsp. *benthamiana*	Herb (<0.5 m)	5 – 9
Crotalaria medicaginea var. *neglecta*	Herb (<0.5 m)	5 – 9
Euphorbia ?biconvexa	Herb (<0.5 m)	1 – 4
Grona muelleri	Herb (<0.5 m)	5 – 9
Indigofera linifolia	Herb (<0.5 m)	< 1
Ipomoea lonchophylla	Herb (<0.5 m)	1 – 4
Ipomoea polymorpha	Herb (<0.5 m)	< 1
Josephinia eugeniae	Herb (<0.5 m)	< 1
Neptunia longipila	Herb (<0.5 m)	1 – 4
Operculina aequisepala	Herb (<0.5 m)	25 – 32
Rhynchosia minima	Herb (<0.5 m)	1 – 4
Sida ?fibulifera	Herb (<0.5 m)	< 1
Streptoglossa ?odora	Herb (<0.5 m)	< 1
Trianthema ?glossostigmum	Herb (<0.5 m)	< 1
Aristida latifolia	Tussock Grass (<0.5 m)	10 – 24
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Cynodon convergens	Tussock Grass (<0.5 m)	5 – 9
Eragrostis setifolia	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	10 – 24

BD_E_277

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.27079, 119.80983				
Landform	Crest/hill top	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Eremophila latrobei subsp. *latrobei*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Tephrosia rosea	Shrub (0.5-1 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Tripogonella loliiformis	Tussock Grass (<0.5 m)	1 – 4
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

BD_E_278

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.28693, 119.7911				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Ehretia saligna var. *saligna*	Shrub (1-2 m)	1 – 4
Grevillea wickhamii	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	1 – 4
Acacia inaequilatera	Shrub (0.5-1 m)	1 – 4
Grevillea pyramidalis subsp. *leucadendron*	Shrub (0.5-1 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Arivela viscosa	Herb (<0.5 m)	< 1
Rhynchosia minima	Herb (<0.5 m)	< 1
Eriachne lanata	Tussock Grass (<0.5 m)	5 – 9
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	33 – 49

BD_E_279

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.29237, 119.79641				
Landform	Hill	**Slope**	Moderate		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone, quartz	**Rock size**	Rocky with outcroppings	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia tenuissima	Shrub (>2 m)	< 1
Acacia acradenia	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	< 1
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_280

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.3017, 119.78839				
Landform	Hill	**Slope**	Steep		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia inaequilatera	Shrub (1-2 m)	< 1
Acacia synchronicia	Shrub (1-2 m)	< 1
Ptilotus calostachyus	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (1-2 m)	< 1
Senna symonii	Shrub (1-2 m)	< 1
Pluchea ferdinandi-muelleri	Shrub (0.5-1 m)	Assoc.
Tribulus suberosus	Shrub (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	< 1

BD_E_281

Date	12/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.30524, 119.79089				
Landform	Minor creek (< 5 m)	**Slope**	NA		
Soil colour	Brown	**Soil texture**	Sand		
Rock type	Mixed river alluvium	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	10 – 30%
Vegetation condition	Poor	**Disturbance**	High weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus victrix	Tree (10-30 m)	25 – 32
Acacia coriacea subsp. *pendens*	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	5 – 9
Acacia trachycarpa	Shrub (>2 m)	5 – 9
Capparis umbonata	Shrub (>2 m)	1 – 4
Vachellia farnesiana	Shrub (0.5-1 m)	< 1
Ehretia saligna var. *saligna*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	1 – 4
Cyperus vaginatus	Sedge (<0.5 m)	1 – 4
Abutilon sp. Dioicum (A.A. Mitchell PRP 1618)	Herb (<0.5 m)	< 1
Alternanthera nana	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	1 – 4
Boerhavia ?coccinea	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Ipomoea muelleri	Herb (<0.5 m)	< 1
Ipomoea plebeia	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (0.5-1 m)	1 – 4
Cenchrus ciliaris	Tussock Grass (<0.5 m)	25 – 32
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	5 – 9
Triodia epactia	Hummock Grass (<0.5 m)	1 – 4

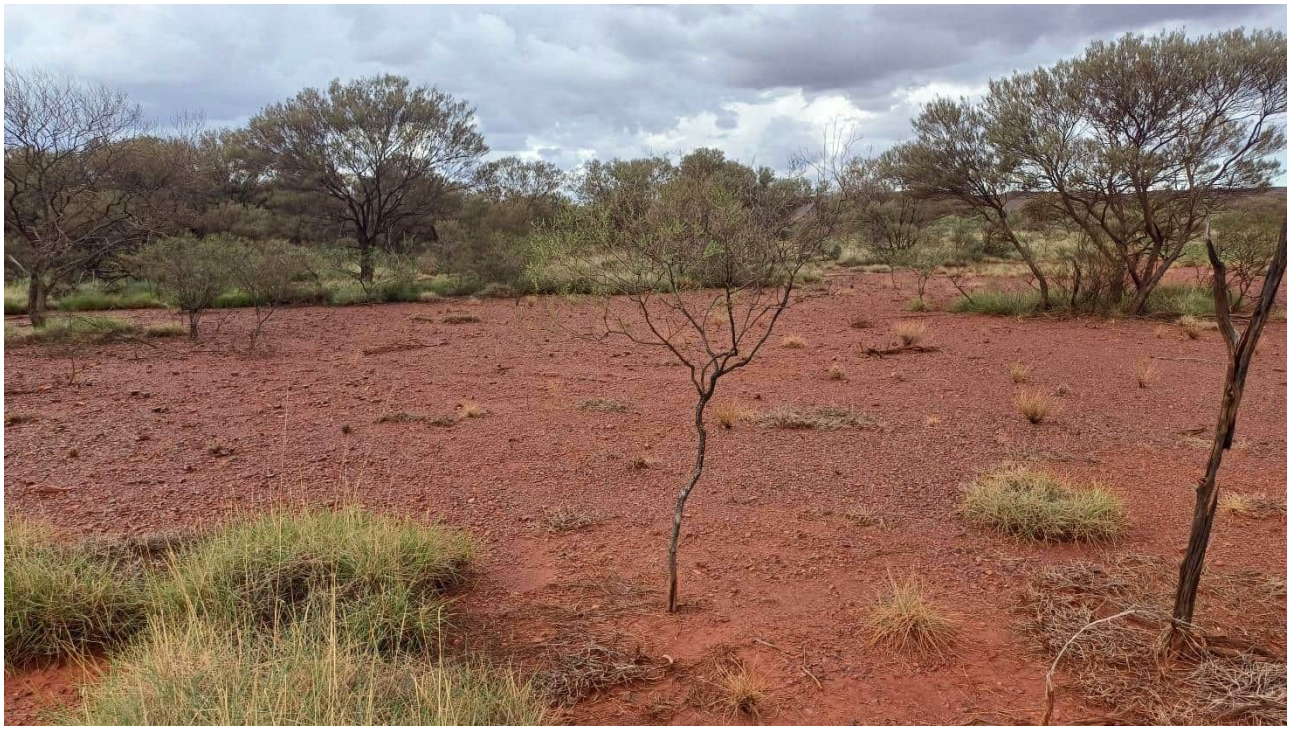
BD_E_282

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.31767, 119.74061				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Sandy clay loam		
Rock type	Calcrete	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	5 – 9
Acacia synchronicia	Shrub (1-2 m)	< 1
Eremophila longifolia	Shrub (0.5-1 m)	1 – 4
Jasminum didymum subsp. *lineare*	Shrub (0.5-1 m)	< 1
Senna ?stricta	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Acacia bivenosa	Shrub (<0.5 m)	< 1
Ehretia saligna var. *saligna*	Shrub (<0.5 m)	< 1
Euploca chrysocarpa	Shrub (<0.5 m)	1 – 4
Psydrax suaveolens	Shrub (<0.5 m)	< 1
Scaevola spinescens	Shrub (<0.5 m)	Assoc.
Senna artemisioides subsp. *oligophylla*	Shrub (<0.5 m)	1 – 4
Scaevola amblyanthera var. *centralis*	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	10 – 24

BD_E_283

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.32035, 119.76534				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				



Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	10 – 24
Acacia ayersiana	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *×luerssenii*	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Psydrax suaveolens	Shrub (1-2 m)	< 1
Senna ?stricta	Shrub (1-2 m)	< 1
Dodonaea petiolaris	Shrub (0.5-1 m)	< 1
Eremophila cuneifolia	Shrub (0.5-1 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (0.5-1 m)	1 – 4
Senna artemisioides subsp. *oligophylla*	Shrub (0.5-1 m)	< 1
Solanum lasiophyllum	Shrub (0.5-1 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (<0.5 m)	< 1
Hibiscus burtonii	Shrub (<0.5 m)	< 1
Hibiscus sturtii var. *campylochlamys*	Shrub (<0.5 m)	< 1
Ptilotus schwartzii	Shrub (<0.5 m)	1 – 4
Duperreya commixta	Herb (1-2 m)	< 1
Afrohybanthus aurantiacus	Herb (0.5-1 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Tribulus hirsutus	Herb (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	5 – 9
Triodia longiceps	Hummock Grass (<0.5 m)	5 – 9

BD_E_284

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.3189, 119.75643				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (0.5-1 m)	1 – 4
Eremophila cuneifolia	Shrub (0.5-1 m)	1 – 4
Senna ?stricta	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	1 – 4
Ptilotus schwartzii	Shrub (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Sida ?fibulifera	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9

BD_E_285

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.32202, 119.74539				
Landform	Hill	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Basalt	**Rock size**	Cobbles [c. 60 - 260 mm]	**Rock cover**	> 70%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	Assoc.
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	Assoc.
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Ptilotus calostachyus	Shrub (1-2 m)	< 1
Aerva javanica	Shrub (0.5-1 m)	< 1
Corchorus lasiocarpus subsp. *parvus*	Shrub (0.5-1 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	1 – 4
Solanum lasiophyllum/phlomoides	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	1 – 4
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Goodenia stobbsiana	Herb (0.5-1 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Dampiera candicans	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Cymbopogon ambiguus	Tussock Grass (1-2 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia basedowii	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	25 – 32

BD_E_286

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH/BN
Location	-22.32772, 119.71995				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	5 – 9
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	< 1
Corchorus lasiocarpus	Shrub (0.5-1 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Sida ?sp. *Golden calyces glabrous (H.N. Foote 32)*	Shrub (<0.5 m)	< 1
Tribulus suberosus	Shrub (<0.5 m)	< 1
Afrohybanthus aurantiacus	Herb (0.5-1 m)	< 1
Goodenia cusackiana	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	10 – 24
Triodia longiceps	Hummock Grass (0.5-1 m)	10 – 24

BD_E_287

Date	6/03/2024	**Site type**	Flora: Releve	**Botanist**	SH
Location	-22.33515, 119.7199				
Landform	Crest/hill top	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Eucalyptus leucophloia subsp. *leucophloia*	Tree (<10 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	5 – 9
Grevillea wickhamii	Shrub (>2 m)	1 – 4
Dodonaea coriacea	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (1-2 m)	1 – 4
Senna sericea	Shrub (0.5-1 m)	< 1
Tribulus suberosus	Shrub (0.5-1 m)	1 – 4
Ptilotus astrolasius	Shrub (<0.5 m)	1 – 4
Ptilotus schwartzii	Shrub (<0.5 m)	< 1
Dampiera candicans	Herb (<0.5 m)	< 1
Duperreya commixta	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	< 1
Triodia brizoides	Hummock Grass (<0.5 m)	25 – 32
Triodia epactia	Hummock Grass (<0.5 m)	10 – 24

BD_E_288

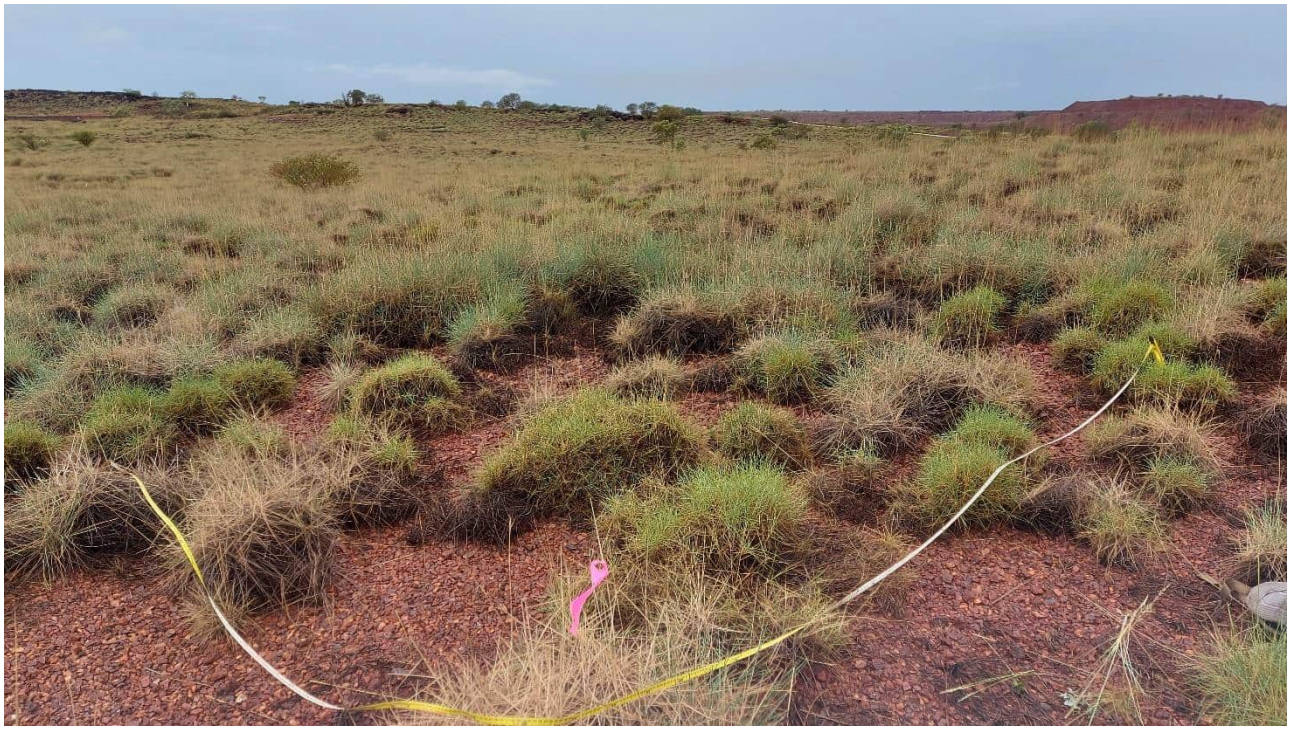
Date	15/07/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.39413, 119.68722				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Mixed	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	< 10%
Vegetation condition	Very Good	**Disturbance**	Minor weed cover and grazing.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	25 – 32
Acacia pruinocarpa	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Psydrax latifolia	Shrub (>2 m)	< 1
Acacia tetragonophylla	Shrub (1-2 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (1-2 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	< 1
Eremophila latrobei subsp. *filiformis*	Shrub (<0.5 m)	< 1
Maireana planifolia	Shrub (<0.5 m)	< 1
Ptilotus obovatus var. *obovatus*	Shrub (<0.5 m)	< 1
Fimbristylis dichotoma	Sedge (<0.5 m)	< 1
Abutilon lepidum	Herb (<0.5 m)	< 1
Arivela viscosa	Herb (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Calandrinia ?stagnensis	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Corchorus tridens/trilocularis	Herb (<0.5 m)	< 1
Cucumis variabilis	Herb (<0.5 m)	< 1
Euphorbia tannensis subsp. *eremophila*	Herb (<0.5 m)	< 1
Euphorbia trigonosperma	Herb (<0.5 m)	< 1
Evolvulus alsinoides var. *villosicalyx*	Herb (<0.5 m)	< 1
Gomphrena canescens subsp. *canescens*	Herb (<0.5 m)	< 1
Goodenia prostrata	Herb (<0.5 m)	< 1
Portulaca oleracea	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Ptilotus gomphrenoides	Herb (<0.5 m)	< 1
Ptilotus helipteroides	Herb (<0.5 m)	< 1
Ptilotus polystachyus	Herb (<0.5 m)	< 1
Rostellularia adscendens var. *clementii*	Herb (<0.5 m)	< 1
Sclerolaena cornishiana	Herb (<0.5 m)	< 1
Sida platycalyx	Herb (<0.5 m)	< 1

Name	Stratum	Percent cover (%)
Trianthema triquetrum	Herb (<0.5 m)	< 1
Tribulopis angustifolia	Herb (<0.5 m)	< 1
Aristida contorta	Tussock Grass (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	1 – 4
Cenchrus setiger	Tussock Grass (<0.5 m)	< 1
Dactyloctenium radulans	Tussock Grass (<0.5 m)	1 – 4
Enneapogon polyphyllus	Tussock Grass (<0.5 m)	10 – 24
Eragrostis leptocarpa	Tussock Grass (<0.5 m)	< 1
Eragrostis tenellula	Tussock Grass (<0.5 m)	< 1
Eriachne pulchella subsp. *dominii*	Tussock Grass (<0.5 m)	< 1
Iseilema vaginiflorum	Tussock Grass (<0.5 m)	< 1
Setaria verticillata	Tussock Grass (<0.5 m)	< 1

BD_E_289

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SH
Location	-22.34991, 119.70101				
Landform	Low hill	**Slope**	Moderate		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				



Name	Stratum	Percent cover (%)
Senna sericea	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Senna artemisioides subsp. *helmsii*	Shrub (0.5-1 m)	< 1
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	33 – 49
Triodia brizoides	Hummock Grass (<0.5 m)	1 – 4
Triodia wiseana	Hummock Grass (<0.5 m)	5 – 9

BD_E_290

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.36781, 119.69383				
Landform	Plain	**Slope**	NA		
Soil colour	Red	**Soil texture**	Clay loam		
Rock type	Ironstone	**Rock size**	Fine gravel [to c. 5 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	5 – 9
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Grevillea berryana	Shrub (>2 m)	1 – 4
Anthobolus leptomerioides	Shrub (1-2 m)	1 – 4
Senna ?stricta	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Acacia tetragonophylla	Shrub (0.5-1 m)	1 – 4
Eremophila forrestii subsp. *forrestii*	Shrub (0.5-1 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Psydrax suaveolens	Shrub (<0.5 m)	< 1
Ptilotus schwartzii	Shrub (<0.5 m)	1 – 4
Sida ?sp. *dark green fruits (S. van Leeuwen 2260)*	Herb (0.5-1 m)	< 1
Eragrostis desertorum	Tussock Grass (<0.5 m)	< 1
Eriachne mucronata	Tussock Grass (<0.5 m)	1 – 4
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9

BD_E_291

Date	6/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.37136, 119.68897				
Landform	Plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay		
Rock type	Basalt, chert	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia ?aptaneura	Shrub (>2 m)	25 – 32
Acacia pruinocarpa	Shrub (>2 m)	Assoc.
Grevillea berryana	Shrub (>2 m)	1 – 4
Acacia ayersiana	Shrub (1-2 m)	1 – 4
Anthobolus leptomerioides	Shrub (1-2 m)	< 1
Dodonaea petiolaris	Shrub (1-2 m)	< 1
Eremophila forrestii subsp. *forrestii*	Shrub (1-2 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (1-2 m)	< 1
Psydrax latifolia	Shrub (1-2 m)	< 1
Psydrax suaveolens	Shrub (1-2 m)	< 1
Ptilotus calostachyus	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *helmsii*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Seringia ?exastia	Shrub (1-2 m)	1 – 4
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Hibiscus burtonii	Shrub (<0.5 m)	< 1
Ptilotus schwartzii	Shrub (<0.5 m)	1 – 4
Solanum lasiophyllum/phlomoides	Shrub (<0.5 m)	< 1
Duperreya commixta	Herb (0.5-1 m)	< 1
Areocleome oxalidea	Herb (<0.5 m)	< 1
Cheilanthes sieberi subsp. *sieberi*	Herb (<0.5 m)	< 1
Evolvulus alsinoides	Herb (<0.5 m)	< 1
Goodenia prostrata	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Sida platycalyx	Herb (<0.5 m)	< 1
Sida sp. *dark green fruits (S. van Leeuwen 2260)*	Herb (<0.5 m)	< 1
Tribulus astrocarpus	Herb (<0.5 m)	< 1
Eragrostis desertorum	Tussock Grass (0.5-1 m)	1 – 4
Eriachne mucronata	Tussock Grass (0.5-1 m)	< 1

Name	Stratum	Percent cover (%)
Triodia brizoides	Hummock Grass (<0.5 m)	10 – 24

BD_E_292

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	AC
Location	-22.31395, 119.77308				
Landform	Undulating plain	**Slope**	NA		
Soil colour	Reddish brown	**Soil texture**	Clay loam		
Rock type	Ironstone, basalt	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia inaequilatera	Shrub (>2 m)	1 – 4
Acacia pyrifolia	Shrub (>2 m)	< 1
Hakea lorea subsp. *lorea*	Shrub (>2 m)	< 1
Acacia bivenosa	Shrub (1-2 m)	< 1
Acacia tetragonophylla	Shrub (1-2 m)	< 1
Androcalva luteiflora	Shrub (1-2 m)	1 – 4
Scaevola spinescens	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. *glutinosa*	Shrub (0.5-1 m)	< 1
Senna glutinosa subsp. *pruinosa*	Shrub (0.5-1 m)	< 1
Solanum elatius	Shrub (0.5-1 m)	< 1
Enchylaena tomentosa var. *tomentosa*	Shrub (<0.5 m)	< 1
Indigofera monophylla	Shrub (<0.5 m)	< 1
Ptilotus astrolasius	Shrub (<0.5 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Boerhavia coccinea	Herb (<0.5 m)	< 1
Goodenia stobbsiana	Herb (<0.5 m)	< 1
Nellica maderaspatensis	Herb (<0.5 m)	< 1
Ptilotus aervoides	Herb (<0.5 m)	< 1
Ptilotus exaltatus	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Senna notabilis	Herb (<0.5 m)	< 1
Solanum cleistogamum	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	< 1
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Paraneurachne muelleri	Tussock Grass (<0.5 m)	< 1
Sporobolus australasicus	Tussock Grass (<0.5 m)	< 1
Triodia longiceps	Hummock Grass (0.5-1 m)	25 – 32
Triodia brizoides	Hummock Grass (<0.5 m)	5 – 9
Triodia wiseana	Hummock Grass (<0.5 m)	25 – 32

BD_E_293

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	SN
Location	-22.31345, 119.79011				
Landform	Undulating plain	**Slope**	Gentle		
Soil colour	Reddish brown	**Soil texture**	Sandy clay		
Rock type	Ironstone	**Rock size**	Gravel/pebbles [c. 5 - 60 mm]	**Rock cover**	> 70%
Vegetation condition	Excellent	**Disturbance**	Minor weed cover and grazing.		
Time since fire	No evidence				

Name	Stratum	Percent cover (%)
Corymbia hamersleyana	Tree (<10 m)	1 – 4
Acacia ancistrocarpa	Shrub (1-2 m)	1 – 4
Acacia bivenosa	Shrub (1-2 m)	1 – 4
Acacia pyrifolia	Shrub (1-2 m)	1 – 4
Acacia trachycarpa	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (1-2 m)	1 – 4
Acacia maitlandii	Shrub (0.5-1 m)	1 – 4
Indigofera monophylla	Shrub (0.5-1 m)	1 – 4
Pentalepis trichodesmoides subsp. *trichodesmoides*	Shrub (0.5-1 m)	< 1
Ptilotus calostachyus	Shrub (0.5-1 m)	< 1
Senna symonii	Shrub (0.5-1 m)	< 1
Sida sp. Pilbara (A.A. Mitchell PRP 1543)	Shrub (<0.5 m)	< 1
Fimbristylis simulans	Sedge (<0.5 m)	10 – 24
Arivela viscosa	Herb (<0.5 m)	1 – 4
Bonamia pilbarensis	Herb (<0.5 m)	< 1
Euphorbia ?biconvexa	Herb (<0.5 m)	< 1
Goodenia ?cusackiana	Herb (<0.5 m)	< 1
Salsola australis	Herb (<0.5 m)	< 1
Tribulus ?hirsutus	Herb (<0.5 m)	1 – 4
Trigastrotheca molluginea	Herb (<0.5 m)	< 1
Cenchrus ciliaris	Tussock Grass (<0.5 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	25 – 32
Triodia wiseana	Hummock Grass (<0.5 m)	1 – 4

BD_E_294

Date	12/03/2024	**Site type**	Flora: Quadrat	**Botanist**	BN
Location	-22.30017, 119.79235				
Landform	Plain	**Slope**	NA		
Soil colour	Red	**Soil texture**	Clay		
Rock type	Ironstone	**Rock size**	Mixed	**Rock cover**	30 – 70%
Vegetation condition	Excellent	**Disturbance**	No significant disturbance.		
Time since fire	Long (> 3 yrs)				

Name	Stratum	Percent cover (%)
Acacia inaequilatera	Tree (<10 m)	< 1
Acacia ?aptaneura	Shrub (>2 m)	1 – 4
Acacia bivenosa	Shrub (>2 m)	1 – 4
Acacia pruinocarpa	Shrub (>2 m)	1 – 4
Acacia synchronicia	Shrub (>2 m)	1 – 4
Eremophila latrobei subsp. *latrobei*	Shrub (>2 m)	1 – 4
Eremophila latrobei subsp. *filiformis*	Shrub (1-2 m)	< 1
Jasminum didymum subsp. *lineare*	Shrub (1-2 m)	< 1
Senna artemisioides subsp. *oligophylla*	Shrub (1-2 m)	< 1
Senna glutinosa subsp. ×*luerssenii*	Shrub (0.5-1 m)	< 1
Triodia epactia	Hummock Grass (0.5-1 m)	33 – 49

Appendix F DBCA Significant Species Report Forms.

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Threatened and Priority Flora Report Form

Version 1.4 March 2021

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants

[redacted]

Reserve No:

[redacted]

LAND TENURE:

Nature reserve ☐ Timber reserve ☐ Private property ☐ Rail reserve ☐ Shire road reserve ☐

National park ☐ State forest ☐ Pastoral lease ☐ MRWA road reserve ☐ Other Crown reserve ☐

[redacted]

Alive	1000			1000
Dead				

Area of pop (m²): _____

Note: Pls record count as numbers (not percentages) for database.

[redacted]

of quadrats (m²): _____

wer ☒

e in flower: _____%

cent ☐

THREATS - type, agent and supporting information: Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. **Specify agent** where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme [redacted]), M=Medium (<5yrs), L=Long (5yrs+)	**Current impact (N-E)**	**Potential Impact (L-E)**	**Potential Threat Onset (S-L)**
[redacted]	_____	_____	_____
[redacted]	_____	_____	_____
[redacted]	_____	_____	_____

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[redacted]

FLORA AUTHORISATION / LICENCE No: Note if only observing plants (i.e. no specimens or plant matieral is taken) then no authorisation/licence is [redacted]

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[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
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[redacted]

Other: _____

[redacted]

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[redacted]		
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