



Jimblebar Wind Power 2030

Single Season Flora and Vegetation Report

Report to BHP Western Australia Iron Ore

4 June 2025



Document Status				
Revision No.	Author	Review / Approved for Issue	Approved for Issue to Name	Date
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2	Kaylin Geelhoed Robyn Chesney	Carmel Winton, Clinton van den Bergh	Jared Leigh	7/3/2025
3	Robyn Chesney	Carmel Winton, Clinton van den Bergh	Jared Leigh	01/05/2025
4	Robyn Chesney	Carmel Winton	Jared Leigh	15/05/2025
5 FINAL	Robyn Chesney	Carmel Winton	Jared Leigh	04/06/2025

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Executive Summary

BHP Western Australia Iron Ore commissioned Biologic Environmental Survey Pty Ltd to undertake a single-season detailed flora and vegetation survey for the Jimblebar Wind Power 2030 Project, located in the vicinity of the Mt Whaleback and Jimblebar mine sites. The survey covered two areas, one at Shovelanna/ Ninga, and a 600 metre wide corridor through Eastern Ridge project area. The term Survey Area is used hereafter to define both these areas collectively.

A total of 50 sites were sampled across the Survey Area (35 quadrats, 14 relevés, and one vegetation mapping note). In addition to the quadrat sampling, opportunistic targeted searches for significant flora were also undertaken. A total of 375 confirmed vascular flora taxa, representing 143 genera from 49 families were recorded within the Survey Area during the field survey. This included 362 confirmed native flora taxa, 14 confirmed introduced taxa, and 27 taxa unable to be fully identified due to lack of identifiable characteristics at the time of survey.

No Threatened flora, listed under the *Biodiversity Conservation Act 2016* (Western Australia) or *Environment Protection Biodiversity Conservation Act 1999* (Commonwealth), were recorded from the Survey Area.

Priority Flora are species listed by the Department of Biodiversity, Conservation and Attractions that may potentially be Threatened, but do not meet the criteria for listing as such under the *Biodiversity Conservation Act 2016* (WA) due to insufficient survey or lack of sufficient data. The desktop assessment indicated three Priority Flora had been previously recorded from the Survey Area. Of these, one (*Triodia* sp. Mt Ella (M.E. Trudgen 12739)) was recorded during the current survey. The remaining two Priority Flora (*Goodenia hartiana* (P2) and *Swainsona thompsoniana* (P3)) were previously recorded (identified in the desktop assessment) but were not recorded during the current field survey. Six additional Priority Flora taxa were also recorded, as follows:

- *Aristida jerichoensis* var. *subspinulifera*;
- *Aristida lazaridis*;
- *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) ;
- *Eremophila naaykensis*;
- *Ipomoea racemigera*; and
- *Isotropis parviflora*.

A total of 24 vegetation types were described and delineated in the Survey Area based on four broad landforms, along with two additional mapping units where vegetation had been

cleared or rehabilitated. No Threatened Ecological Communities listed under the *Biodiversity Conservation Act 2016* (WA) are known from the Survey Area and none of the vegetation types identified in the Survey Area resemble known Threatened Ecological Communities from the Pilbara. No Priority Ecological Communities, as listed by the Department of Biodiversity, Conservation and Attractions, intersect the Survey Area. None of the vegetation types identified in the Survey Area resemble known Priority Ecological Communities from the Pilbara. Five vegetation types were identified as significant due to their association with significant flora species; however, these vegetation types were considered to be well-represented throughout the Pilbara. Two vegetation types were considered to potentially be groundwater-dependent vegetation due to the presence of facultative phreatophyte species *Eucalyptus camaldulensis* and vadophyte species *E. victrix*. One vegetation type contained areas of mulga banding indicative of sheet-flow dependent vegetation in the east of the Survey Area (to the south of the Jimblebar Hub).

Vegetation condition in the Survey Area ranged from Excellent to Completely Degraded. In total, 31.8.0% of the Survey Area was recorded as Completely Degraded (mapped as Rehab and Cleared).

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1 Introduction

1.1 Background

BHP Western Australia Iron Ore (BHP WAIO) commissioned Biologic Environmental Survey Pty Ltd (Biologic) to undertake a single-season detailed flora and vegetation survey for the Jimblebar Wind Power 2030 Project, located in the vicinity of the Mt Whaleback and Jimblebar mine sites. The survey covered two areas, one at Shovelanna/ Ninga, and a 600 metre wide corridor through Eastern Ridge project area (Figure 1.1). The term Survey Area is used hereafter to define both these areas collectively.

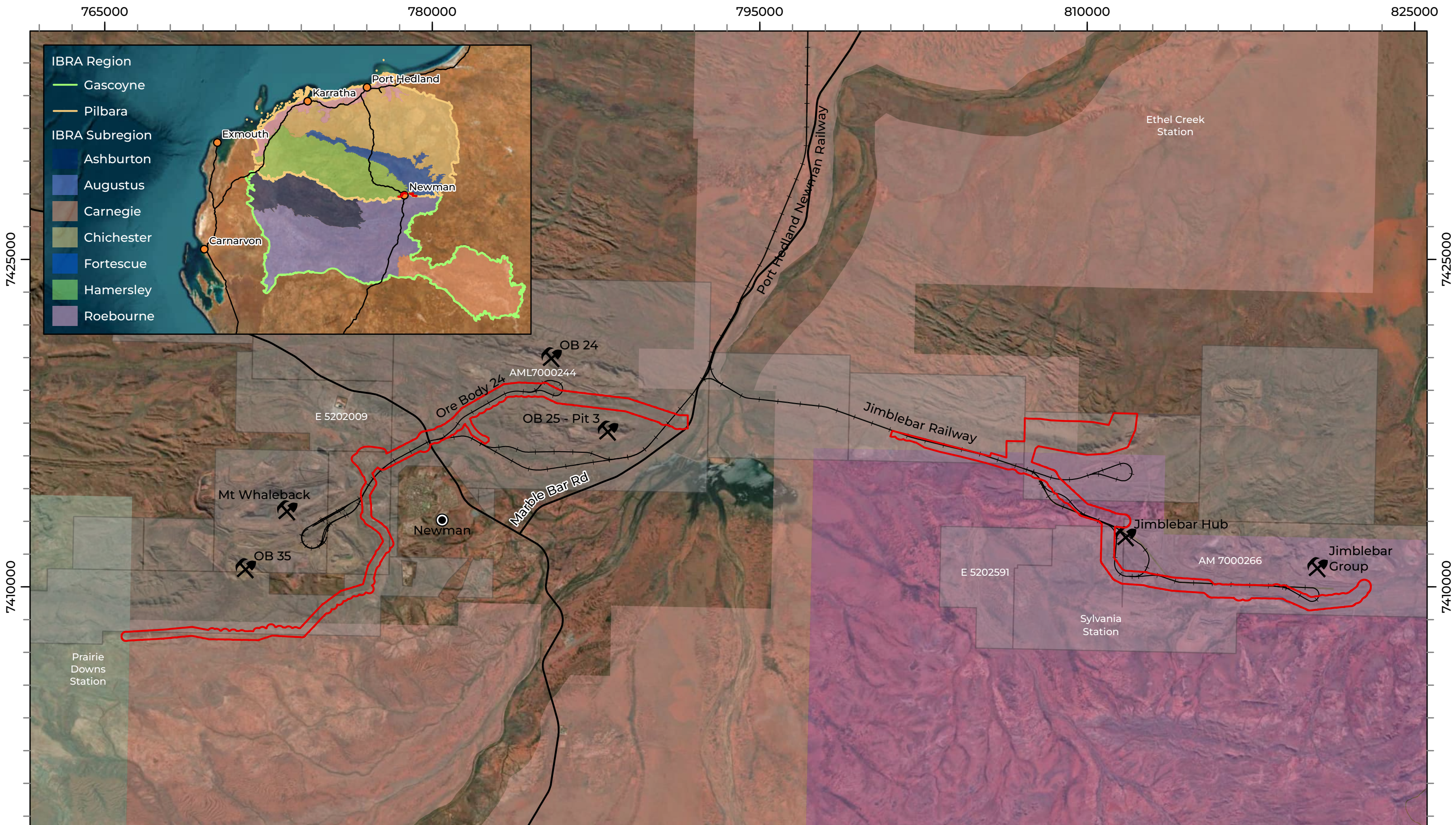
The western section of the Survey Area is located directly northwest of Newman township and extends either side of Newman, approximately 12 kilometres (km) to the southwest and northeast. The eastern section of the Survey Area is located approximately 20-40 km east of Newman to the Jimblebar operations. Hereafter, these combined areas are referred to as the 'Survey Area' and cover approximately 4,186 hectares (ha) across active and non-active geoscience and operations tenure.

1.2 Scope and Objectives

The overarching objective of the flora and vegetation survey (hereafter the 'Survey') was to identify the flora and vegetation values of the Survey Area. This included determining the significant values that will require consideration during future environmental assessments across the Survey Area. This document provides an interim single-season report and includes the following scope of works:

- Completion of a desktop assessment, including the review of previous biological surveys and government and non-government databases;
- Completion of a single-season detailed flora and vegetation survey of the Survey Area;
- Completion of preliminary broad vegetation types; and
- Review of the results of the flora and vegetation survey to identify preliminary significant environmental values within the Survey Area.

Access was unavailable to the westernmost extent of the western section of the Survey Area at the time of survey.



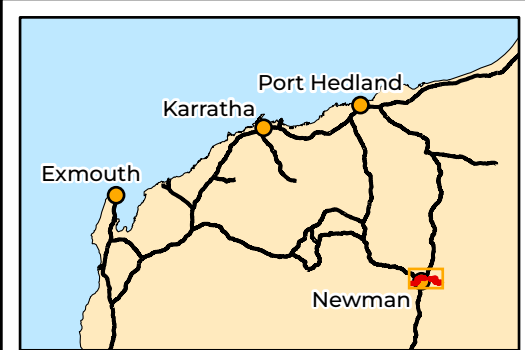
- LEGEND**
- | | | |
|--------------|----------------|-----------------------|
| Survey Area | Operating Mine | Ethel Creek Station |
| BHP Tenement | State Road | Prairie Downs Station |
| | Rail | Sylvania Station |

 **Biologic**

Scale 1:162,000

0 3 6 Km

Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 15/10/2024



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Figure 1.1: Survey Area
and regional context

1.3 Compliance

The Environmental Protection Authority (EPA) outline guidance for biological surveys in WA. All aspects of botanical assessments at Biologic are compliant with the *Environmental Factor Guideline: Flora and Vegetation* (EPA, 2016a) and *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b) and the This extends to preparation, survey design, personnel, data analysis, reporting and client data submission.

Additionally, Biologic is consistent with the values presented in the Factor Guidelines for flora and vegetation (EPA, 2016a), intended to protect biological diversity and ecological integrity of WA flora and vegetation during the EIA process. Guidelines provided by BHP WAIO were also considered during the field survey and report preparation.

- EPA (2023) *Statement of Environmental Principles, Factors, Objectives and Aims of EIA*;
- DoE (2013) *Matters of National Environmental Significance: Significant impact guidelines*;
- EPA (2016a) *Environmental factor guideline: Flora and Vegetation*;
- EPA (2016b) *Technical guidance: Flora and Vegetation Surveys for Environmental Impact Assessment*;
- BHP (2018b) *Vegetation and Flora Surveys Procedure*;
- BHP WAIO (2023) *Biodiversity Survey Spatial Data Requirements: Procedure*; and
- DWER (2024) *Index of Biodiversity Surveys for Assessments (IBSA)*.

1.3.1 Significant Flora and Vegetation

Significant flora and vegetation are protected at a state and commonwealth level and legislated by the following parliamentary acts:

- State *Biodiversity Conservation Act 2016* (BC Act);
- State *Environmental Protection Act 1986* (EP Act); and
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Rare, endemic, new or special flora and vegetation communities are protected at varying levels by classification under codes of significance (Appendix A). Significant flora and vegetation may extend beyond the assigned codes. This is also outlined in (Appendix A).

1.3.2 Introduced Flora

Introduced flora can pose a threat to native vegetation and biodiversity. The Commonwealth of Australia, in collaboration with the states and territories, identified 32 Weeds of National Significance (WoNS) assessed according to their invasiveness, potential for spread, and environmental, social and economic impacts (DoEE, 2019).

A database of Declared Pests (DP) is kept by the Department of Primary Industries and Regional Development (DPIRD). This database falls under State jurisdiction, legislated by the *Biosecurity and Agricultural Management Act 2007* (BAM Act) (DPIRD, 2007). Some introduced flora taxa may be classified within categories that have legal control or management requirements (Appendix A). These requirements must be met by the landholder.

2 Existing Environment

2.1 Biogeography

The majority of the Survey Area is located within the Hamersley (PIL03) subregion of the Pilbara bioregion; however, small sections of the Survey Area occur in the Fortescue (PIL02) subregion of the Pilbara bioregion, and the Augustus (GAS03) subregion of the Gascoyne bioregion (Figure 1.1), as defined by the Interim Biogeographic Regionalisation of Australia (IBRA; Thackway & Cresswell, 1995).

The IBRA regions represent a landscape-based approach to classifying land surface, including attributes of climate, geomorphology, landform, lithology, and characteristic flora and fauna. The Pilbara bioregion is characterised by vast coastal plains and inland mountain ranges with cliffs and deep gorges (Thackway & Cresswell, 1995). Vegetation is predominantly mulga (*Acacia* spp.) low woodlands or snappy gum (*Eucalyptus leucophloia*) over bunch and hummock grasses (Bastin & ACRIS, 2008). The climate is semi-desert tropical with an average rainfall of 300 millimetres (mm), usually in summer cyclonic or thunderstorm events. Winter rain is not uncommon (Kendrick, 2003). The Gascoyne bioregion is characterised by rugged low Proterozoic sedimentary and granite ranges divided by broad flat valleys (Thackway & Cresswell, 1995). Open mulga woodlands occur on shallow earthy loams over hardpan on plains, with mulga scrub and *Eremophila* shrublands on the shallow stony loams of the ranges (Thackway & Cresswell, 1995).

2.2 Climate

The Pilbara IBRA bioregion has a semi-desert to tropical climate, with rainfall occurring sporadically throughout the year, although mostly during summer (Thackway & Cresswell, 1995). Summer rainfall is usually the result of tropical storms in the north or tropical cyclones that impact upon the coast and move inland (Leighton, 2004). The winter rainfall is generally lighter and is the result of cold fronts moving north easterly across Western Australia (Leighton, 2004). The average annual rainfall ranges from 200–350 mm, although there are significant fluctuations between years, with some locations receiving up to 1,200 mm in some years (McKenzie *et al.*, 2009).

2.3 Geology

The Survey Area is located within the Pilbara Craton super province (Geoscience Australia, 2013). The Pilbara Craton is a major Archean granite-greenstone terrane of northwestern Western Australia, containing some of the oldest rocks on Earth. The Survey Area is also located within the Fortescue Basin and the Hamersley Basin (Geoscience Australia, 2013). The Fortescue Basin overlies the Pilbara Craton and entirely consists of the Fortescue Group, which is predominantly a volcanic succession, characterised by basaltic rocks. The Hamersley

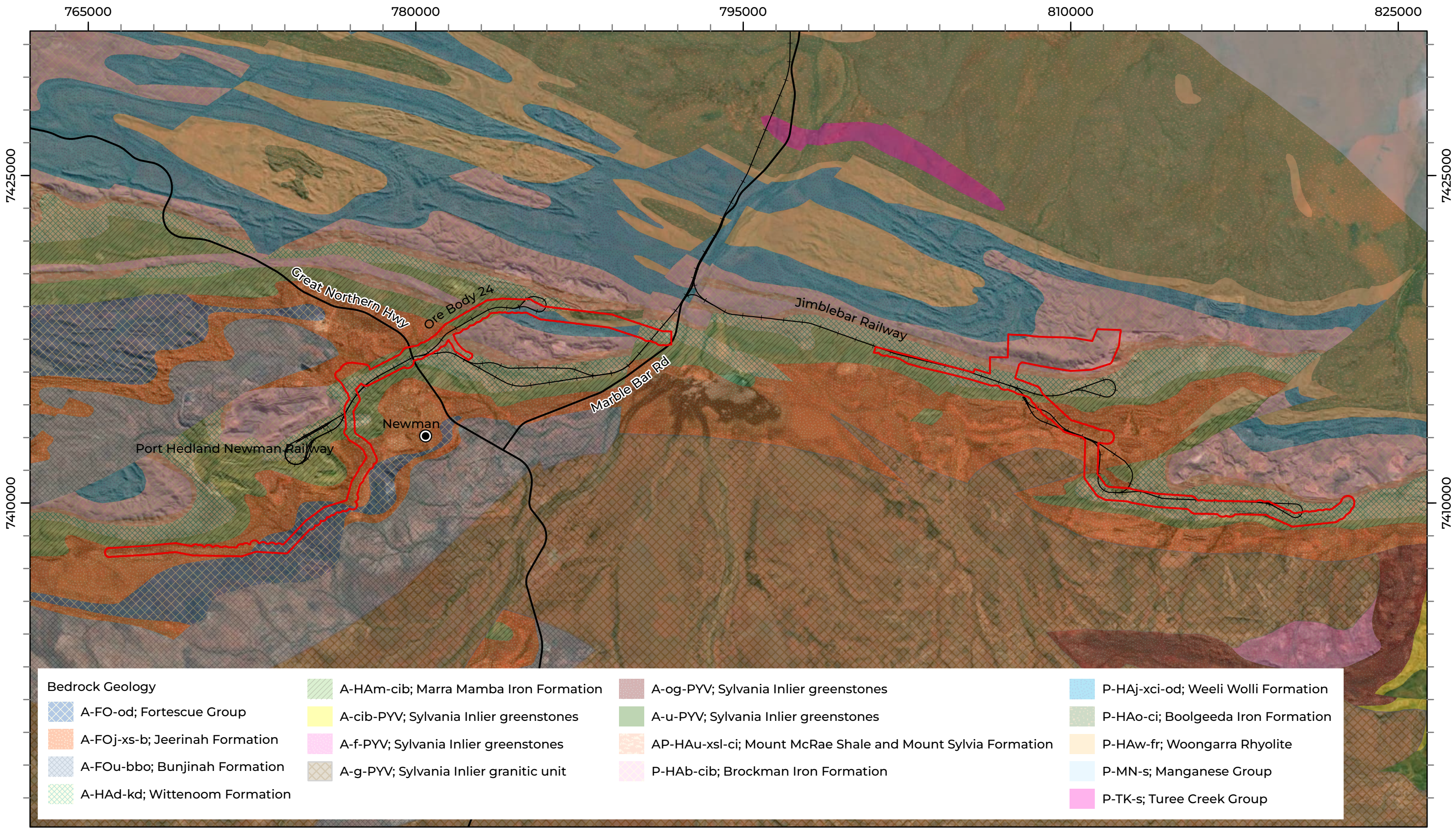
Basin then overlies the Fortescue Basin, consisting of banded iron formation, chert, pelite, felsic volcanic rocks, dolostone and dolomitic mudstone as well as calcrete deposits (Kendrick, 2003).

At a finer scale (1:500,000), the Survey Area occurs across ten bedrock geological units and across eleven broad regolith geological units (ranging from calcrete and clay, silt, sand to transported duricrust and exposed bedrock) (GSWA, 2020a, 2020b) (Table 2.1). Bedrock geology is illustrated in Figure 2.1.

Table 2.1: Geological formations (1:500,000) occurring within the Survey Area

Unit Code	Unit name Description	Extent in Survey Area	
		ha	%
Bedrock geological units (1:500,000)			
A-FOj-xs-b	Jeerinah Formation Siliciclastic sedimentary rocks, mafic volcanic rocks and minor felsic volcanic rocks; local carbonate rocks, chert, and dolerite sills	864.3	20.6
A-FO-od	Fortescue Group Dolerite dyke or sill	221.1	5.3
A-g-PYV	Sylvania Inlier granitic Unit Granite to granodiorite; metamorphosed and variably foliated	2.3	0.1
A-HAd-kd	Wittenoom Formation Thinly bedded dolomite and dolomitic shale, with minor black chert, shale, banded iron formation and sandstone	1285.9	30.7
A-HAM-cib	Marra Mamba Iron Formation Chert, banded iron-formation, mudstone, and siltstone; minor carbonate; metamorphosed	645.3	15.4
A-HAu-xsl-ci	Mount McRae Shale and Mount Sylvia Formation Mudstone, siltstone, chert, banded iron-formation, and dolomite; metamorphosed	101.8	2.4
P_-HAb-cib	Brockman Iron Formation Banded iron-formation, chert, mudstone, and siltstone; metamorphosed	750.6	17.9
P_-HAj-xci-od	Weeli Wolli Formation Banded iron-formation (commonly jaspilite), mudstone, siltstone, and numerous dolerite sills; metamorphosed	142.0	3.4
P_-Hao-ci	Boolgeeda Iron Formation Fine-grained, finely laminated iron-formation, mudstone, siltstone, and chert; minor dolomite, sandstone, conglomerate, and diamictite	75.0	1.8
P_-Haw-fr	Woongarra Rhyolite Rhyolite, rhyodacite, rhyolitic breccia, banded iron-formation, and mudstone	98.6	2.4
Total		4,186.8	100

Unit Code	Unit name Description	Extent in Survey Area	
		ha	%
Regolith geological units (1:500,000)			
A-PIP	Alluvial/fluviat unit Clay, silt, sand, and gravel in channels and on floodplains	1,027.6	24.5
Aa-PIP	Alluvial/fluviat unit Sand- or clay-rich alluvium on alluvial plain	389.3	9.3
Ac-PIP	Alluvial/fluviat unit Clay, silt, sand, and gravel in fluviat channels	35.6	0.9
C-PIP	Colluvial unit Colluvium derived from different rock types; includes gravel, sand, silt and clay	527.5	12.6
Ct-f-PIP	Colluvial unit Talus deposit from iron-rich rocks and iron-rich weathering products; commonly derived from banded iron-formation and ferruginous duricrust	16.9	0.4
Ct-PIP	Colluvial unit Colluvial talus derived from different rock types	95.8	2.3
E-PIP	Eolian unit Eolian sand, silt and clay in sheet deposits and dunes	3.4	0.1
Rr-k-PIP	Residual or relict unit Calcrete duricrust (residual or relict)	63.0	1.5
Rt-PIP	Residual or relict unit Transported duricrust; cemented sand, gravel, cobbles, and boulders in alluvial/colluvial deposits	0.3	<0.1
W-PIP	Sheetwash unit Clay, silt and sand in distal sheetwash fan and slope deposits; local ferruginous pisoliths and gravel	230.9	5.5
X-PIP	Exposed unit Exposed bedrock	1,796.5	42.9
Total		4,186.8	100



LEGEND

- Survey Area
- State Road
- Rail

Scale 1:162,000

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Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 15/10/2024

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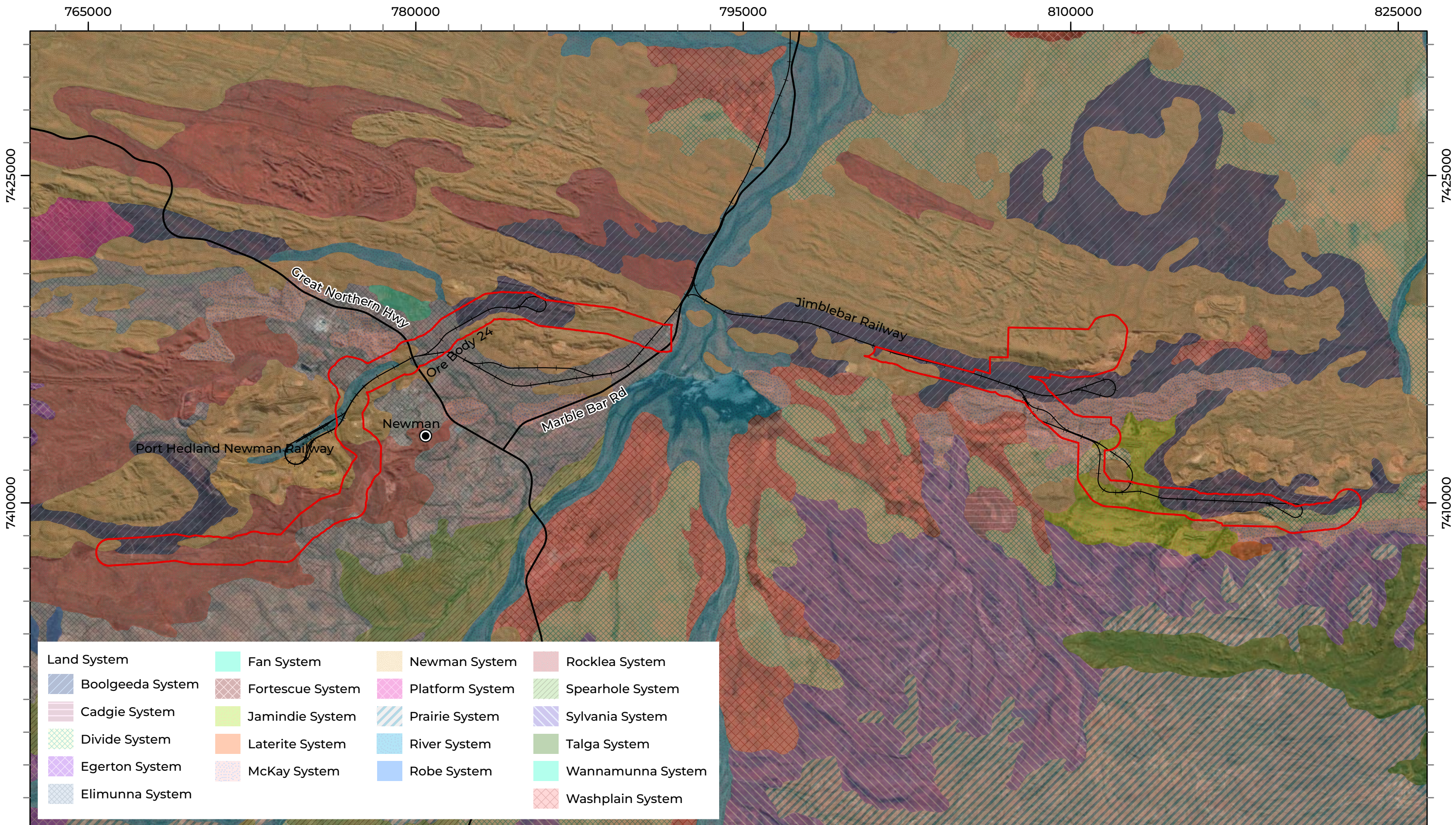
Figure 2.1: Broad geology
of the Survey Area

2.4 Land Systems

Review of land systems mapping by Payne *et al.* (1988) and later refined by van Vreeswyk *et al.* (2004) identified nine land systems in the Survey Area (Table 2.2; Figure 2.2).

Table 2.2: Land systems occurring within the Survey Area

Name	Description	Extent in Survey Area	
		ha	%
Boolgeeda	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands	1,173.1	28
Divide	Gently undulating sandplains with minor dunes, supporting hard spinifex hummock grasslands with numerous shrubs	251.8	6
Elimunna	Stony plains on basalt supporting sparse acacia and cassia shrublands and patchy tussock grasslands	413.7	9.9
Jamindie	Stony hardpan plains and rises supporting groving mulga shrublands, occasionally with spinifex understorey	226.2	5.4
McKay	Hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands	251.9	6
Newman	Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands	1,251.7	29.9
River	Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands	118.5	2.8
Rocklea	Basalt hills, plateaux, lower slopes, and minor stony plains supporting hard spinifex (and occasionally soft spinifex) grasslands	499.8	11.9
Sylvania	Gritty surfaced plains and low rises on granite supporting acacia-eremophila-cassia shrublands	<0.1	<0.1
Total		4,186.8	100



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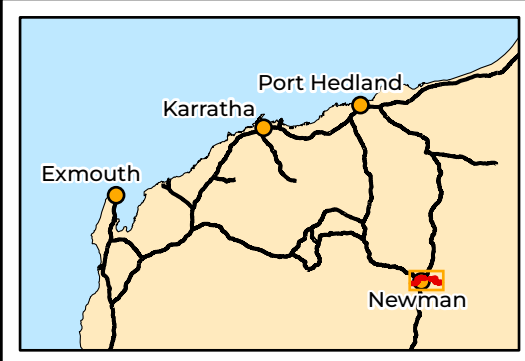
- Survey Area
- State Road
- Rail

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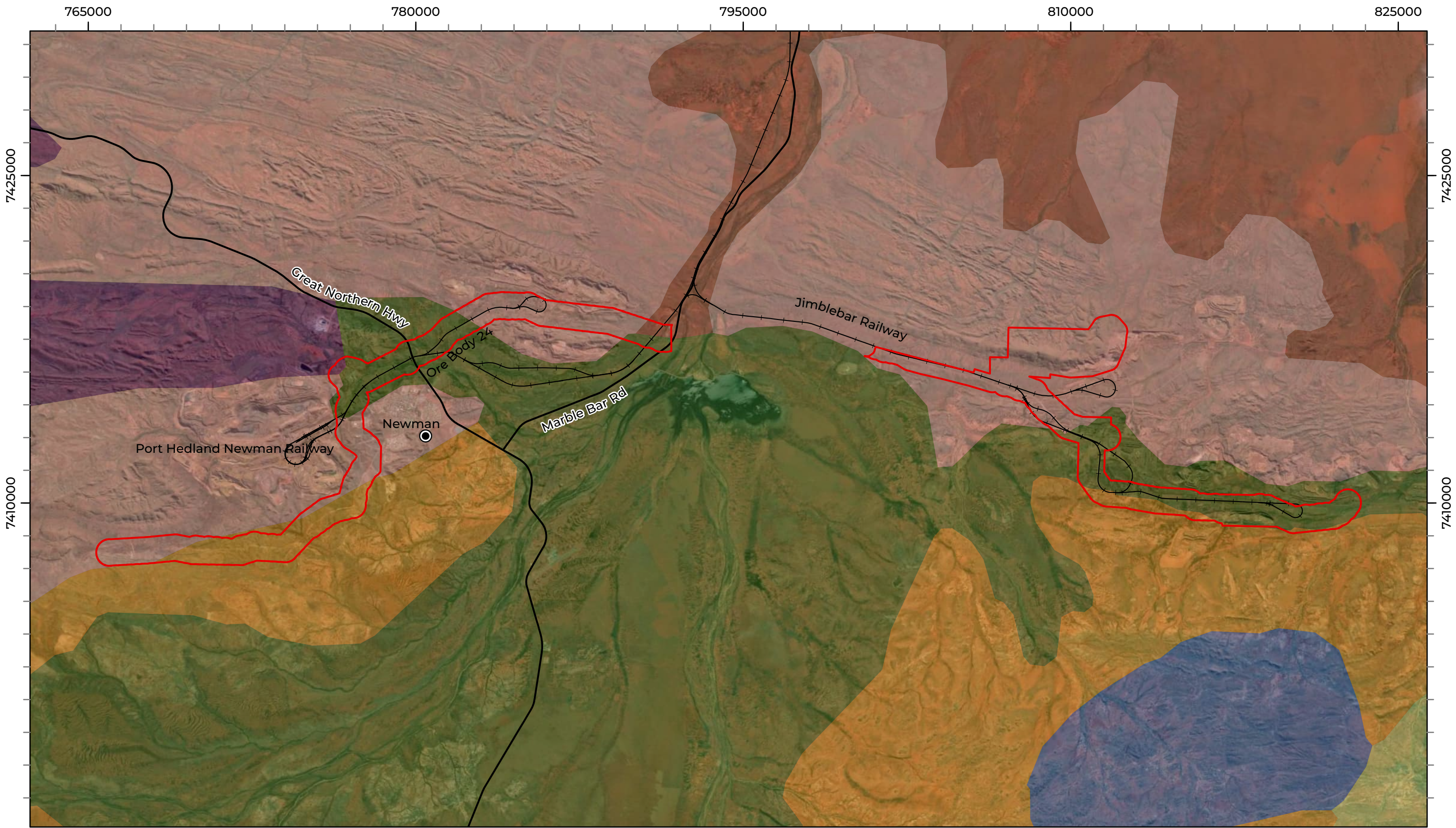
Figure 2.2: Land systems
of the Survey Area

2.5 Soils

The Atlas of Australian Soils was compiled by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in the 1960s to provide a consistent national description of Australia's soils (Northcote *et al.*, 1960-1968). It comprises a series of ten maps and associated explanatory notes published at a scale of 1:2,000,000, although the original compilation was at scales from 1:250,000 to 1:500,000. The Survey Area is characterised by five soil units (Table 2.3; Figure 2.3).

Table 2.3: Soil units occurring within the Survey Area

Unit Code	Description	Extent in Survey Area	
		ha	%
BE6	Extensive flat and gently sloping plains	1,511.4	36.1
Fa13	Ranges of banded jaspilite and chert along with shales, dolomites, and iron ore formations	2,103.7	50.3
Fa14	Steep hills and steeply dissected pediments on areas of banded jaspilite and chert along with shales.	8	0.2
Mz25	Plains associated with the Fortescue valley; there is a surface cover of stony gravels close to the ranges and hills: chief soils are acid red earths (Gn2.11) with some neutral red earths (Gn2.12); red-brown hardpan is absent.	49	1.2
Oc64	Low stony hills and dissected pediments on granite with occasional basic dykes: chief soils are hard	514.7	12.3
Total		4,186.8	100



LEGEND

- | | | |
|-------------|-----------|------|
| Survey Area | Soil Unit | Fa14 |
| State Road | AA16 | Mz25 |
| Rail | BE6 | Mz36 |
| | Fa13 | Oc64 |

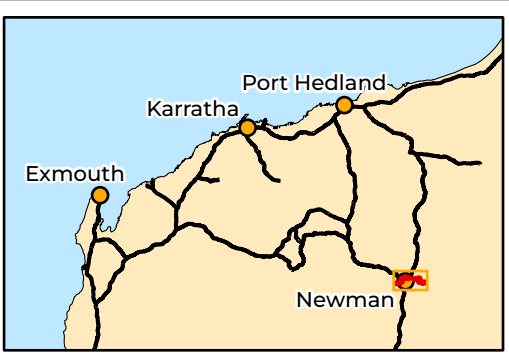


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Figure 2.3: Soils of the
Survey Area

2.6 Hydrology and Hydrogeology

The surface and groundwater hydrology of the Pilbara is highly variable as a result of a dynamic climate with severe droughts and major flooding (Department of Water, DoW, 2010). Streamflow is highly seasonal and variable and is usually a direct response to rainfall. Most runoff occurs from January to March as a result of episodic cyclonic activities (DoW, 2010).

The Survey Area occurs within the Fortescue River Basin and the Upper Fortescue River Catchment, the latter of which drains into the Fortescue Marsh. At a finer scale, the Survey Area is located within two sub catchments (the Ophthalmia Dam sub-catchment and an Unnamed sub-catchment) (Figure 2.4).

The western section of the Survey Area is located within 500 m of the Fortescue River and approximately 1.5 km from Ophthalmia Dam. Homestead Creek, a minor watercourse, flows through the Survey Area, along with several other small, unnamed watercourses (Figure 2.4).

The eastern section of the Survey Area is situated approximately 8 km from the Fortescue River and around 6 km from Ophthalmia Dam. Several unnamed tributaries traverse this area, with one on the eastern side flowing into Jimblebar Creek, located approximately 4 km east of the Survey Area. Simultaneously, several other tributaries on the western side of the Survey Area flow into Shovelanna Creek, approximately 2 km to the south of the Survey Area (Figure 2.4).

2.6.1 Groundwater Dependent Ecosystems

Groundwater Dependent Ecosystems (GDE) are ecosystems that rely upon groundwater for their continued existence (Bureau of Meteorology, BoM, 2024b). GDE can be represented by many different assemblages of biota which rely on groundwater, and as a result come in many forms. For terrestrial ecosystems there are three key types of GDE (BoM, 2024b); 1) aquatic ecosystems: that rely on the surface expression of groundwater, 2) terrestrial ecosystems: that rely on the subsurface presence of groundwater (this includes all vegetation ecosystems or Groundwater Dependent Vegetation (GDV)), and 3) subterranean ecosystems (this includes cave and aquifer ecosystems).

Aboveground terrestrial GDEs are typically characterised by the presence of flora species that rely on groundwater, i.e. phreatophytes. Phreatophytes may be classified as either obligate or facultative phreatophytes (Section 2.6.1.1).

The BoM has developed the Groundwater Dependent Ecosystems Atlas (GDE Atlas) as a national dataset of Australian GDEs to inform groundwater planning and management (BoM, 2024b). It is the first and only national inventory of GDEs in Australia.

The GDE Atlas contains information about the three key types of terrestrial ecosystems, with mapping from two broad sources:

- National assessment – national-scale analysis based on a set of rules that describe potential for groundwater/ ecosystem interaction and available geographic information systems (GIS) data.
- Regional studies – more detailed analysis undertaken by various state and regional agencies using a range of different approaches including field work, analysis of satellite imagery and application of rules/conceptual models.

The BoM GDE Atlas indicates that the Survey Area has potential to support terrestrial GDEs, based on the national assessment (Figure 2.4) (BoM, 2024b).

2.6.1.1 Groundwater Dependent Flora and Vegetation

Aboveground terrestrial GDE are typically characterised by the presence of flora species that rely on groundwater (i.e., phreatophytes). Phreatophytes may be classified as either obligate or facultative phreatophytes depending on their reliance on groundwater (Eamus *et al.*, 2016).

- Obligate phreatophytes are flora species confined to habitats with access to groundwater;
- Facultative phreatophytes are flora species that can utilise groundwater to satisfy a proportion of their ecological water requirement (EWR) when it is available. However, some individuals may also satisfy their EWR by relying solely on uptake from upper unsaturated soils layers where groundwater is inaccessible.

Obligate phreatophytes are flora species which are completely or highly dependent on groundwater and are therefore confined to habitats with continual, seasonal, or episodic access to groundwater. As they rely on groundwater to satisfy at least some proportion of their EWR (Eamus *et al.*, 2016), obligate phreatophytes are highly sensitive to changes in groundwater regime and respond negatively to rapid groundwater drawdown. As such, obligate phreatophytes are often the best indicator of consistently shallow groundwater tables, or permanent surface water presence in the Pilbara. Not all phreatophytic species display the same degree of dependency on groundwater and the dependency within species has been shown to vary both spatially and temporally (Eamus *et al.*, 2016), with the hydrological regime of a particular catchment, creek, or river system, a key factor in presence and dependency of a phreatophyte on groundwater.

Facultative phreatophytes are plants that can access groundwater but are not totally reliant on it, instead using groundwater opportunistically, particularly during times of drought. Some individuals may satisfy their EWR by relying solely on uptake from upper unsaturated

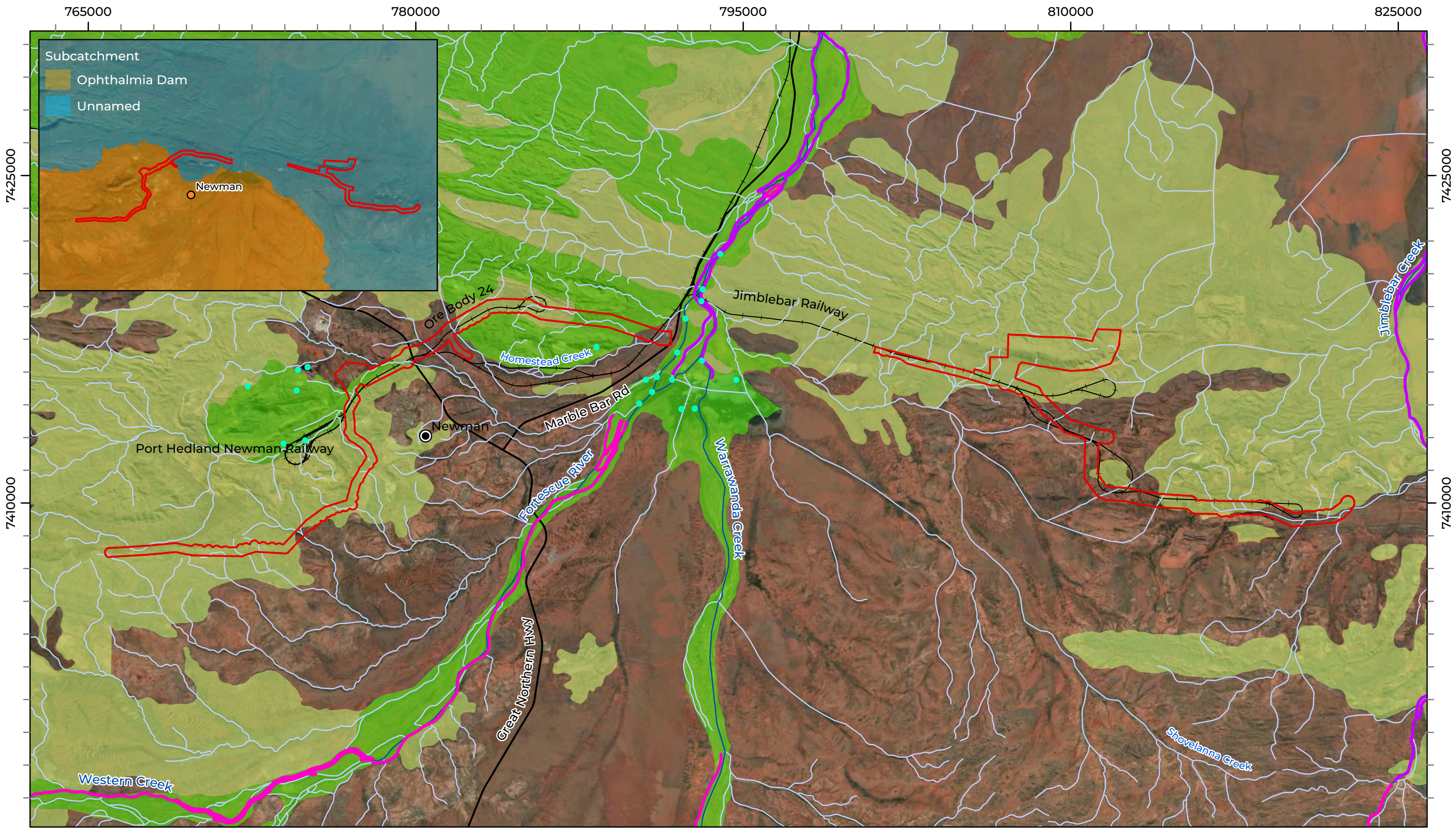
soil layers where groundwater is inaccessible (Eamus *et al.*, 2016). Facultative phreatophytes are therefore generally associated with the subsurface presence of groundwater, rather than surface expression of groundwater. Most facultative phreatophytes are large woody trees and shrubs with deep root systems. Vadophytes are plant species that rely on moisture in the soil surface profile, and are independent of groundwater, while xerophytes need very little water (Rio Tinto, 2018).

In the Pilbara, tree species are often used as a tool to broadly indicate groundwater dependence. The key Pilbara tree species that are considered to be indicators of groundwater depth and permanence are presented in Table 2.4.

Table 2.4: Groundwater dependence categorisation

Species Dependence on Groundwater categorisation	Plant Physiology/ water use strategy	Relevant Species in the Pilbara
High	Obligate phreatophyte	<i>Melaleuca argentea</i>
Moderate	Facultative phreatophyte	<i>Eucalyptus camaldulensis</i>
Low to Moderate	Facultative phreatophyte/ vadophyte	<i>Eucalyptus victrix</i> , <i>Eucalyptus xerothermica</i> , <i>Corymbia candida</i>
Low (virtually negligible)	Vadophyte/ xerophyte	<i>Eucalyptus leucophloia</i> , <i>Corymbia hamersleyana</i> , <i>Corymbia deserticola</i>

In addition to the tree species outlined above, other hydrophytic and mesophytic Pilbara flora taxa can be indicators of presence and availability of soil moisture content, and therefore GDV. Further, landforms with groundwater in proximity to the surface (e.g. drainage lines) may also be indicative of the presence of GDV.



LEGEND

Survey Area

State Road

Rail

Surface Hydrology

- Minor
- Major

Aquatic GDE

- High potential GDE - from national assessment
- Moderate potential GDE - from national assessment
- Unclassified potential GDE - from regional studies

Terrestrial GDE

- Moderate potential GDE - from national assessment
- Low potential GDE - from national assessment

Biologic

Scale 1:162,000

0 3 6 Km

Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 15/10/2024

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Single Season Flora and Vegetation Survey

Figure 2.4: Surface hydrology of the Survey Area

2.6.2 Sheet-flow Dependent Ecosystems

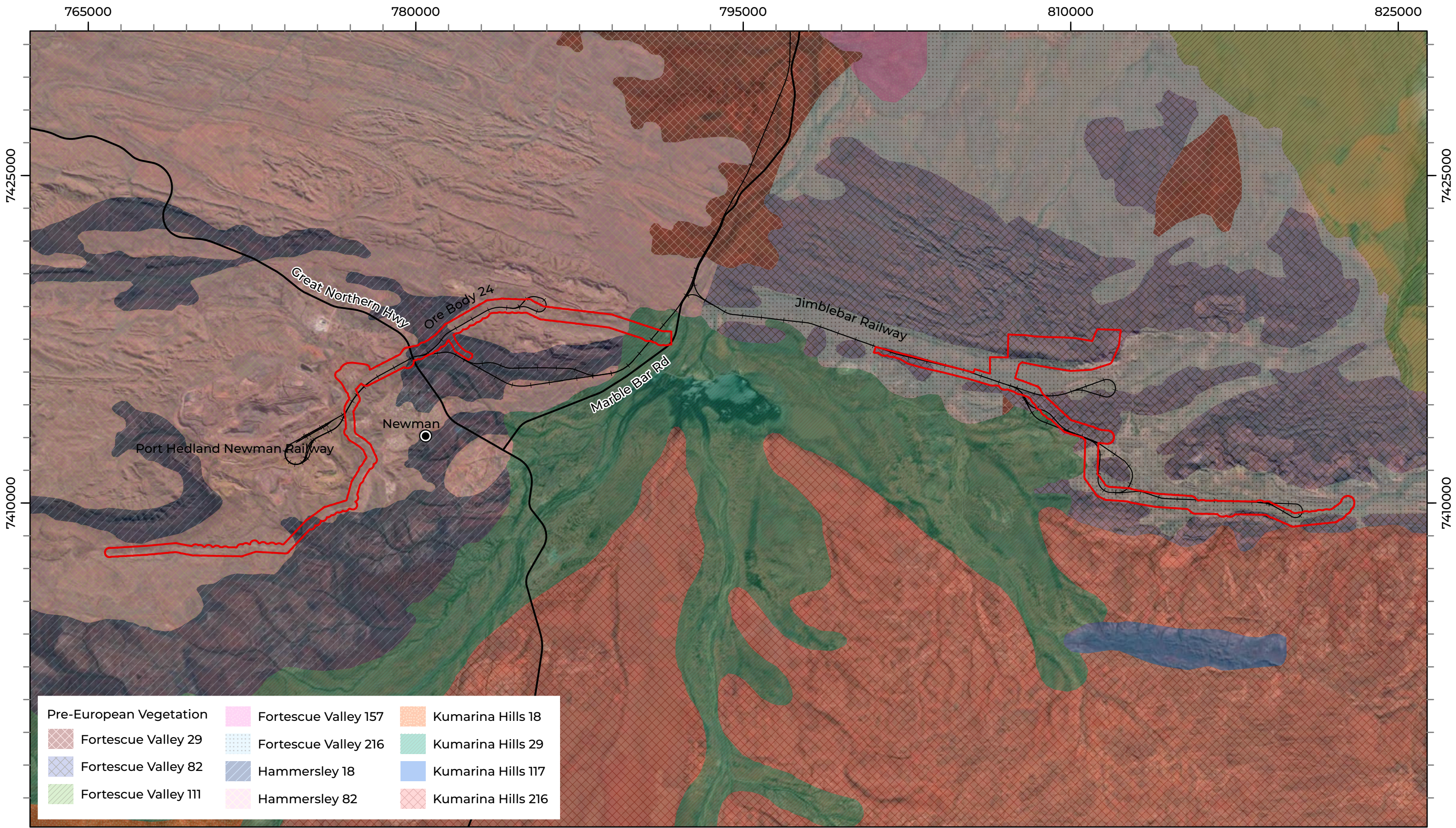
Mulga is a vernacular term used in reference to a dominant arid-zone, group of tall shrubs, allied to the *Acacia aneura* taxonomic complex, of which there are 12 separate entities, excluding informal variants, putative hybrids and intergrades (Maslin & Reid, 2012). The term “mulga” is also used to describe vegetation communities in which these taxa predominate (Maslin *et al.*, 2012). The structure and patterning of mulga communities varies from strongly banded (groved) through to open shrublands and woodlands across the landscape (Page & Grierson, 2012). The bandings act as a sink for nutrients and water to infiltrate the soil and are readily available for uptake by the flora located within the banding. This banding and overland sheet-flow supports a diverse biota within the mulga bands and plays an important ecological function which is well documented (Dawson & Ahern, 1973; Saco *et al.*, 2007; Winkworth, 1973).

The Survey Area contains two land systems that have landforms subject to sheet-flow, with these being characterised by mulga groves within stony plains and hardpan plains. The Boolgeeda Land System includes small groves up to 20 m long within stony lower plains which are subject to sheet flow. The Jamindie Land System supports groves up to 400 m long and 20 m wide, but commonly much less, on hardpan plains (van Vreeswyk *et al.*, 2004).

2.7 Vegetation

2.7.1 Vegetation System Associations

Pre-European vegetation mapping based on the major structural vegetation types was originally undertaken by Beard at various scales (predominantly 1:1,000,000) across Western Australia (Beard, 1975a). Shepherd *et al.* (2002) reinterpreted and updated this mapping to reflect the National Vegetation Information System (NVIS) Technical Working Group standards (Executive Steering Committee for Australian Vegetation Information, ESCAVI, 2003). The update also accounts for extensive clearing since Beard (1975b) mapping. Shepherd *et al.* (2002) created a series of ‘systems’ to assist in removing mosaic vegetation associations originally mapped by Beard (1975b); however, some mosaics still occur. Six vegetation system associations occur across the Survey Area (Table 2.5), and are illustrated in Figure 2.5 (Shepherd *et al.*, 2002).



LEGEND

- Survey Area
- State Road
- Rail

Scale 1:162,000

0 3 6 Km

Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 15/10/2024

BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 2.5: Pre-European
vegetation associations
of the Survey Area

Table 2.5: Pre-European vegetation associations occurring within the Survey Area

Vegetation Association	Code	Description	Extent in Survey Area	
			ha	%
Fortescue Valley	82	Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i>	1,077.2	25.7
	216	Low woodland; mulga (with spinifex) on rises	1,195.5	28.6
Hammersley	18.11	Low woodland; mulga (<i>Acacia aneura</i>)	257.1	6.1
	82.3	Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i>	1,518.5	36.3
Kumarina Hills	29	Sparse low woodland; mulga, discontinuous in scattered groups	138	3.3
	216	Low woodland; mulga (with spinifex) on rises	0.6	<0.1
Total			4186.8	100

Source: Shepherd *et al.* (2002)

The Government of Western Australia historically reported annually on the statistics of the pre-European and current extent for both vegetation associations and vegetation complexes of the south-west of Western Australia. The state-wide statistics are no longer updated and publicly available and have not been updated since 2018. However, the state-wide statistics is a useful tool to determine if vegetation is rare or otherwise significant (Government of Western Australia, 2019a, 2019b), while understanding that any new clearing from 2019 has not been captured. The statistics provide details on the progress towards achieving a conservation reserve system that is comprehensive, adequate, and representative (CAR Reserve) and the statistics for each local government area. Lands protected for conservation are defined as lands managed by the Department of Biodiversity, Conservation and Attractions (DBCA) with an IUCN category of I – IV (with a primary purpose of conservation) (Government of Western Australia, 2019a, 2019b).

The 2018 extent of each of the pre-European vegetation system associations exceeds 94% across the four regional scales: State, bioregion (Pilbara, and Gascoyne), subregion (Fortescue, Hamersley, and Augustus) and Local Government Authority (Shire of East Pilbara) (Government of Western Australia, 2019b) (Table 2.6). As at 2018, the pre-European vegetation system associations 18.11 and 82.3 were represented within the National Reserve System having greater than 19 % and 12 % of their bioregional and subregional extent within reserves, respectively (Government of Western Australia, 2019b) (Table 2.6). The remaining vegetation system associations were not protected in reserves, but retained 94 to 100% of their pre-European extent across the IBRA bioregions found in the Survey Area.

Table 2.6: Regional and local extent of vegetation system associations

Vegetation System Association	Code	Scale	Pre-European extent (ha)	Current extent remaining (ha/%)	Current extent remaining within reserves (ha/%)
Fortescue Valley	82	State	30,467	30,271.2 / 99.4	n/a
		Pilbara	30,239.9	30,044.1 / 99.4	n/a
		Fortescue	15,127.9	15,127.9 / 100	n/a
		Hamersley	15,047.3	14,851.5 / 98.7	n/a
		Shire of East Pilbara	29,989.1	29,793.3 / 99.4	n/a
	216	State	26,399.3	26,102 / 98.9	n/a
		Pilbara	26,388.2	26,090.9 / 98.9	n/a
		Fortescue	18,931.2	18,931.2 / 100	n/a
		Hamersley	7,457	7,159.7 / 96	n/a
		Shire of East Pilbara	26,399.3	26,102 / 98.9	n/a
Hamersley	18.11	State	580,556	575,851.6 / 99.2	113,404.4 / 19.7
		Pilbara	580,512.3	575,807.9 / 99.2	113,404.4 / 19.7
		Hamersley	580,512.3	575,807.9 / 99.2	113,404.4 / 19.7
		Shire of East Pilbara	224,292.1	220,375.4 / 98.3	44.4 / <0.1
	82.3	State	2,169,997	2,157,841 / 99.4	262,983 / 12.2
		Pilbara	2,168,702	2,156,547 / 99.4	262,983 / 12.2
		Hamersley	2,158,862	2,146,708 / 99.4	262,244 / 12.2
		Shire of East Pilbara	573,312.8	565,215.1 / 98.6	n/a
Kumarina Hills	29	State	784,574.7	784,364.4 / 99.9	n/a
		Gascoyne	780,621.9	780,428.5 / 99.9	n/a
		Pilbara	2,706	2,689 / 99.4	n/a
		Augustus	780,337	780,143.7 / 99.9	n/a
		Hamersley	2,388.8	2,371.8 / 99.3	n/a
		Shire of East Pilbara	42,853.1	42,644.7 / 99.5	n/a
	216	State	254,360.1	253,135.1 / 99.5	n/a
		Gascoyne	254,078.4	252,853.4 / 99.5	n/a
		Pilbara	281.7	281.7 / 100	n/a
		Augustus	254,078.4	252,853.4 / 99.5	n/a
		Hamersley	145.8	145.8 / 100	n/a
		Shire of East Pilbara	18,669.4	17,709.6 / 94.9	n/a

2.7.2 Bioregional Significance

Under the Convention on Biological Diversity, Australia has worked towards a target of 17 % of the continent to be protected as part of the National Reserve System (NRS) (Convention on Biological Diversity, 2020). The NRS is an Australia-wide network of protected areas, defined as legally recognised, dedicated and managed areas with the purpose of achieving

long-term conservation of nature, ecosystem services and cultural values (NRSTG, 2009). In building the NRS, priority is given to under-represented bioregions that have less than 10 % of their remaining area protected in reserves (NRSTG, 2009). The Pilbara and Gascoyne bioregions are under-represented bioregions, each with less than 10 % of its total area protected in reserves. The Hamersley subregion is adequately represented, with approximately 13 % of the subregional area protected within reserves, while the Augustus and Fortescue subregions have approximately 2.5 % and 0.5 % protected respectively (Government of Western Australia, 2019b). Despite the Pilbara and Gascoyne bioregions being under-represented within the NRS, greater than 96 % of vegetation within the Fortescue, Hamersley and Augustus subregions remains intact (Government of Western Australia, 2019b).

3 Desktop Assessment

3.1 Methods

A desktop assessment, comprising database searches and a literature review, was undertaken prior to the field survey. The purpose of the desktop assessment was to identify significant flora and vegetation values occurring, or potentially occurring, in the Survey Area.

3.1.1 Database Searches

Seven database searches were undertaken to generate a list of vascular flora taxa previously recorded within, and near, the Survey Area; including introduced and significant taxa (Table 3.1). The database searches also identified ecological communities/ vegetation types of significance that occur, or may occur, within and near the Survey Area. The parameters for each of the search areas are presented in Table 3.1.

Table 3.1: Details of database searches conducted

Purpose	Database	Parameters
To identify flora species and communities previously recorded within the Survey Area and its vicinity, particularly those of significance.	Threatened and Priority Ecological Communities, Species and Communities Branch #11-0224EC	70 km radius of the Survey Area
	Threatened and Priority Flora Database #18-0224FL	
	Western Australian Herbarium (WAH) Specimen Database	
	NatureMap – species occurrence search #21-0224NM	40 km radius of the Survey Area
	Atlas of Living Australia (ALA) – species occurrence search	
To identify potential species and communities listed under the Commonwealth EPBC Act within the Survey Area	EPBC Act Protected Matters Search Tool	40 km radius of the Survey Area
To identify declared pest plants within the Survey Area	Declared Pests Database (Western Australian Organism List)	Search of the entire Shire of East Pilbara

3.1.2 Review of Other Survey Reports

A review of available literature relevant to the Survey Area was undertaken to compile a list of significant flora and vegetation communities of interest with the potential to occur within the Survey Area. Twenty-five previous flora and vegetation assessments were reviewed, with six intersecting or partially intersecting the Survey Area, 14 located within 10 km of the Survey Area, and two greater than 10 km (Table 3.2).

Table 3.2: Summary of other reports informing the desktop assessment

Survey Title	Reference	Survey Type
Intersecting Survey Area		
<i>Coombanbunna Well Detailed Flora and Vegetation Survey</i>	Biologic (2020a)	Detailed
<i>Western Ridge: Single season detailed flora and vegetation survey</i>	Biologic (2021)	Detailed
<i>Western Ridge Pipeline reconnaissance flora and vegetation survey</i>	Biologic (2022c)	Reconnaissance
<i>Western Ridge Paddy Bore Area Reconnaissance Flora and Vegetation Survey</i>	Biologic (2022b)	Reconnaissance
<i>Western Ridge detailed flora and vegetation survey</i>	Biologic (2020c)	Detailed
<i>Dynasty and West Jimblebar Level 2 Flora and Vegetation Survey</i>	Onshore (2015a)	Detailed
<i>OB32 Surplus Water & Homestead Creek Wetting Front Detailed Flora & Vegetation Assessment</i>	Spectrum (2022a)	Detailed
<i>East Ophthalmia & Ninga Detailed Flora & Vegetation Survey</i>	Spectrum (2023a)	Detailed
< 10 km from Survey Area		
<i>East Jimblebar & Caramulla detailed flora and vegetation assessment</i>	Biologic (2019a)	Detailed
<i>Shearers East reconnaissance flora and vegetation assessment</i>	Biologic (2019b)	Reconnaissance
<i>Western Ridge Creeks detailed flora and vegetation assessment</i>	Biologic (2022a)	Detailed
<i>Jumbuck reconnaissance flora and vegetation assessment</i>	Biologic (2020b)	Reconnaissance
<i>Level 1 flora and fauna surveys along the Great Northern Highway for Jimblebar Mine module transport</i>	Eco Logical (2012)	Reconnaissance
<i>Jimblebar Wye rail junction priority flora and riparian vegetation assessment</i>	Ecologia (2005)	Vegetation Assessment
<i>Rapid growth project 5: Repeater 9 access road flora and vegetation assessment</i>	ENV (2008a)	Detailed
<i>Orebody 31 Targeted Significant Flora Survey</i>	Onshore (2014b)	Targeted
<i>Jimblebar Creek Riparian Flora and Vegetation Baseline Survey</i>	Onshore (2015b)	Detailed
<i>Targeted flora survey Acacia sp. East Fortescue</i>	Onshore (2015c)	Targeted
<i>Reconnaissance Flora and Vegetation Survey Caramulla</i>	Onshore (2018a)	Reconnaissance and Targeted
<i>Shearers West Detailed Flora and Vegetation Survey</i>	Onshore (2018b)	Detailed
<i>Jimblebar North Reconnaissance Flora and Vegetation Survey</i>	Onshore (2019)	Reconnaissance and Targeted
<i>Homestead Creek & Cathedral Gorge Detailed Flora & Vegetation Assessment</i>	Spectrum (2024)	Detailed
<i>Southwest Jimblebar Level 2 Flora and Vegetation Survey</i>	Syrinx (2014)	Detailed
> 10 km from Survey Area		
<i>Caramulla Creek flora and vegetation survey</i>	Astron (2019)	Reconnaissance
<i>Roy Hill: Southern Borefield Study Area (L47/642 and L47/735) Detailed Flora and Vegetation Assessment</i>	Maia (2018)	Detailed

3.1.3 Assessment of Occurrence

Significant flora species identified from the desktop assessment were assessed for their likelihood of occurrence in the Survey Area. The rankings were assigned using the following definitions presented in the decision matrix (Table 3.3).

Interpretation of likelihood criteria may vary between species due to several factors influencing species occurrence, including known distribution, known range, preferred habitat, ecology, and/or dispersal capabilities. The assessment of occurrence also considered how well distributed a species was within known localities. Likelihood rankings were re-assessed post field survey, taking ground truthing into consideration (see Section 4.2.1.3).

Table 3.3: Assessment of Occurrence decision matrix

		Habitat Categories (within the Survey Area)			
		Core/ Critical Habitat Present	Suitable Habitat Present/ Within Known Distribution	Marginal Habitat Present/ Adjacent to Known Distribution	No Suitable Habitat Present/ Outside of Known Distribution
Species Records/ Occurrence Categories	Recorded within the Survey Area	Confirmed	Confirmed	Confirmed	Confirmed
	Recorded within <5 km	Highly Likely	Likely	Possible	Possible
	Recorded within 5-15 km	Likely	Possible	Possible	Unlikely
	Recorded within 15-40 km	Possible	Possible	Unlikely	Unlikely
	Recorded >40 km	Possible	Unlikely	Unlikely	Highly Unlikely
	Taxa considered locally/ regionally extinct	Unlikely	Unlikely	Highly Unlikely	Highly Unlikely

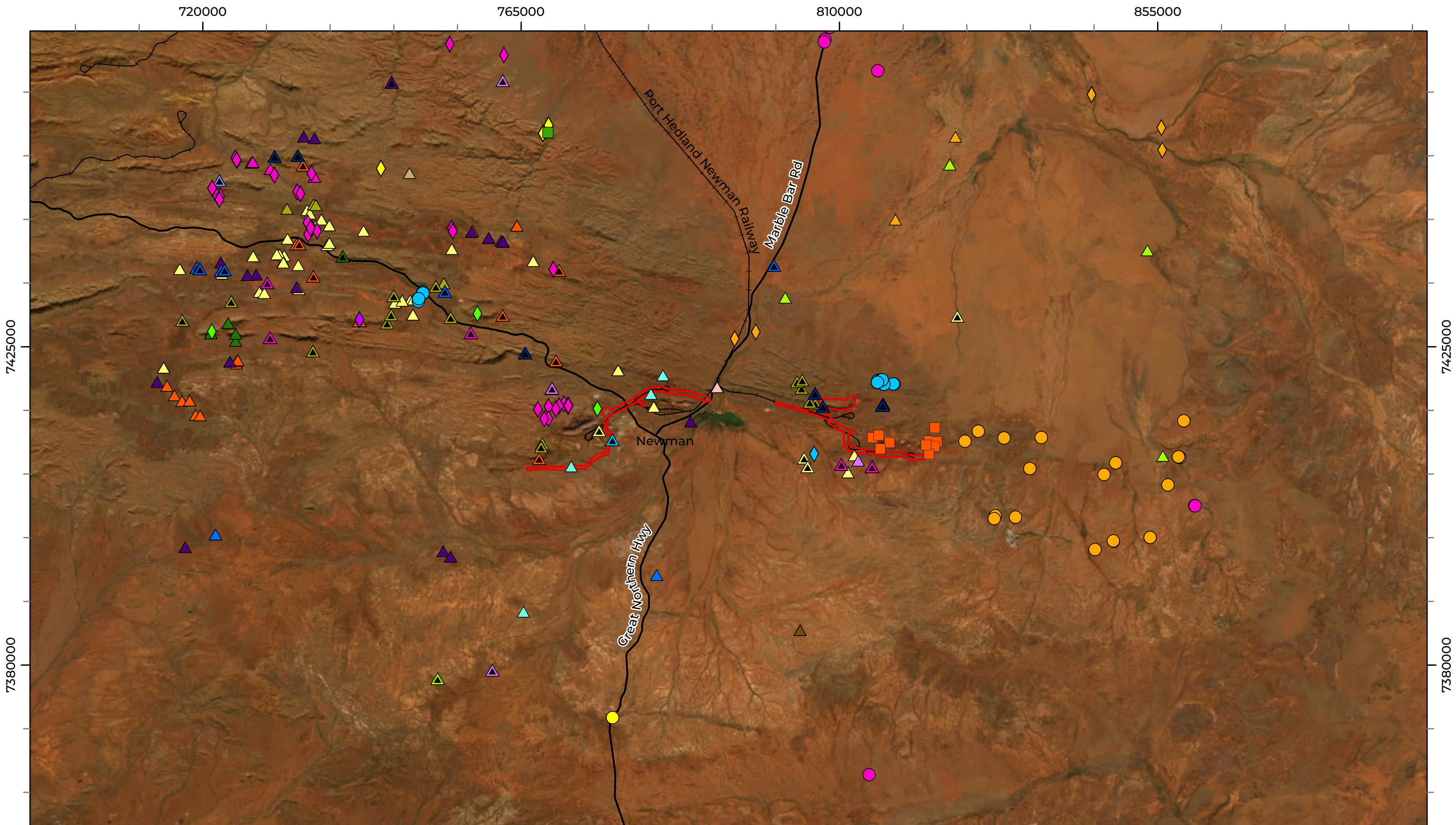
3.2 Results

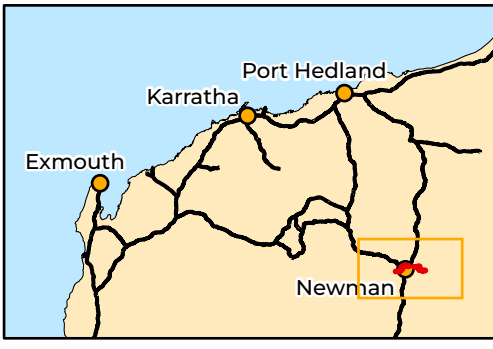
3.2.1 Flora

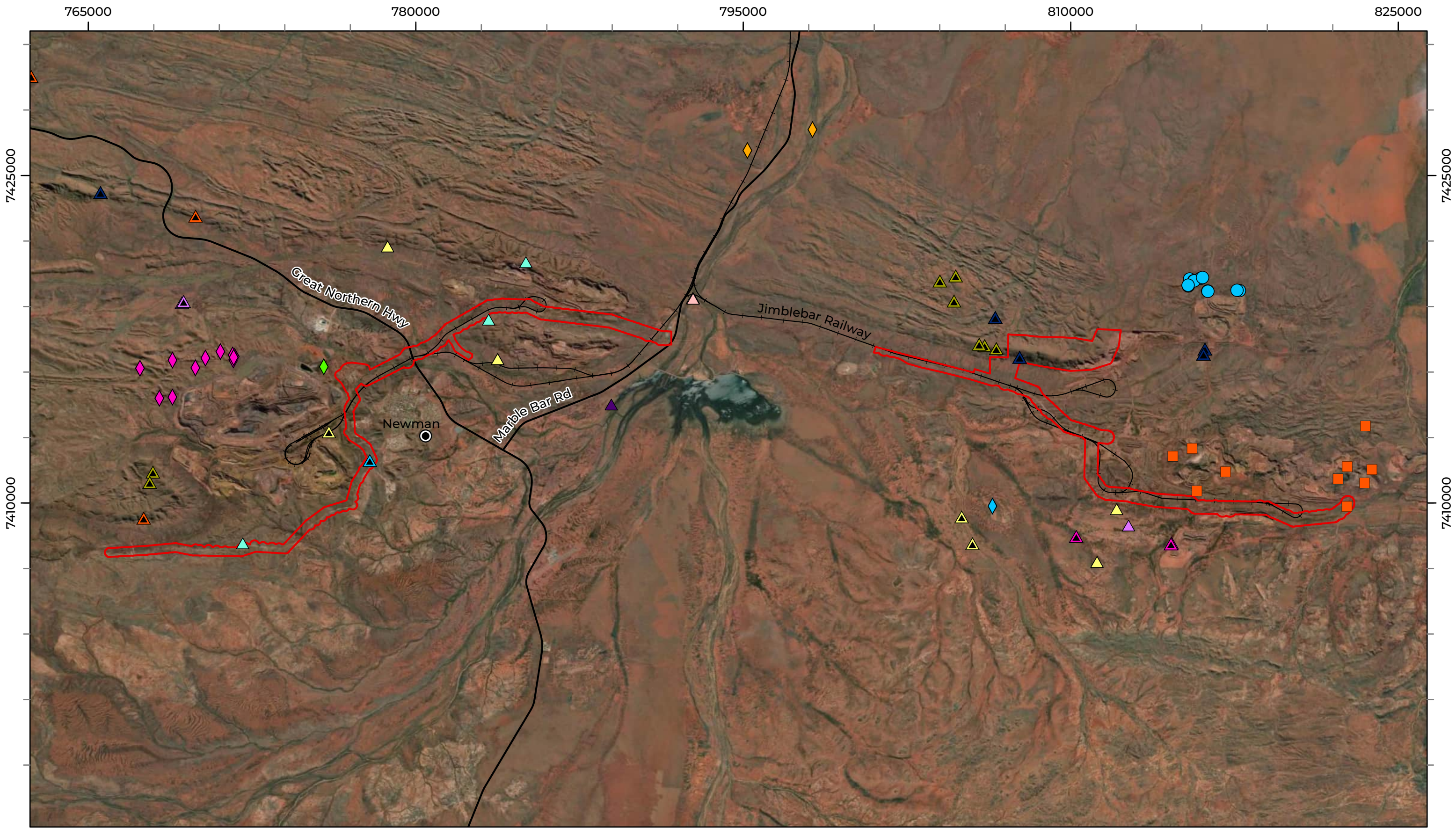
A total of 905 vascular flora taxa from 76 families and 271 genera were collated during the review of the database searches (Appendix B). This list included 77 introduced flora taxa from 24 families (Appendix C). One additional Priority Flora taxon, *Uvedalia clementii* (P3), was added to Florabase in August 2024. As this was subsequent to database searches and field surveys being completed, it has not been included in the count of species identified in database searches.

3.2.2 Significant Flora

Forty-seven significant flora taxa (those listed under the EPBC Act, BC Act, or DBCA's Priority List) were identified from the desktop assessment, of which 41 occurred within a 50 km radius of the Survey Area (Figure 3.1). Of the 47 taxa, one is listed as Threatened under the BC Act; *Thryptomene wittweri* (T). The remaining taxa are categorised as follows: seven listed as Priority 1, two as Priority 2, 31 as Priority 3 and six as Priority 4. Key findings from the review of other survey reports are presented in Appendix D. *Uvedalia clementii* (P3) has not been incorporated into these counts as described in Section 3.2.1.



LEGEND Survey Area State Road Rail	 Biologic Scale 1:500,000 0 10 20 Km Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 04/06/2025		BHP WAIO Power 2030 Single Season Flora and Vegetation Survey Figure 3.1a: Significant flora records from the desktop assessment
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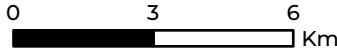
- Survey Area
- State Road
- Rail



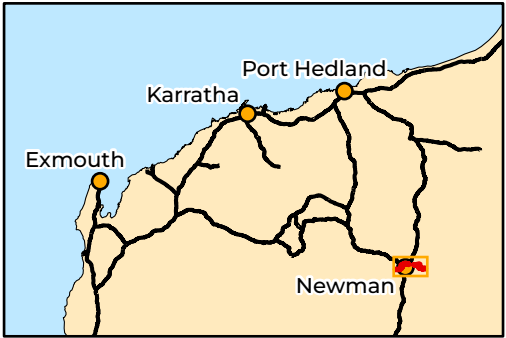
Biologic



Scale 1:162,000



Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 04/06/2025



BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 3.1b: Significant flora records in the Study Area from the desktop assessment

Taxon

P1

- *Acacia corusca*
- *Eremophila capricornica*
- *Eremophila rhegos*
- *Eremophila pilosa*
- *Paranotis* sp. Pilbara (H. Ajduk HAOP04a)

P2

- *Goodenia hartiana*
- *Hibiscus* sp. Gurinbiddy Range (M.E. Trudgen MET 15708)

P3

- ▲ *Acacia subtiliformis*
- ▲ *Amaranthus centralis*
- ▲ *Aristida jerichoensis* var. *subspinulifera*
- ▲ *Aristida lazaridis*
- ▲ *Crotalaria smithiana*
- ▲ *Dampiera metallorum*
- ▲ *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109)
- ▲ *Eremophila magnifica* subsp. *velutina*
- ▲ *Eremophila naaykensis*
- ▲ *Eremophila rigida*
- ▲ *Eremophila* sp. West Angelas (S. van Leeuwen 4068)
- ▲ *Euphorbia inappendiculata* var. *inappendiculata*

- ▲ *Goodenia* sp. East Pilbara (A.A. Mitchell PRP 727)

- ▲ *Grevillea saxicola*

- ▲ *Gymnanthera cunninghamii*

- ▲ *Indigofera gilesii*

- ▲ *Ipomoea racemigera*

- ▲ *Isotropis parviflora*

- ▲ *Maireana prosthecochaeta*

- ▲ *Oxalis* sp. Pilbara (M.E. Trudgen 12725)

- ▲ *Swainsona thompsoniana*

- ▲ *Themeda* sp. Hamersley Station (M.E. Trudgen 11431)

- ▲ *Triodia* sp. Mt Ella (M.E. Trudgen 12739)

- ▲ *Rostellularia adscendens* var. *latifolia*

- ▲ *Streptoglossa* sp. Cracking clays (S. van Leeuwen et al. PBS 7353)

- ▲ *Stylidium weeliwolli*

- ▲ *Vittadinia* sp. Coondewanna Flats (S. van Leeuwen 4684)

P4

- ◆ *Acacia bromilowiana*

- ◆ *Eremophila magnifica* subsp. *magnifica*

- ◆ *Eremophila youngii* subsp. *lepidota*

- ◆ *Goodenia berringbinensis*

- ◆ *Lepidium catapycnon*

- ◆ *Sida* sp. Barlee Range (S. van Leeuwen 1642)

Assessment of Occurrence

The 47 significant taxa identified from the desktop assessment were ranked for likelihood of occurrence in the Survey Area. Table 3.4 displays taxa considered Confirmed within (three), Highly Likely to occur (nine), Likely to occur (three) and Possible to occur (eight) in the Survey Area pre-survey. The remaining taxa are considered either Unlikely (20) or Highly Unlikely (four) (Appendix E).

Thryptomene wittweri (T), a species only known from high mountainous peaks, is a spreading conifer-like, aromatic shrub with small, white flowers. Due to suitable habitat not occurring and known locations over 100 kms northwest and southeast of the Survey Area, this taxon was considered Highly Unlikely to occur in the Survey Area pre-survey.

Of the 47 taxa identified by the desktop assessment, one queried Priority taxon, *Triodia ?birriliburu* (P3), was identified from the review of other survey reports only (not identified by database searches) (Astron, 2019). This queried taxon was recorded by Astron (2019), but was unable to be definitively identified due to a lack of diagnostic material. For the purposes of this assessment, we are taking a precautionary approach and treating this taxon as a Priority species. However, the approximate distance from the Survey Area boundary was estimated utilising survey maps and aerial imagery and thus has been included in the overall pre-survey assessment of occurrence. The taxon was considered Highly Unlikely pre-survey, occurring >60 km from the Survey Area boundary.

One additional flora taxon, *Uvedalia clementii* (P3) was re-identified as this taxon in August 2024 (date of determination 24/08/2024), placing it in the Pilbara region for the first time. This is subsequent to database searches and field survey work being undertaken. Given the timing of determination of this taxon, it was not incorporated in the assessment of occurrence.

Table 3.4: Summary of the assessment of occurrence

Taxa (Conservation Status)	Source	Proximity from Survey Area
Confirmed		
<i>Goodenia hartiana</i> (P2)	A, C, D	Within
<i>Swainsona thompsoniana</i> (P3)	A, D	Within
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3)	A, C, L	Within
Highly Likely		
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i> (P3)	A, C, Q	1 km S
<i>Ipomoea racemigera</i> (P3)	A, C, D, O	0.7 km W
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3)	A, C, Q	0.4 km S
<i>Eremophila naaykensis</i> (P3)	A, C	0.07 km NW
<i>Gymnanthera cunninghamii</i> (P3)	A, C, D, J	1.8 km NNE

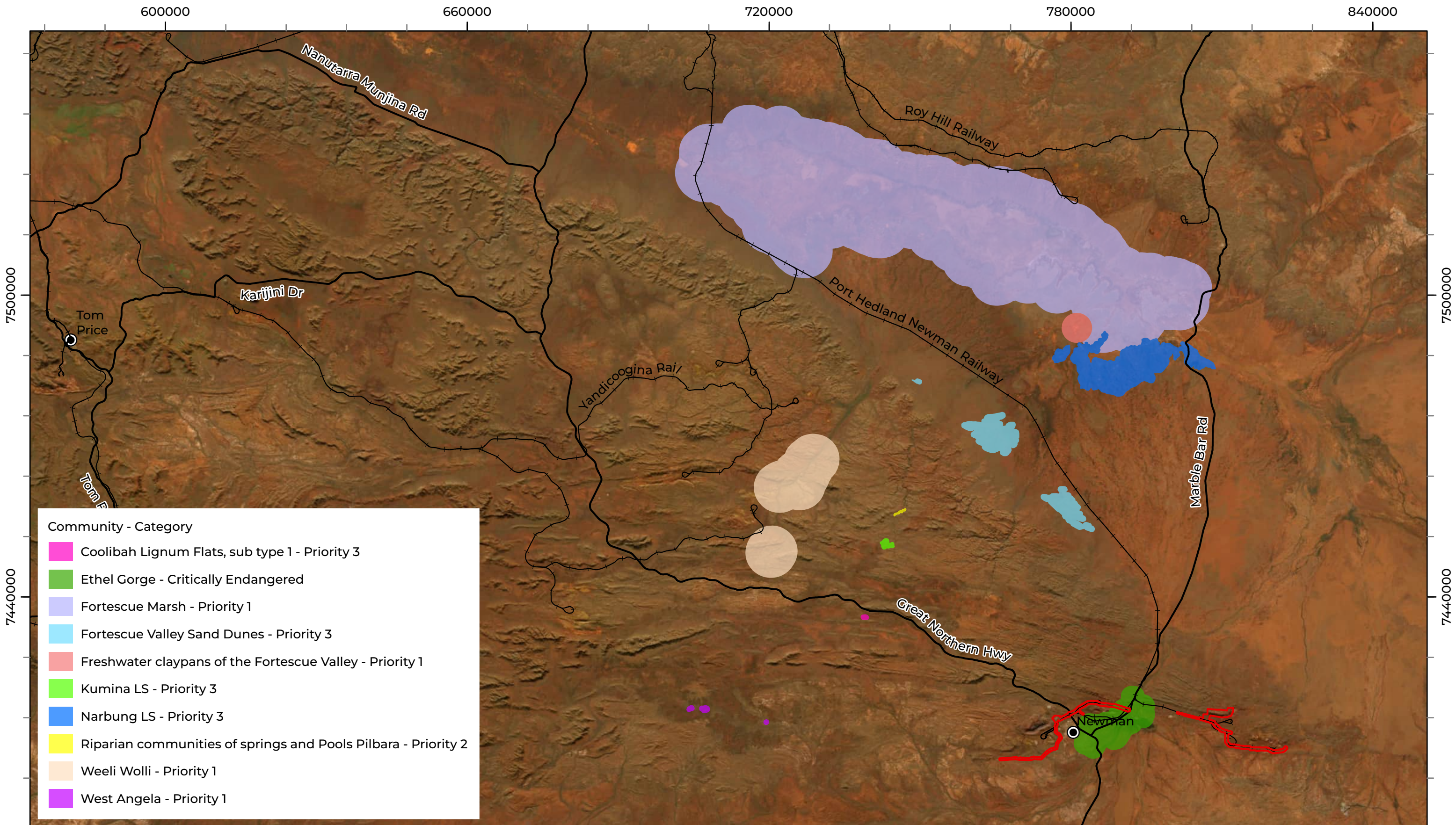
Taxa (Conservation Status)	Source	Proximity from Survey Area
<i>Indigofera gilesii</i> (P3)	A, C, D	1.3 km NNW
<i>Isotropis parviflora</i> (P3)	A, C, D	0.4 km N
<i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684) (P3)	A, C, Q	1.6 km S
<i>Lepidium catapycnon</i> (P4)	A, C, D	4.7 km W
Likely		
<i>Acacia corusca</i> (P1)	A, C, D, N	3.7 km NE
<i>Eremophila magnifica</i> subsp. <i>magnifica</i> (P4)	A, C	0.6 km WNW
<i>Goodenia berringbinensis</i> (P4)	A, C, D	4.4 km WSW
Possible		
<i>Eremophila capricornica</i> (P1)	A, C, D, F, O, P	5 km ENE
<i>Aristida lazaridis</i> (P3)	A, C, D	
<i>Crotalaria smithiana</i> (P3)	A, C, D, E, O	14.9 km N
<i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727) (P3)	A, C	3.3 km SSW
<i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353) (P3)	A, D	7.7 km WNW
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431) (P3)	A, C	
<i>Acacia bromilowiana</i> (P4)	A, C	
<i>Eremophila youngii</i> subsp. <i>lepidota</i> (P4)	A, C	9 km NNE

Source key: A = DBCA (WAH &/ or TPFL) (DBCA, 2024c), B = Protected Matters Search Tool (EPBC) (DCCEEW, 2024), C = NatureMap (DBCA, 2024a), D = Atlas of Living Australia (ALA) (ALA, 2024), E = Astron (2019), F = Biologic (2019a), G = Biologic (2021), H = Biologic (2022a), I = Biologic (2022c), J = (Ecologia, 2005), K = ENV (2008b), L = Onshore (2014b), M = Onshore (2015a), N = Onshore (2015c), O = Onshore (2018a), P = Onshore (2019), Q = Syrinx (2014).

3.2.3 Significant Vegetation

Two Threatened Ecological Communities (TECs) listed under the BC Act are recognised for the Pilbara region of Western Australia (DBCA, 2018). Neither of the TECs are listed under the commonwealth EPBC Act. One TEC, 'Ethyl Gorge aquifer stygobiont community' (EN), was identified as partially overlapping the eastern portion of the western Survey Area (Figure 3.2). However, this TEC does not represent terrestrial vegetation and is not considered further.

A total of 43 Priority Ecological Communities are recognised in the Pilbara region, of which 34 are relevant to terrestrial vegetation (DBCA, 2022). Nine PECs with potential to occur within the Survey Area were identified from the desktop assessment (Table 3.5). Review of the vegetation mapping from the desktop assessment against relevant GIS parameters (e.g. Land Systems, aerial imagery, etc.) suggests that there is a low potential for any of these nine PECs to occur in the Survey Area.



LEGEND

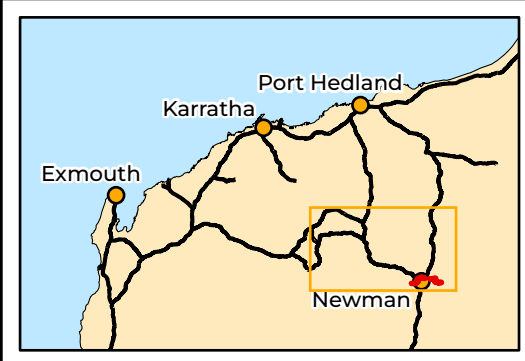
- Study Area
- State Road
- Rail

 **Biologic**

Scale 1:703,000

0 10 20 Km

Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 23/10/2024



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Figure 3.2: Significant ecological communities from the desktop assessment

Table 3.5: Significant ecological communities from the desktop assessment

Significant Vegetation	DBCA	Description	Proximity to Survey Area
Vegetation of sand dunes of the Hamersley Range/Fortescue Valley	P3	These red linear iron-rich sand dunes lie on the Divide Land system at the junction of the Hamersley Range and Fortescue Valley, between Kalgan Creek and the low hills to the west. A small number are vegetated with <i>Acacia dictyophleba</i> scattered tall shrubs over <i>Crotalaria cunninghamii</i> , <i>Trichodesma zeylanicum</i> var. <i>grandiflorum</i> open shrubland. They are regionally rare, small and fragile and highly susceptible to threatening processes.	33.6 km N
Coolibah - Lignum Flats (sub type 1)	P3	Woodland or forest of <i>Eucalyptus victrix</i> (Coolibah) over thicket of <i>Duma florulenta</i> (lignum) on red clays in run-on zones. Associated species include <i>Eriachne benthamii</i> , <i>Themeda triandra</i> , <i>Aristida latifolia</i> , <i>Eulalia aurea</i> and <i>Acacia aneura</i> . Sub-type 1 (Coondewanna, Wannamunna and Mt Bruce flats): coolibah and mulga woodland over lignum (<i>Duma florulenta</i>) and tussock grasses on clay pans.	38.1 km NW
Kumina Land System	P3	Ferricrete duricrust plains, uplands and plateaux remnants, relief up to 15 m. Duricrust plains and plateau remnants support hard spinifex grasslands.	46.2 km NW
West Angelas Cracking-Clays	P1	Open tussock grasslands of <i>Astrebla pectinata</i> , <i>A. elymoides</i> , <i>Aristida latifolia</i> , in combination with low scattered shrubs of <i>Sida fibulifera</i> , on basalt (Jerrinah formation) derived cracking-clay loam depressions and flowlines. Occurs throughout the central and eastern Hamersley Range from near Tom Price east to Newman.	46.4 km W
Riparian flora and plant communities of springs and river pools with high water permanence of the Pilbara Region	P2	The community includes flora with restricted distributions or populations that are highly disjunct or are major range extensions from northern and eastern Australia. These include <i>Imperata cylindrica</i> , <i>Cladium procerum</i> , <i>Schoenus falcatus</i> and <i>Fimbristylis sieberiana</i> (P3). In the Pilbara these taxa are almost exclusively restricted to the riparian zones of permanent wetlands with high soil moisture maintained by groundwater flows. Occurrences are disjunct with sites typically associated with groundwater discharge in gorge and valley wetlands that are often coupled with significant shading.	50.4 km NW
Weeli Wolli Spring Community	P1	Weeli Wolli Spring's riparian woodland and forest associations are unusual because of composition of the understorey. The sedge and herb field communities that fringe many of the pools and associated water bodies along the main channels of Weeli Wolli Creek have not been recorded from any other wetland site in the Pilbara. The spring and creek line are also noted for their relatively high diversity of stygofauna, and this is probably attributed to the large-scale calcrete and alluvial aquifer system associated with the creek. The valley of Weeli Wolli Spring also supports a very rich microbat assemblage including a threatened species.	56.7 km NW
Narbung Land System	P3	Alluvial wash plains with prominent internal drainage foci supporting snakewood and mulga shrublands with halophytic low shrubs.	60.6 km N

Significant Vegetation	DBCA	Description	Proximity to Survey Area
Fortescue Marsh (Marsh Land System)	P1	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 dependant riparian ecosystems. It is an arid wetland utilized 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 faunae. Endemic <i>Eremophila</i> species, populations of priority flora and several near-endemic and novel samphire's.	69.1 km N
Freshwater claypans downstream of the Fortescue Marsh - Goodiadarrie Hills on Mulga Downs Station.	P1	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	71.2 km N

4 Field Survey

4.1 Method

4.1.1 Survey Timing & Personnel

The field survey consisted of a single-season detailed flora and vegetation survey, undertaken from 29 April to 5 May 2024 by eight botanists, totalling 36 person days. The field survey was completed between March and June, the survey period recommended for the Pilbara (EPA, 2016b). All personnel held the current and relevant licencing and had adequate experience for the bioregion. All team leads had at least 5 years' experience, as recommended by the technical guidance (EPA, 2016b). Project roles and licences are listed in Table 4.1.

Table 4.1: Project team and licences

Biologic Personnel	Project Involvement	Licensing	Experience
Principal Botanists			
Clinton van den Bergh	Project management support, reviewer for quality assurance, field survey (2 – 5 May)	FB62000453 TFL 2223-0030	18 years
Carmel Winton	Project management, overall field survey lead (29 April – 4 May), vegetation mapping, reporting support	FB62000134 TFL 134B-2021	15 yrs
Ryonen Butcher	Field survey (29 April – 4 May)	FB62000405 TFL 145-2122	28 yrs
Senior Botanists			
Kelby Jennings	Field survey (2 – 5 May)	FB62000486	12 yrs
Raimond Orifici	Field survey (29 April – 4 May)	FB62000158-2	24 yrs
Dr. Rachel Meissner	Specimen identification	-	27 yrs
Rachel Butler	Specimen identification	-	17 yrs
Botanist			
Kaylin Geelhoed	Field survey (29 April – 3 May), desktop assessment, data management, reporting	FB62000238-2	6 yrs
Emalyn Loudon	Field survey (2 – 5 May)	-	8 yrs
April Slater	Field survey (2 – 5 May)	-	5 yrs
Kay Greenacre	Desktop assessment, reporting	-	1 yr
Ryan Woodhouse	Reporting	-	4 yrs

4.1.2 Climate & Weather

Long-term climatic data is not available for the Survey Area. However, long-term climatic data (from 1971 for rainfall and from 1996 for temperature) is available from the BoM weather station at Newman Airport (station #007176), approximately 10 km south of the western section of the Survey Area (BoM, 2024a). Newman Airport is expected to provide the most

accurate dataset for historic and current climatic conditions experienced within the Survey Area.

In the 12 months prior to the survey, mean temperatures were comparable to long-term averages (1996 to 2024) and mean rainfall was comparable to long-term averages (1971 to 2024) in the 6 months prior to the survey (Figure 4.1). It is worth noting that no rainfall was recorded in February or April 2024 at Newman, while at least double the long-term average was recorded during January 2024 and March 2024 (Figure 4.1). The rainfall in January and March are considered critical in regard to optimal survey timing, occurring in the 4 months preceding this wet-season survey as per the guidance (EPA, 2016b). On-ground observations confirmed adequate survey timing, with favourable ground conditions noted as well as high representation of annual and ephemeral taxa. Weather conditions during the survey did not present any limitations, with temperature maximums ranging from 29–31°C.

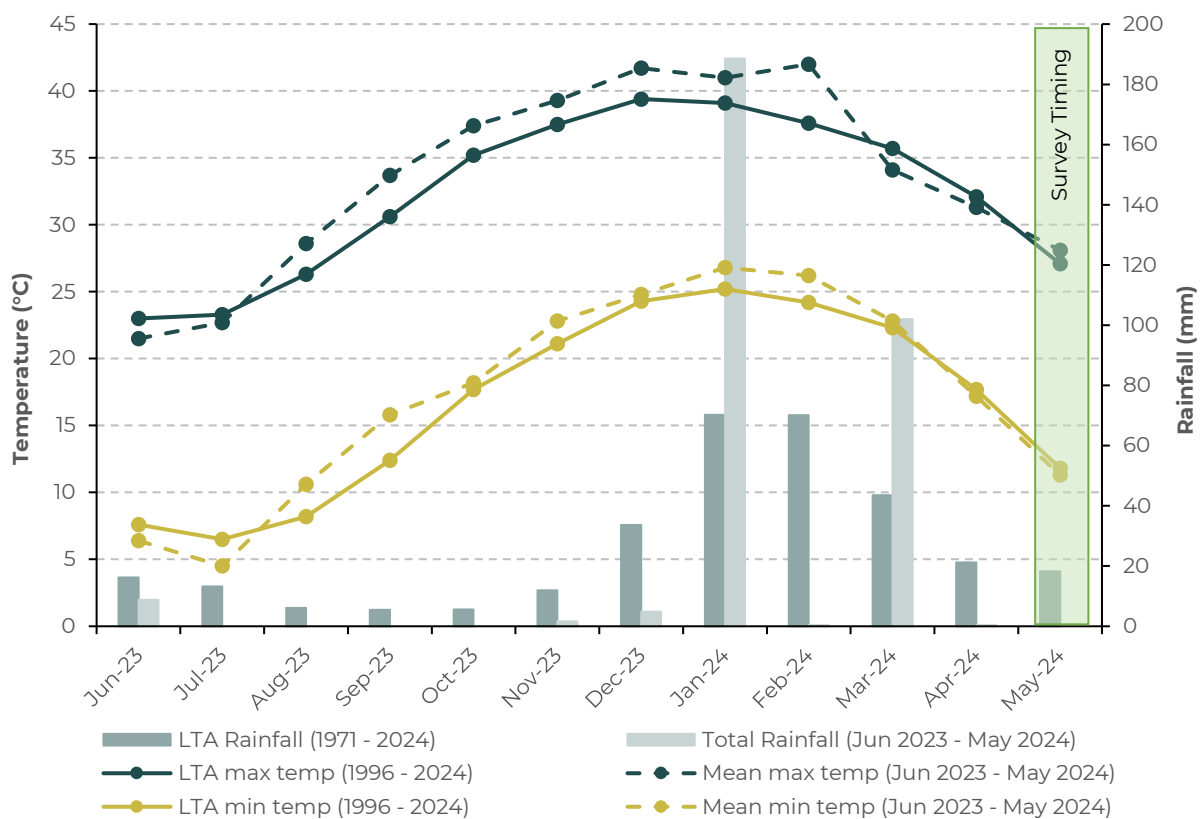


Figure 4.1: Long term and current climatic data for the Survey Area (BoM Station #007176) (BoM, 2024a) with approximate survey timing shaded

4.1.3 Detailed flora survey

A single-season detailed flora and vegetation survey was carried out across the Survey Area. A combination of quadrats, relevés, vegetation mapping notes, meandering traverses, and opportunistic sampling were used (EPA, 2016b) and are described in Table 4.2. A total of 50 sites were sampled across the Survey Area (35 quadrats, 14 relevés, and one vegetation mapping note) (Figure 4.2). In addition to the quadrat sampling, opportunistic targeted searches for significant flora were also undertaken.

An area at the west of the eastern section of the Survey Area was not accessed for ground-truthing. The vegetation in this area was considered to be inadequate for sampling at a detailed level as it is small patches and of low condition rating. Much of the vegetation in this area is in Poor to Degraded condition and occurs as small remnant patches between roads and cleared areas. This area had also previously been sampled during detailed and reconnaissance surveys conducted from 2018 to 2020 by Biologic (2020c, 2021, 2022b, 2022c).

Table 4.2: Field survey techniques

Approach	Description
Quadrat	A comprehensive and replicable survey technique for gathering information during the single-season detailed flora and vegetation survey. A clearly defined area of set proportions, giving a consistent assessment of flora and vegetation across the Survey Area. Each quadrat represents a vegetation type. Vegetation types are represented by a minimum of three quadrat sites where practicable. Information collected at each quadrat includes: • Site code, date, location, botanist • One photograph (as a minimum), from the NW corner of the site • Vegetation condition and disturbances (including fire) • Landform including slope, soil, rock type; aspect • Flora and vegetation information; dominant cover, structure and species count where necessary • Comprehensive recording of every species within the quadrat boundary (50 x 50 m for a Pilbara botanical survey).
Relevé	Relevé sites used to support the vegetation mapping and survey effort. They are a lower intensity survey technique or sampled where quadrats are too dangerous to set up (such as steep slopes), or too small/disturbed to sample effectively (i.e. drill lines close together). Information collected at each relevé is the same as that of a quadrat site, excluding the comprehensive collection of every species.
Vegetation Mapping Note	Vegetation mapping notes were used to ground-truth existing vegetation mapping and significant flora locations. They are a lower intensity, unbounded, survey technique. Information collected at each mapping note may vary in detail depending upon what is present and needed for that site. The following was recorded as a minimum: location co-ordinates, representative photograph and brief description of the vegetation mapping note focus.

Approach	Description
Traverse/ Meandering Traverse	A traverse is an unmarked route along which data is collected. Traverses are useful for identifying the boundaries and characteristics of vegetation types, selecting sites for detailed survey, and targeting significant flora or vegetation. Information recorded along a traverse during this assessment was the same as a mapping note, with the addition of noting vegetation changes and relationships between vegetation and substrate.
Opportunistic (Supplementary) Sampling	Flora and vegetation not recorded through other sampling methods were opportunistically sampled as encountered in the survey. Opportunistic sampling also included recording locations of significant, introduced (weed) and unknown species.

Prior to field mobilisation, site locations were preliminarily selected using a combination of aerial imagery, surface geology layers, contour mapping and specialist knowledge of Pilbara vegetation communities. Sites were selected to be representative of the vegetation in the Survey Area, with a focus on areas with undisturbed vegetation that had no recent previous surveys. Parts of the Survey Area that looked unusual from the aerial imagery or appeared to represent potential habitat for significant flora and vegetation were also targeted. Where possible, a minimum of three quadrats were established and sampled within each vegetation unit, with additional quadrats assigned to larger units to ensure spatial coverage. Survey effort is presented in Figure 4.2, supplemented by quadrat site data (Appendix F) and a site by species matrix (Appendix G).

4.1.3.1 Significant vegetation

Where possible, significant vegetation in the Survey Area was sampled with floristic sample sites. However, if a small patch of significant vegetation was observed in isolation, a central GPS coordinate was recorded for the occurrence. The boundary was then mapped with GPS track logs and/or additional GPS points. Information collected at each occurrence comprised:

- Landform and habitat – scale, heterogeneity, rarity
- Vegetation structure, diversity and seasonality
- Relevant PEC/ TEC assessment (if applicable)
- Photographs.

4.1.4 Targeted Flora Survey

4.1.4.1 Significant Flora

The list of significant flora from the Assessment of Occurrence was compiled. Field personnel familiarised themselves with photographs, reference samples and descriptions of these taxa before conducting the survey. Analysis of aerial photography and significant flora locations was also conducted prior to the survey to identify any areas of suitable habitat for targeted survey.

If a significant taxon was identified, a GPS coordinate of the individual was taken when occurring in isolation, or a central GPS coordinate was taken for a small population (central coordinate with an approximate 20 m radius). Information collected at each location comprised:

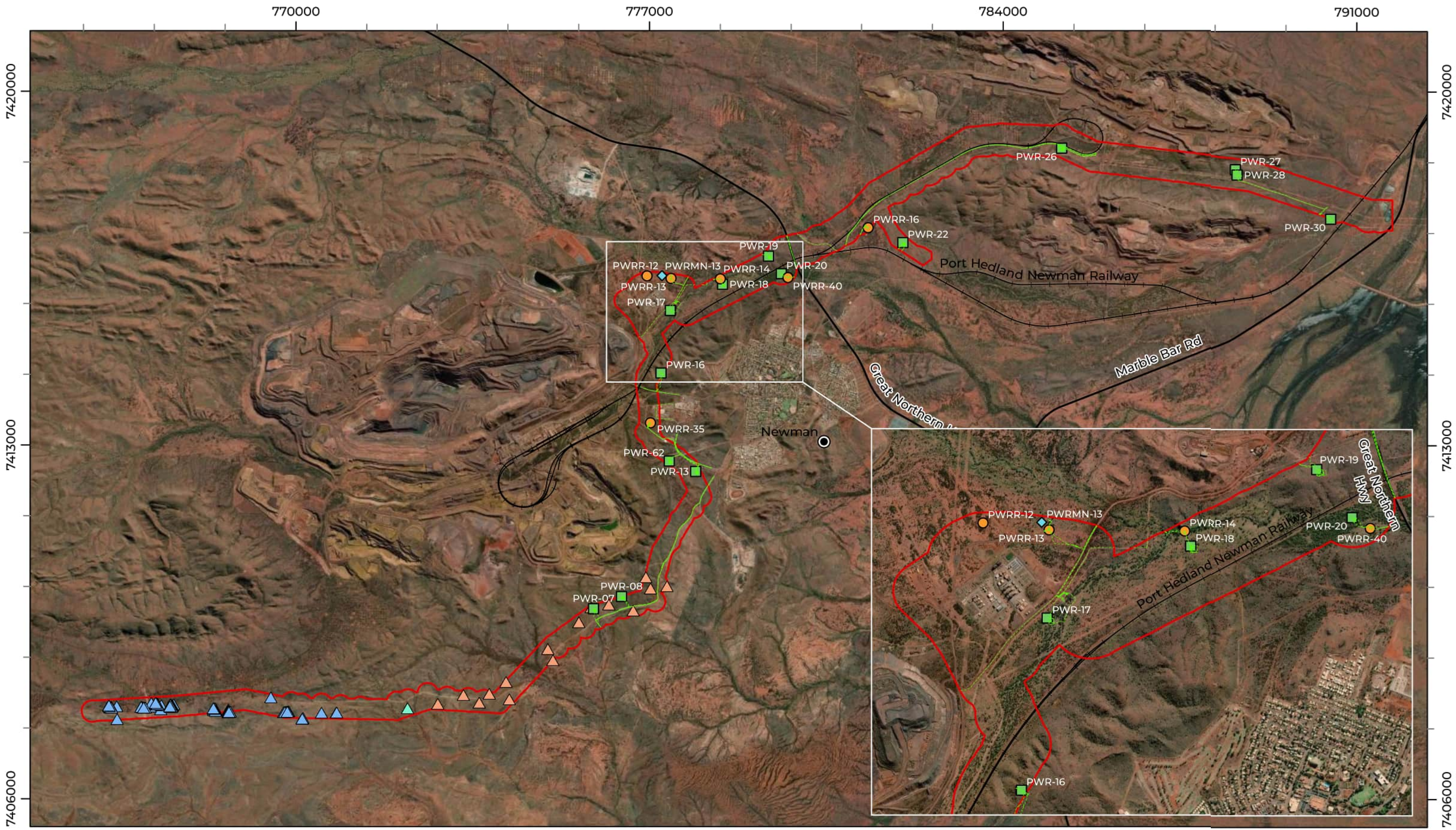
- Number of individuals, for a small population
- Condition and reproductive status of the plants in each population
- Photographs and description of vegetation habitat
- Broad information on vegetation type and condition
- Coordinates of each plant (if few) or the extent of the population (if many) using a GPS.

Threatened and Priority Flora Report Forms will be provided to the Parks and Wildlife Service (Parks and Wildlife) of DBCA, as required under the flora collecting permits. Significant flora specimens will be vouchered with the Western Australian Herbarium (WAH), where required and appropriate.

4.1.4.2 Introduced Flora

Whilst completing the field survey, any observations of introduced flora taxa were recorded, with a particular focus on substantial infestations and significant environmental weeds. Significant environmental weeds refer to any plant listed as WoNS or DPs listed under Section 12 and Section 22 of the BAM Act. When introduced flora taxa were identified, a GPS coordinate of the individual was taken when occurring in isolation, or a central GPS coordinate was taken for an infestation (central coordinate with an approximate 20 m radius). Weed classification definitions are provided in Appendix A. Information collected at each location comprised:

- Number of individuals (count or estimate), including an approximate area of infestation (if applicable)
- Photographs
- Any comments regarding vegetation condition.



LEGEND

Survey Area

State Road

Rail

Sampling Type

Quadrat

Relevé

Vegetation Mapping Note

Traverse

Previous Survey

Biologic (2022b, 2022c)

Biologic (2020a)

Biologic (2020c)



Biologic

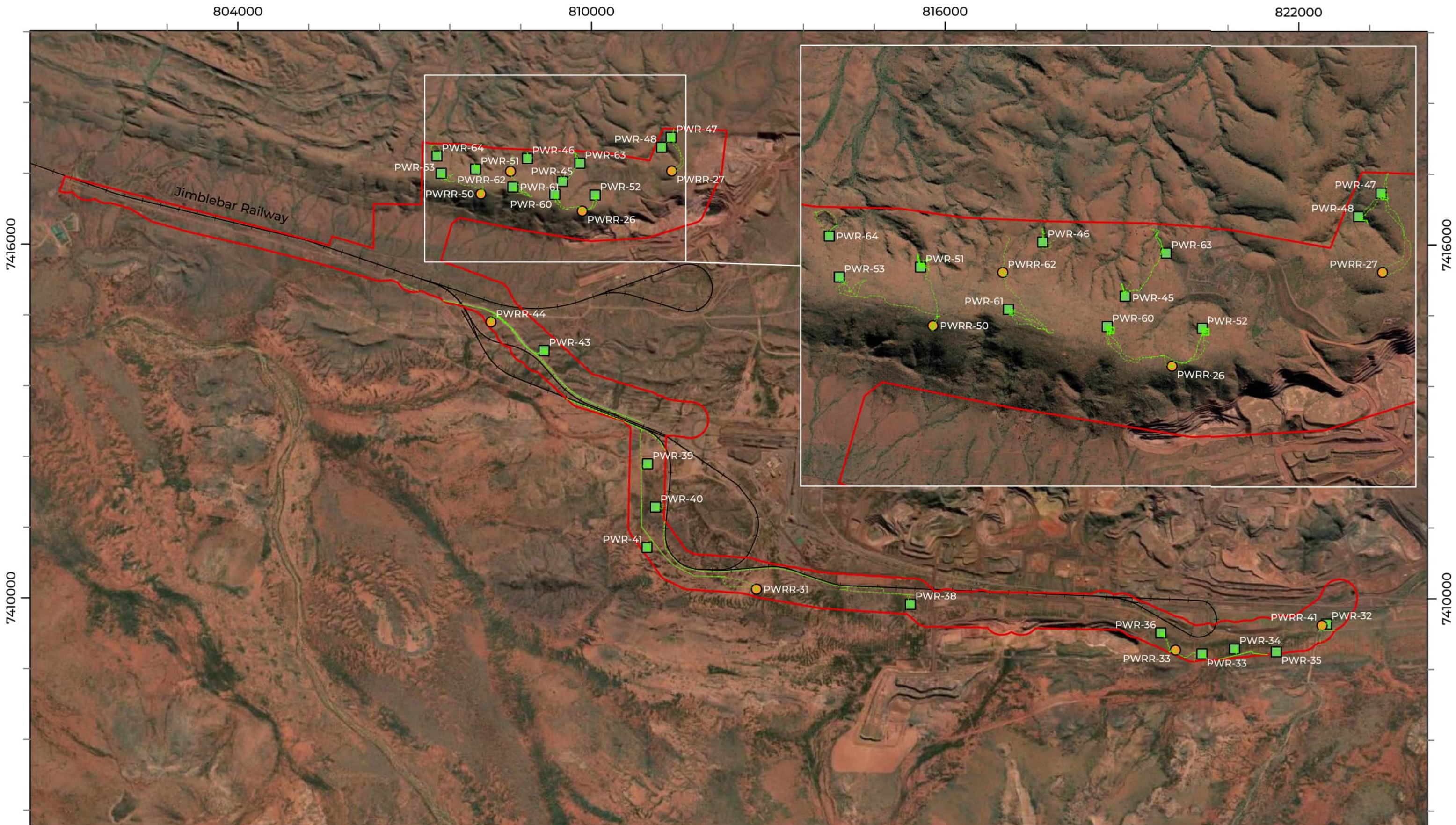
Scale 1:70,000

0 1 2 Km

Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 01/05/2025

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Figure 4.2a: Sample
sites and traverses - West



LEGEND

Survey Area

— Rail

Sampling Type

■ Quadrat

● Relevé

◆ Vegetation Mapping Note

- - - Traverse



Biologic

Scale 1:60,000

0

1

2

Km

Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 01/05/2025



BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 4.2b: Sample sites and traverses - East

4.1.5 Nomenclature and specimen identification

Flora nomenclature used in this report is consistent with the WAH's plant census, provided on Florabase (WAH, 1998 -). All species names are current at the time of report preparation. All unconfirmed taxa are displayed as 'Genus sp. Indet' (e.g. *Maireana ?georgei* is *Maireana* sp. indet), in the spatial data in line with BHP data standards and naming registers (BHP WAIO, 2023).

Specimens were identified by Biologic's identification botanists, Dr. Rachel Meissner and Rachel Butler (Table 4.1), using the appropriate taxonomic keys, Western Australian reference herbarium and, where required, relevant taxonomic experts at the WAH (WAH, 2015). Significant flora specimens or new introduced species for the region were submitted to the WAH for formal identification (ACC/10937/E). Fourteen plants were sent for formal identification (Appendix H).

4.1.6 Vegetation

Vegetation was sampled using quadrats, relevés, and vegetation mapping notes, including information on disturbance and condition, as per Table 4.2. The sampling methods were carried out in accordance with EPA guidelines (EPA, 2016b).

4.1.6.1 Vegetation mapping

Broad, preliminary vegetation mapping has been undertaken for this single season assessment. Site photographs and full descriptions were taken at each sampling site to support the vegetation mapping. Aerial imagery from various sources assisted in delineating vegetation unit boundaries, including regional imagery (Landgate, 2021), and Google Earth imagery (Google Earth, 2023).

The current nationally adopted classification system for vegetation descriptions is the NVIS (NVIS Technical Working Group, 2017) (definition in Appendix I). NVIS seeks to manage national vegetation data to help improve vegetation planning and management within Australia including standardising scale and technical wording for vegetation associations. The vegetation types in the Survey Area have been described to Level 5 (vegetation association), where possible, in the (NVIS) hierarchical structure (NVIS Technical Working Group, 2017). The vegetation structure information collected was used to describe the vegetation type based on the dominant taxa, foliage cover and height of the three traditional strata (upper, mid and lower/ground) which followed BHP guidance (BHP, 2018a).

Due to access constraints during the field survey not all parts of the Survey Area were able to be ground-truthed. The vegetation in this area was considered to be inadequate for sampling at a detailed level as it is small patches and of low condition rating. Much of the vegetation in this area is in Poor to Degraded condition and occurs as small remnant patches

between roads and cleared areas. This area had also previously been sampled during detailed and reconnaissance surveys conducted from 2018 to 2020 by Biologic (2019b, 2020c, 2021, 2022c). Overall, a combination of aerial imagery, floristic sample site data, field observations, and historical vegetation mapping were used to guide vegetation mapping and description of the vegetation types, which is consistent with the technical guidance (EPA, 2016b).

4.1.6.2 Vegetation condition

Vegetation condition was defined within the Survey Area using the vegetation condition scale for the Eremaean Botanical Province in EPA (2016b), which has been adapted from Keighery (1994) and Trudgen (1988) (Appendix J). The vegetation condition was recorded at each quadrat and relevé, while additional notes and observation records (e.g., vegetation mapping notes) were taken while traversing the Survey Area to broadly map vegetation condition boundaries, where relevant. Disturbance layers from BHP were used to further inform condition mapping and areas of rehabilitation and clearing. The vegetation condition mapping was then digitised using GIS software.

4.1.7 Review of assessment of occurrence and significance

Significant flora taxa identified in the database searches and previous reports are assessed per taxa for their likelihood of occurrence in the Survey Area (Section 3.1.3). Following the field assessment, ground-truthing of existing significant flora records and presence of potential habitat is reviewed to revise the likelihood of occurrence for each taxon. A summary of the revised occurrence assessment is provided in Section 4.2.1.3, while the overall assessment of occurrence is provided in Appendix E.

4.2 Results and Discussion

4.2.1 Flora

4.2.1.1 Flora Composition

A total of 375 confirmed vascular flora taxa, representing 143 genera from 49 families were recorded within the Survey Area during the field survey. The full species list includes all taxa found during the assessment (402), including 27 indeterminable taxa, 361 confirmed native flora taxa and 14 confirmed introduced taxa (Appendix K). A site by species matrix is given in Appendix G. The most species diverse families were Fabaceae, Poaceae, Malvaceae, and Amaranthaceae, together making up 58.2% of the total flora (20.3%, 18.4%, 12.5% and 7.2% respectively) (Table 4.3). The most represented genera were *Acacia* (8.8%), followed by *Ptilotus* (4.8%), *Senna* (4.3%), *Sida* (3.7%), and *Eremophila* (3.2%), with a combined 24.8% of the total flora (Table 4.3).

Table 4.3: Species diversity in the Survey Area

Classification	Taxa Count	Classification	Taxa Count
Most species rich families		Most species rich genera	
Fabaceae	75 taxa from 17 genera	<i>Acacia</i>	33 taxa
Poaceae	69 taxa from 26 genera	<i>Ptilotus</i>	18 taxa
Malvaceae	46 taxa from 11 genera	<i>Senna</i>	16 taxa
Amaranthaceae	27 taxa from 5 genera	<i>Sida</i>	16 taxa
		<i>Eremophila</i>	12 taxa

One record was not able to be confirmed to genus level and was not included in the counts, while 27 were unable to be definitively confirmed to species level due to insufficient/ poor identifying material, as indicated with a “?” (10) or “sp. indet.” (16) in the species list (Appendix K). Five of the ten queried specimens have confirmed species in the species list (e.g. *Hibiscus ?coatesii*, and *Hibiscus coatesii* are both in the species list). These ten taxa are considered likely to represent confirmed records within the Survey Area of the same genus and species, and none of these records are considered to potentially represent significant taxon.

Five of the unconfirmed specimens that are only confirmed to genus level are from the same genus as significant taxa identified in the desktop assessment (i.e. *Euphorbia* sp. indet, *Goodenia* sp. indet, *Hibiscus* sp. indet, *Sida* sp. indet and *Streptoglossa* sp. indet). While these taxa were unable to be confirmed to species level, they were considered unlikely to represent any of the significant taxa identified in the desktop assessment, based on the sterile characteristics of specimens collected.

4.2.1.2 Significant Flora

Threatened Flora

No Threatened flora listed under the BC Act or EPBC Act were recorded from the Survey Area.

Priority Flora

Nine Priority Flora have been recorded from the Survey Area. Seven of these were recorded during the current survey, comprising seven Priority 3 taxa (Table 4.4, Figure 4.3). Two Priority Flora were previously recorded but were not recorded in the current survey (*Goodenia hartiana* (P2) and *Swainsona thompsoniana* (P3)).

While surveys were undertaken outside the optimal flowering period for *Goodenia hartiana* (August-September), this species is a shrub to 50 cm in height (Sage & Albrecht, 2006) and, if present, would have been observed even if sterile. *Goodenia* sp. indet. was recorded at one location but had been heavily grazed and was not able to be identified beyond genus. Based on remaining characteristics, it was considered unlikely to represent *G. hartiana* (P2).

Additionally, *G. hartiana* occurs on sand dune swales or sandy areas such as sandy hills (Sage & Albrecht, 2006), while the *Goodenia* sp. indet. record was located on silty loam soils. The single previous record of *G. hartiana* within the Survey Area was situated adjacent to the conveyor in cleared vegetation (Figure 3.1). This area was not accessible during the survey; as such, could not be ground-truthed.

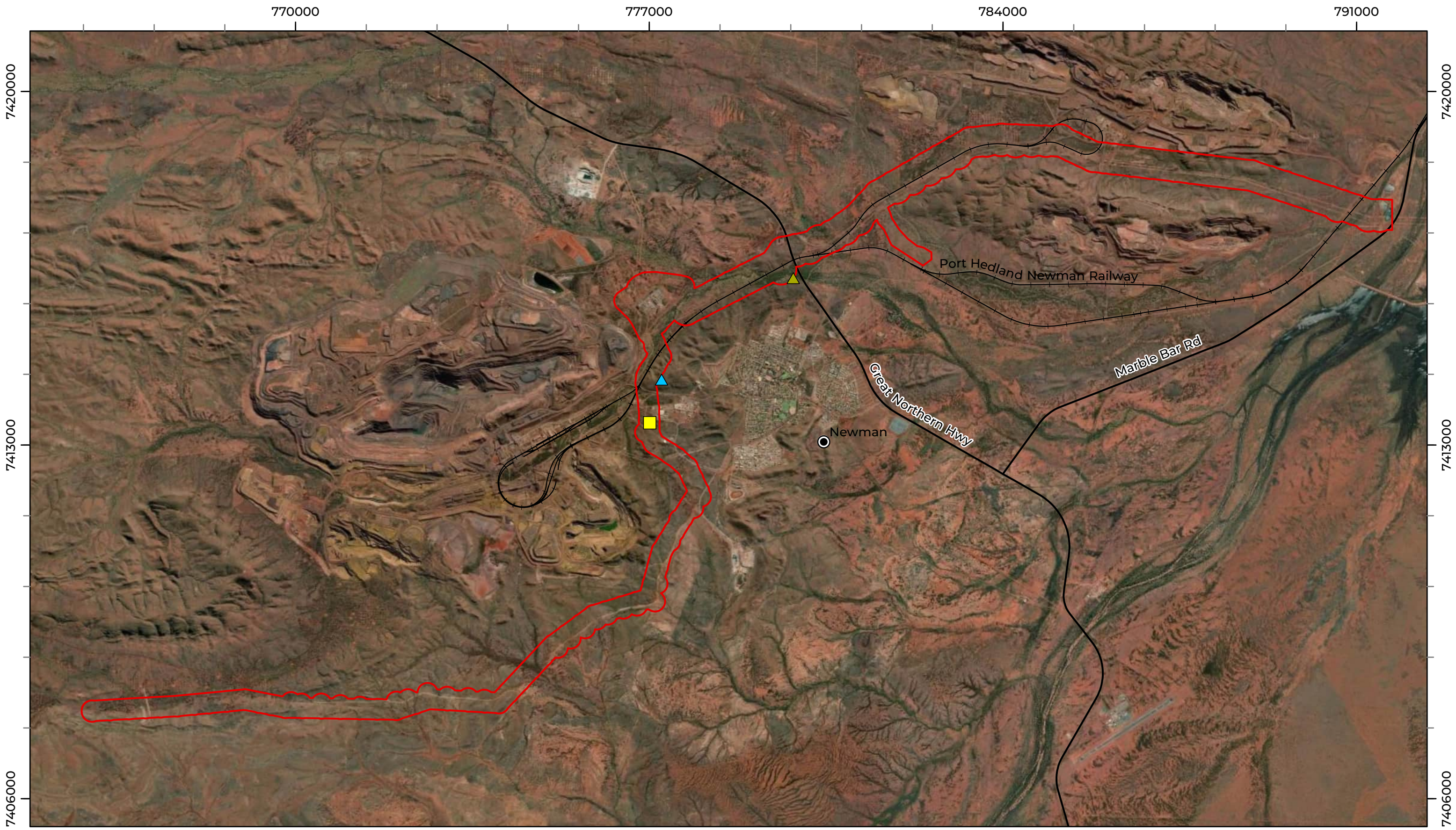
S. thompsoniana (P3) is an annual herb that been recorded flowering in disparate months (March, April, June and August) (Davis & Hurter, 2013). Most known collections of this taxon were flowering and fruiting when collected from August to September, with one specimen flowering and fruiting in March (Davis & Hurter, 2013). The current survey took place in late April/early May, which falls within the taxon's broader flowering period and, as *Swainsona* is a relatively distinctive genus, it is likely that any individuals would have been observed in areas surveyed, if present. One *Swainsona* sp. indet. was recorded at two locations during the current survey; however, this was tentatively identified as *Swainsona ?elegantoides*. The single record of *S. thompsoniana* within the Survey Area was located in proximity to Yates Rd; however, teams were unable to revisit this location during the survey.

While not recorded during the current survey, *S. thompsoniana* is still considered to occur in the Survey Area given the number and relative recency (2017) of previous records. *G. hartiana* was also still considered to occur in the Survey Area. While the spatial record was situated in cleared vegetation, given the number of individual plants present (20) it was considered likely that the taxon may still occur within surrounding vegetation (WAH, 1998 -). Taxon profiles (location/s in the Survey Area, images, current taxonomy, currently held records etc.) are presented in Table 4.5. Counts of individuals were estimated when the populations were large. All priority listed specimens were submitted to the WAH for formal identification by taxonomic experts (Appendix H).

Table 4.4: Summary of Priority Flora recorded from the Survey Area

Taxon	Individuals total	Locations total	WAH records
<i>Goodenia hartiana</i> (P2)	Previously recorded (DBCA, 2024b)		27
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3)	50	2	48
<i>Aristida lazaridis</i> (P3)	200	1	28
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)	15	3	8
<i>Eremophila naaykensis</i> (P3)	1	1	22
<i>Ipomoea racemigera</i> (P3)	1	1	18
<i>Isotropis parviflora</i> (P3)	1	1	34
<i>Swainsona thompsoniana</i> (P3)	Previously recorded (DBCA, 2024b)		29

Taxon	Individuals total	Locations total	WAH records
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3)	301	2	40



LEGEND

- State Road
- + Rail

Taxon

- *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) - P2
- ▲ *Aristida lazaridis* - P3
- ▲ *Eremophila naaykensis* - P3

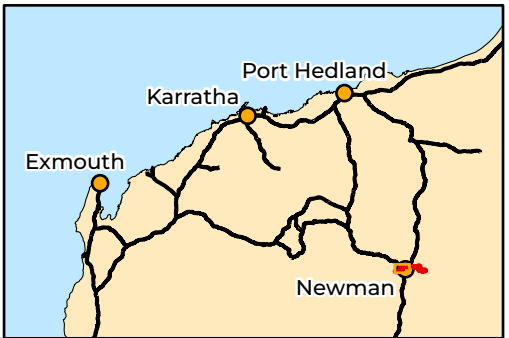


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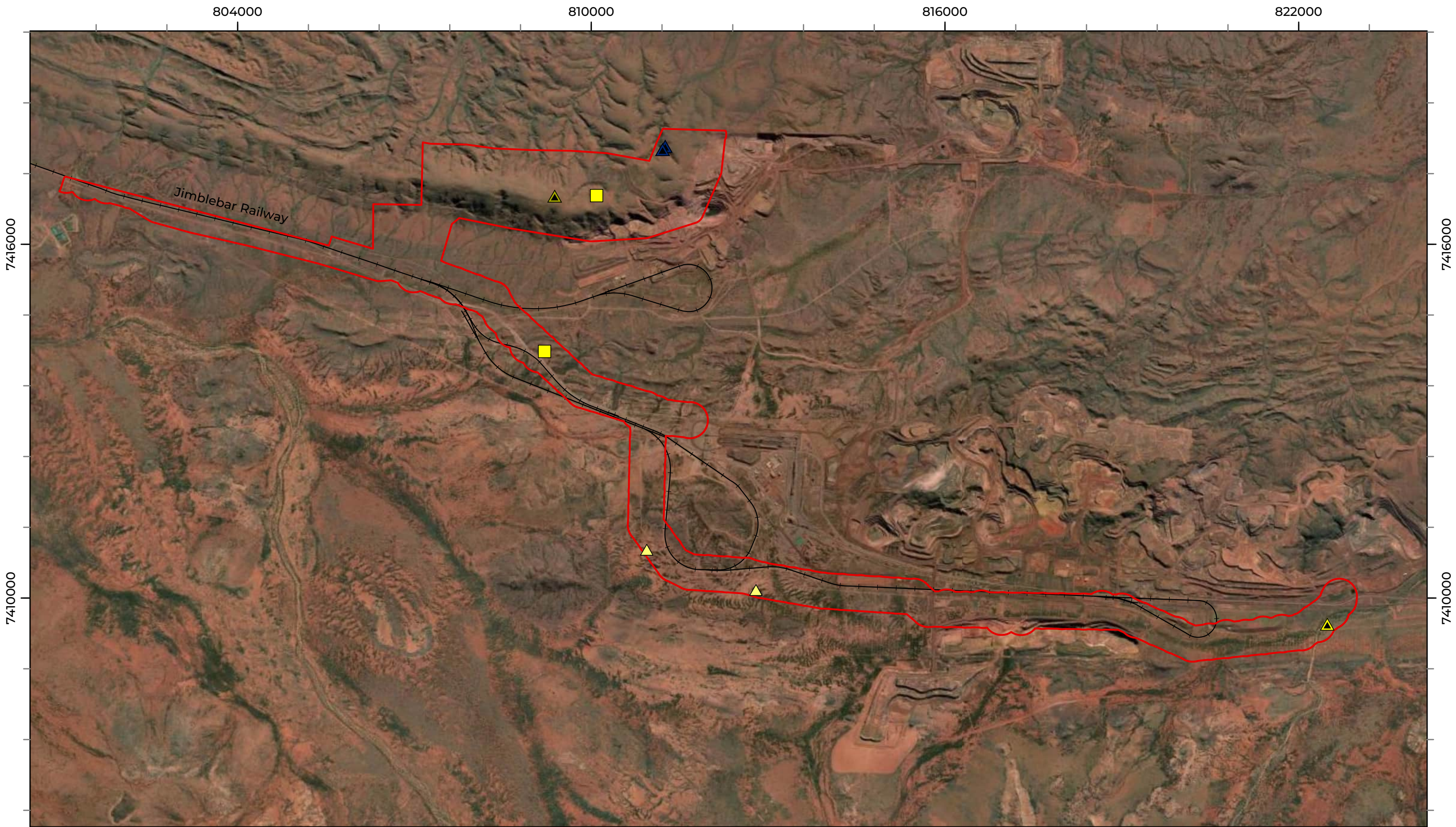
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Transverse Mercator Created: 29/10/2024



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Figure 4.3a: Significant
flora recorded in the
Survey Area - West



LEGEND

-  Survey Area
 Rail

Taxon

-  *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) - P2
 *Aristida jerichoensis*odia var. *subspinulifera* - P3
 *Ipomoea racemigera* - P3
 *Isotropis parviflora* - P3
 *Triodia* sp. Mt Ella (M.E. Trudgen 12739) - P3



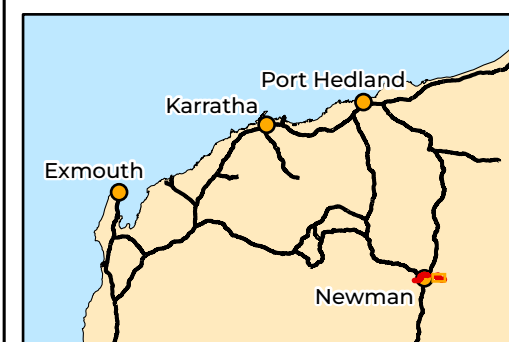
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Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 29/10/2024



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Figure 4.3b: Significant
flora recorded in the
Survey Area - East

Table 4.5: Significant flora recorded in the Survey Area

Description	Habitat	Records from survey	Representative floristic material/ habit and/ or habitat
Priority 3			
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> A compactly tufted perennial tussock grass, growing to 0.6 m high, with subequal lemma awns, muricate lemma grooves and rolled leaf edges (wire-like) (Simon & Alfonso, 2023; WAH, 1998 -).	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> is an Australian endemic recorded from all mainland states. In Western Australia it is currently only known from the Pilbara in a small area north of Newman (Rio Tinto & WAH, 2015). <i>Aristida jerichoensis</i> var. <i>subspinulifera</i> is recorded from sand and clay soils on hardpan plains, clay pans, floodplains and drainage lines, mainly associated with mulga woodlands of varying density (Rio Tinto & WAH, 2015; Simon & Alfonso, 2023).	This taxon was recorded on hardpan plains associated with mulga woodlands associated with vegetation type SP AaAayAi ArAadsAte SeahSegl ErffEre TpTw Pacl in the eastern section of the Survey Area.	 Source: Biologic photographs
<i>Aristida lazaridis</i> A tufted perennial, grass, growing to 1.5 m in height and producing green/purple flowers in April (WAH, 1998 -). The leaf blade surface is characteristically scaberulous, rough on both sides, with prominent pulvini (Rio Tinto & WAH, 2015). The lemma margins protrude from the groove, and the panicles are loose and branching (Rio Tinto & WAH, 2015).	<i>Aristida lazaridis</i> is widespread and distributed in tropical Queensland, the Northern Territory and Western Australia where it is known from the Kimberley and Pilbara bioregions (Rio Tinto & WAH, 2015). In the Pilbara, it has been recorded between Newman and Karijini where it is confined to sandy or loamy soils (Rio Tinto & WAH, 2015).	This taxon was recorded from a drainage area/ floodplain, in one location in the western section of the Survey Area in vegetation type FP CcChfTt AaAci ChExCoc.	 Source: Biologic photographs
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) A tussock forming perennial grass with a woolly base, that grows to 0.3 m high (Rio Tinto & WAH, 2015; WAH, 1998 -). The culms are wiry and scabrous, while the leaf blades are involute and stiff with rigid points. The inflorescence is spiciform, with flowering occurring in September (Rio Tinto & WAH, 2015; WAH, 1998 -).	<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) is only known from Mt Robinson in the Hamersley Range, where it has been recorded growing on steep slopes and summits in skeletal red-brown gritty soils over massive banded ironstone of the Brockman Iron Formation (Rio Tinto & WAH, 2015; WAH, 1998 -).	This taxon was recorded from hillslopes and summits of the eastern section of the Survey Area in vegetation types of HC TvTp AadAhi GrwPIAma ChHc and HS TvTw AbAsiAsyApr ElHcEg. It was also recorded in the western section of the Survey Area on a flat stony plain in vegetation type HS TvTw AbAsiAsyApr ElHcEg.	 Source: Biologic photographs

Description	Habitat	Records from survey	Representative floristic material/ habit and/ or habitat
<i>Eremophila naaykensis</i> An erect, usually dome-shaped, shrub growing to 3.5 m high (Curtis <i>et al.</i>, 2022; WAH, 1998 -). It has fibrous, grey bark with short “velvety” hairy branchlets, pale grey-green leaves with a shiny silver appearance, and resinous young leaves. It produces white-cream to pale purple flowers, typical of the genus, from June to October (Curtis <i>et al.</i>, 2022; WAH, 1998 -).	<i>Eremophila naaykensis</i> typically occurs on a variety of rocky ironstone hillslope landforms, often forming a mid to tall shrub layer, particularly in gully/ gorge situations (Curtis <i>et al.</i>, 2022; WAH, 1998 -). Its distribution is restricted to the Pilbara and Gascoyne regions, occurring sporadically from Newman to Paraburdoo, extending north to central Karijini (WAH, 1998 -).	This taxon was recorded on a low hillslope of the western section of the Survey Area in vegetation type HS TvTw AbAsiAsyApr ElHcEg.	 Source: Biologic photograph
<i>Ipomoea racemigera</i> Creeping annual, herb or climber with twining stems (WAH, 1998 -). Leaves of <i>Ipomoea racemigera</i> are ovate to ovate-elliptic, with a distinctly glabrous upper surface and sparsely hairy lower surface. This species produces small (12-20 mm wide), white, funnel-shaped flowers throughout the year, mainly during March to August (Rio Tinto & WAH, 2015).	<i>Ipomoea racemigera</i> is known to occur on sandy soils along watercourses in Western Australia, the Northern Territory and Queensland (Rio Tinto & WAH, 2015).	The one individual found during the survey was recorded from a drainage area associated with a medium drainage line in the eastern section of the Survey Area and associated with vegetation type FP CcChfTt AaAci ChExCoc.	 Source: Biologic photographs
<i>Isotropis parviflora</i> A small, erect spindly shrub, growing to 0.2 m. Stems are terete and hairy, while leaves are simple, entire, shortly petiolate linear to lanceolate, and alternately arranged (WAH, 1998 -). Flowers are multicoloured, but mostly pink or white and appear during March (WAH, 1998 -).	<i>Isotropis parviflora</i> has been recorded from Western Australia, Northern Territory and Queensland. In Western Australia it is known from the Pilbara and the Tanami Desert, where it is mostly recorded from hill slopes with mallee or with hard spinifex on ironstone (Rio Tinto & WAH, 2015).	This taxon was recorded from a rocky upper hillslope in the eastern section of the Survey Area in vegetation types HC TvTp AadAhi GrwPIAma ChHc.	 Source: Biologic photographs

Description	Habitat	Records from survey	Representative floristic material/ habit and/ or habitat
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) A resinous, perennial, hummock-forming grass growing to 0.6 m high and 1.5 m wide, producing flowers from May and August (WAH, 1998 -). This taxon superficially resembles a number of resinous species in the soft <i>Triodia</i> group, but is readily distinguished by its' copiously resinous foliage, glabrous leaf sheath surfaces, narrowly lanceolate glumes and awned lemmas (Barrett & Trudgen, 2018).	<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) occurs on skeletal hillslopes, ridgelines, gullies and summits of massive ironstone ranges and mountains restricted to the south-eastern Pilbara between Newman (Jimblebar) and the eastern boundary of Karijini. Singular disjunct records of this taxon occur in the north-eastern Gascoyne (Angelo River proper) and Little Sandy Desert Rudall River, Karlamilyi National Park) regions (WAH, 1998 -).	This taxon was recorded from a rocky ironstone gully and upper hillslope in the eastern section of the Survey Area in vegetation type GU Tp CyaEmu CfEIFib GrwPIAh.	 Source: Biologic photographs

4.2.1.3 Review of Assessment of Occurrence

The pre-survey assessment of occurrence was reviewed post-survey (Table 4.6, Appendix E). A comprehensive post-survey assessment of occurrence will also be undertaken following phase two of this survey.

Records of three significant flora taxa, *Goodenia hartiana* (P2), *Swainsona thompsoniana* (P3) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3), were known to occur within the Survey Area prior to the survey. One of these taxa, *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3) was recorded during the current survey; however, *Goodenia hartiana* (P2) and *Swainsona thompsoniana* (P3) were not recorded during the current survey and thus are considered Previously Confirmed. A summary of the review to the Confirmed, Highly Likely, Likely and Possible pre-survey taxa, and the reasoning for the change/ no change is presented in Table 4.6.

Of the nine taxa considered Highly Likely to occur in the Survey Area pre-survey, four were recorded and formally identified (Confirmed) during the current survey. The remaining five were reclassified to Possible post-survey. One of the three taxa considered Likely to occur pre-survey, *Goodenia berrinbinensis* (P4), was also reassessed as Possible to occur post-survey. The remaining two were reassessed as Unlikely.

Onshore (2015c) conducted targeted surveys for *Acacia corusca* (formerly known as *Acacia* sp. East Fortescue) in a 65 km² area surrounding three populations of the species known at the time of survey. These populations occurred along a fault line at the intersection of two geological formations, Boolgeeda Iron Formation and Woongarra Rhyolite, where the overlying Boolgeeda Iron Formation had been heavily weathered, exposing the underlying Woongarra Rhyolite at the surface Onshore (2015c).

Species Distribution Modelling (SDM) for *A. corusca* was later conducted by Spectrum (2023b). Spectrum (2023b) based on existing records provided by BHP WAIO and sourced from the WAH. The analysis predicted that *A. corusca* occurs in close proximity (<12 km) to where the Boolgeeda Iron and Woongarra Rhyolite geological formations meet. Modelling identified areas of high, moderate and low priority for targeted ground-truthing, with subsequent targeted surveys covered 80.6% of the areas classified as having a high probability of occurrence of the species, 61.0% of medium probability of occurrence, and 21.7% low probability of occurrence. Two areas of Low priority habitat for *A. corusca* were identified by Spectrum (2023b), including one small area at the easternmost extent of the western section of the current Survey Area, and one at the eastern end of the western section of the current Survey Area. These areas were not subject to ground-truthing by Spectrum (2023b) due to the Low rating. No individuals of *A. corusca* were recorded in any of the locations subject to targeted survey by Spectrum (2023b).

In consideration of the above, *Acacia corusca* was reassessed as Unlikely in the post-survey review. *Eremophila magnifica* subsp. *magnifica* (P4) was also reassessed as Unlikely (Table 4.6, Appendix E).

One taxon considered Possible pre-survey, *Aristida lazaridis* (P3) was Confirmed during the current survey. The remaining seven taxa considered Possible pre-survey are now considered Unlikely or Highly Unlikely post-survey. One taxon considered Unlikely pre-survey, *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P3), was Confirmed during the current survey (Table 4.6), whilst the remaining taxa considered Unlikely or Highly Unlikely pre-survey either remained so or (for Unlikely) were downgraded further post-survey (Appendix E).

Table 4.6: Assessment of Occurrence review post-survey

Taxon	Likelihood post-survey	Reasoning for change/ no change in post-survey likelihood
Pre-survey likelihood – Confirmed		
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3)	Confirmed	Recorded within the Survey Area during the current survey
<i>Goodenia hartiana</i> (P2) <i>Swainsona thompsoniana</i> (P3)	Previously Confirmed	Previously recorded in the Survey Area. Not confirmed/ recorded during the current survey. Previous record locations were not able to be ground-truthed during the survey (Section 4.2.1.2).
Pre-survey likelihood – Highly Likely		
<i>Ipomoea racemigera</i> (P3) <i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3) <i>Eremophila naaykensis</i> (P3) <i>Isotropis parviflora</i> (P3)	Confirmed	Recorded within the Survey Area during the current survey
<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i> (P3)	Possible	Taxon is a small, inconspicuous, annual herb, often requiring favourable conditions for germination. The closest record occurs only 1 km south of the Survey Area on seasonally inundated <i>Acacia</i> plains/ flats (WAH, 1998 -). Many occurrences of this habitat are within the Survey Area. Further ground truthing would be required to exclude this taxon from areas that were not accessed in this survey.
<i>Gymnanthera cunninghamii</i> (P3) <i>Indigofera gilesii</i> (P3) <i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684) (P3) <i>Lepidium catapycnon</i> (P4)	Possible	Suitable habitat present within the Survey Area. All three taxon also have records within 2 km of the Survey Area (WAH, 1998 -). Further ground truthing required to exclude this taxon from areas that were not accessed in this survey.

Taxon	Likelihood post-survey	Reasoning for change/ no change in post-survey likelihood
Pre-survey likelihood – Likely		
<i>Goodenia berrinbinensis</i> (P4)	Possible	Suitable habitat present within the Survey Area. Further ground truthing required to exclude this taxon from areas that were not accessed in this survey.
<i>Acacia corusca</i> (P1) <i>Eremophila magnifica</i> subsp. <i>magnifica</i> (P4)	Unlikely	Both of the closest records are within <4 km of the Survey Area (WAH, 1998 -). However, there is limited optimal habitat in the Survey Area for these taxa. Habitat modelling and targeted survey for <i>A. corusca</i> indicated that it occurs on breakaway slopes of relatively low undulating hills with overhangs and small caves characteristic, and along adjacent minor drainage lines, restricted to where the Boolgeeda Iron Formation and Woongarra Rhyolite geological formations meet (Onshore, 2015c; Spectrum, 2022b). A small area fitting this description occurs at the easternmost extent of the Survey Area; however, this area has not been subject to ground-truthing by Spectrum (2022b).
Pre-survey likelihood – Possible		
<i>Aristida lazardidis</i> (P3)	Confirmed	Recorded within the Survey Area during the current survey
<i>Crotalaria smithiana</i> (P3)	Unlikely	Suitable habitat present within the Survey Area. Likely to have been seen if present

Taxon	Likelihood post-survey	Reasoning for change/ no change in post-survey likelihood
<i>Eremophila capricornica</i> (P1) <i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727) (P3) <i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353) (P3) <i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431) (P3) <i>Acacia bromilowiana</i> (P4) <i>Eremophila youngii</i> subsp. <i>lepidota</i> (P4)	Highly Unlikely	Limited suitable habitat observed in the Survey Area.
Pre-survey likelihood – Unlikely		
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4068) (P3)	Confirmed	Recorded within the Survey Area during the current survey Closest previous records of this species were 43.6 km from the Survey Area; as such, records from this survey represented a 43.6 km range extension to the southeast for this taxon. Two collected specimens were formally identified at the WAH, associated with <i>Triodia</i> low open hummock grassland.

4.2.1.4 Flora of 'Other' Significance

The EPA (2016b) advises that flora species, subspecies, varieties, hybrids and ecotypes may be considered significant for reasons other than listing as a Threatened or Priority Flora taxa. These reasons may include, but are not limited to, range extensions, new locations, potentially undescribed species, keystone species, relic status, local endemism and anomalous features. For the purposes of this report, flora of 'other' significance has been broken up into two separate categories of significance:

1. Taxa with anomalous features; and
2. Taxa representing new locations.

Based on these features combined, 94 flora taxa recorded from the Survey Area represent flora of 'other' significance.

Taxa with anomalous features

Two taxa, *Euphorbia* aff. *ferdinandi* and *Hibiscus* aff. *campanulatus*, are considered significant due to anomalous features and are considered to represent taxa of special interest. *E. aff. ferdinandi* was recorded at two locations (one individual at each of quadrat numbers PWR-39 and PWR-41). Specimens collected were noted to have a divided style and wider seed than *E. ferdinandi* (M. Hislop (WAH) personal communication, 17 July 2024). Sixty five individuals of *H. aff. campanulatus* were recorded at one location (PWR-28). This taxon is a known entity from this area, differing from *H. campanulatus* (P3) in having mauve flowers with a dark spot at the base of each petal (in comparison to having white to pale mauve with no spot at the petal base). The taxon differs from *H. sp.* Gurinbiddy Range in having broader obovate epicalyx lobes, stellate hairs with a smaller diameter, and a larger corolla that has stellate and glandular hairs near the margins on the outer surface, whereas *H. sp.* Gurinbiddy Range is glabrous (S. Dillon (WAH) personal communication, 7 February 2024).

Range Extensions and Locality Holes

A total of 26 flora taxa recorded in the Survey Area by this survey represent either range extensions in current known distribution (five taxa) or fill gaps in current known distribution when considering the WAH database (over 50 km from the Survey Area; 21 taxa) (Table 4.7) (WAH, 1998 -). The number of range extensions and taxa filling gaps in known distribution are likely a result of several factors, including those listed below:

- A low number of previous specimen lodgements to the WAH from previous surveys occurring in the Survey Area;
- A high diversity of vascular flora taxa in the area; and
- Good seasonal conditions prior to the survey.

Table 4.7: Taxa representing range extensions and locality holes

Taxon	Comments
Records represent extension of known range of the taxon	
<i>Aristida lazaridis</i> (P3)	Range extension to the SE of its known distribution, closest record 28.7 km from the Survey Area.
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)	Range extension to the SE of its known distribution, closest record 43.2 km from the Survey Area.
<i>Eulalia simonii</i>	Range extension to the SE of its known distribution, closest record 63.8 km from the Survey Area.
<i>Polymeria mollis</i>	Range extension to the SE of its known distribution, closest record 86.6 km from the Survey Area.
<i>Wahlenbergia gracilentia</i>	Range extension to the ESE of its known distribution, closest record 95.8 km from the Survey Area.
Records fill gap in known distribution for the taxon	
* <i>Dichanthium annulatum</i>	Although this species has been recently recorded from the Pilbara, no specimens have so far been databased (M. Hislop, (WAH) personal communication, 17 July 2024). Closest known record is 782.4 km SW near Geraldton.
<i>Gomphrena affinis</i>	Closest record 91.5 km W from the Survey Area.
<i>Leichhardtia australis</i>	Closest record 76.2 km S from the Survey Area.
<i>Sesbania cannabina</i>	Closest record 70.8 km NW from the Survey Area.
* <i>Citrullus colocynthis</i>	Closest record 69.6 km N from the Survey Area.
<i>Rhynchosia minima</i>	Closest record 68.2 km N from the Survey Area.
<i>Indigofera linnaei</i>	Closest record 67.7 km E from the Survey Area.
<i>Ipomoea polymorpha</i>	Closest record 67.5 km E from the Survey Area.
<i>Ipomoea calobra</i>	Closest record 64.7 km NE from the Survey Area.
<i>Halgania gustafsenii</i> var. <i>gustafsenii</i>	Closest record 64.6 km SE from the Survey Area.
<i>Indigofera linifolia</i>	Closest record 64.1 km NW from the Survey Area.
<i>Ptilotus schwartzii</i> var. <i>schwartzii</i>	Closest record 63.3 km SE from the Survey Area.
<i>Gossypium robinsonii</i>	Closest record 61.2 km NW from the Survey Area.
<i>Melhania oblongifolia</i>	Closest record 60.6 km NW from the Survey Area.
<i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32)	Closest record 60.6 km NE from the Survey Area.
<i>Waltheria indica</i>	Closest record 55.7 km NW from the Survey Area.
<i>Scaevola amblyanthera</i>	Closest record 55.1 km S from the Survey Area.
<i>Scaevola amblyanthera</i> var. <i>centralis</i>	Closest record 55.1 km S from the Survey Area.
<i>Themeda avenacea</i>	Closest record 53.6 km S from the Survey Area.
<i>Stylobasium spathulatum</i>	Closest record 53.6 km S from the Survey Area.
<i>Solanum phlomoides</i>	Closest record 49 km SW (edge of extent) from the Survey Area.

4.2.1.5 Introduced Flora

Fourteen introduced taxa, representing seven families, were recorded from the Survey Area (Table 4.8). None of the introduced flora are listed as WoNS, or as ‘Priority Alert’ weeds by the DCBA Parks and Wildlife Service.

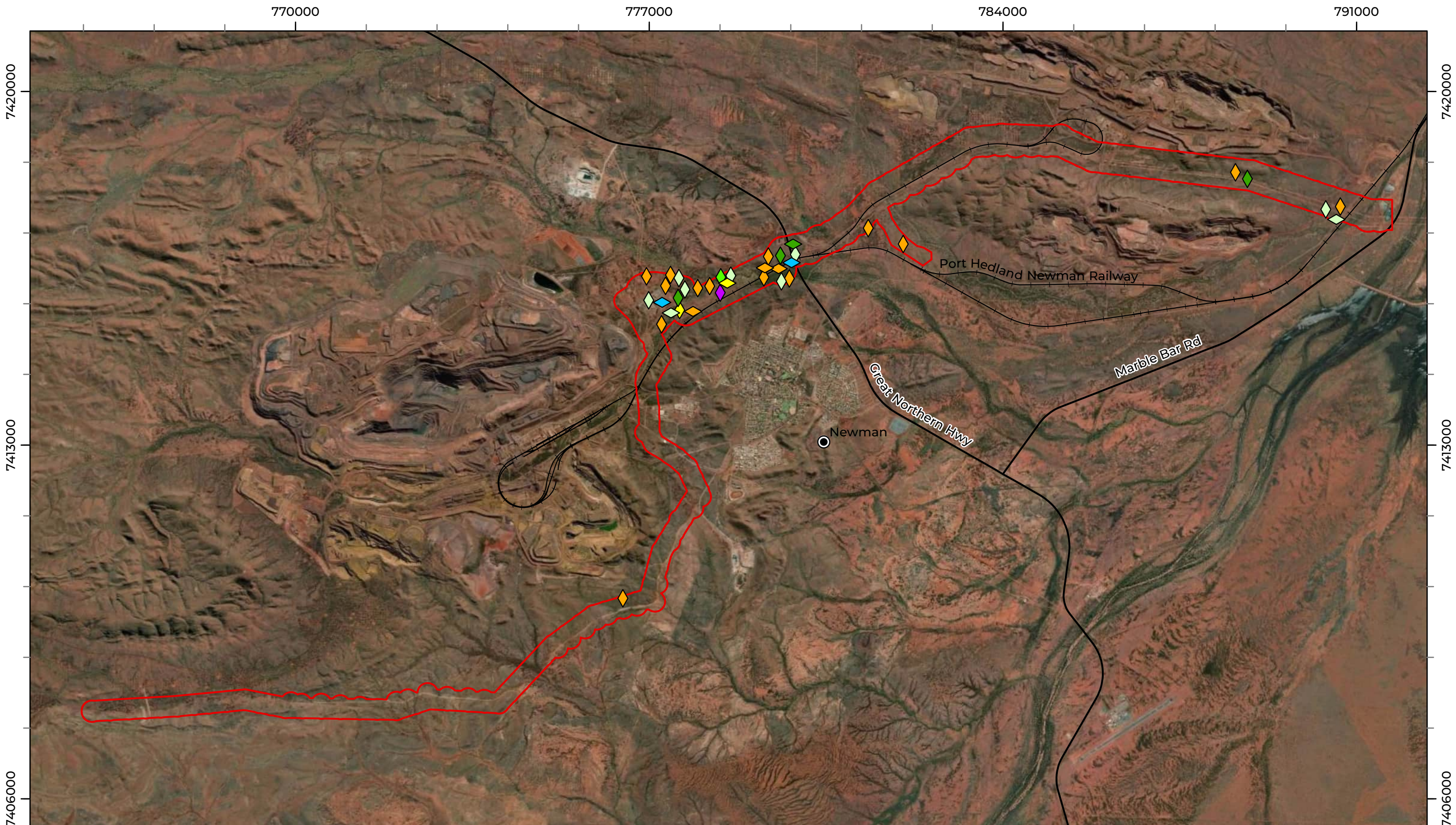
Table 4.8: Introduced flora recorded in the Survey Area

Family	Taxon	Lifeform/ Habit	Density and extent
Amaranthaceae	* <i>Aerva javanica</i>	Perennial herb/ shrub	1 individual from 1 location
Asteraceae	* <i>Bidens bipinnata</i>	Annual herb	1,700 individuals from 10 locations
	* <i>Flaveria trinervia</i>		1 individual from 1 location
Cucurbitaceae	* <i>Citrullus amarus</i>	Annual herb	7 individuals from 3 locations
	* <i>Citrullus colocynthis</i>	Perennial herb	5 individuals from 1 location
Fabaceae	* <i>Vachellia farnesiana</i> var. <i>farnesiana</i>	Perennial shrub	6 individuals from 2 locations
Malvaceae	* <i>Malvastrum americanum</i>	Perennial herb/ shrub	260 individuals from 5 locations
Poaceae	* <i>Cenchrus ciliaris</i>	Perennial grass	3,305 individuals from 21 locations
	* <i>Cenchrus setiger</i>		647 individuals from 8 locations
	* <i>Chloris virgata</i>	Annual grass	1 individual from 1 location
	* <i>Cynodon dactylon</i>	Perennial grass	25 individuals from 4 locations
	* <i>Dichanthium annulatum</i>		1 individual from 1 location
	* <i>Echinochloa colona</i>	Annual grass	21 individuals from 2 locations
Zygophyllaceae	* <i>Tribulus terrestris</i>	Annual herb	26 individuals from 2 locations

Eight of these introduced taxa are rated as having a high ecological rating and rapid invasiveness (DPIRD, 2022), they are:

- **Aerva javanica*;
- **Cenchrus ciliaris*;
- **Cenchrus setiger*;
- **Chloris virgata*;
- **Cynodon dactylon*;
- **Echinochloa colona*;
- **Malvastrum americanum*; and
- **Vachellia farnesiana* var. *farnesiana*.

Four of the introduced taxa (**Citrullus amarus*, **Dichanthium annulatum*, **Flaveria trinervia*, **Tribulus terrestris*) have not been assessed for their ecological impact and invasiveness (DPIRD, 2022), while the remaining two species’ ecological impact is unknown, with a rapid (**Bidens bipinnata*) or moderate (**Citrullus colocynthis*) invasiveness (DPIRD, 2022).



LEGEND

 Survey Area

 State Road

 Rail

Taxon

 **Aerva javanica*

 **Bidens bipinnata*

 **Cenchrus ciliaris*

 **Cenchrus setiger*

 **Cynodon dactylon*

 **Dichanthium annulatum*

 **Echinochloa colona*

 **Flaveria trinervia*

 **Malvastrum americanum*

 **Tribulus terrestris*

 **Vachellia farnesiana* var. *farnesiana*



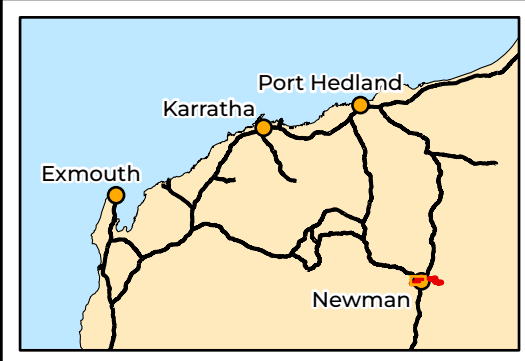
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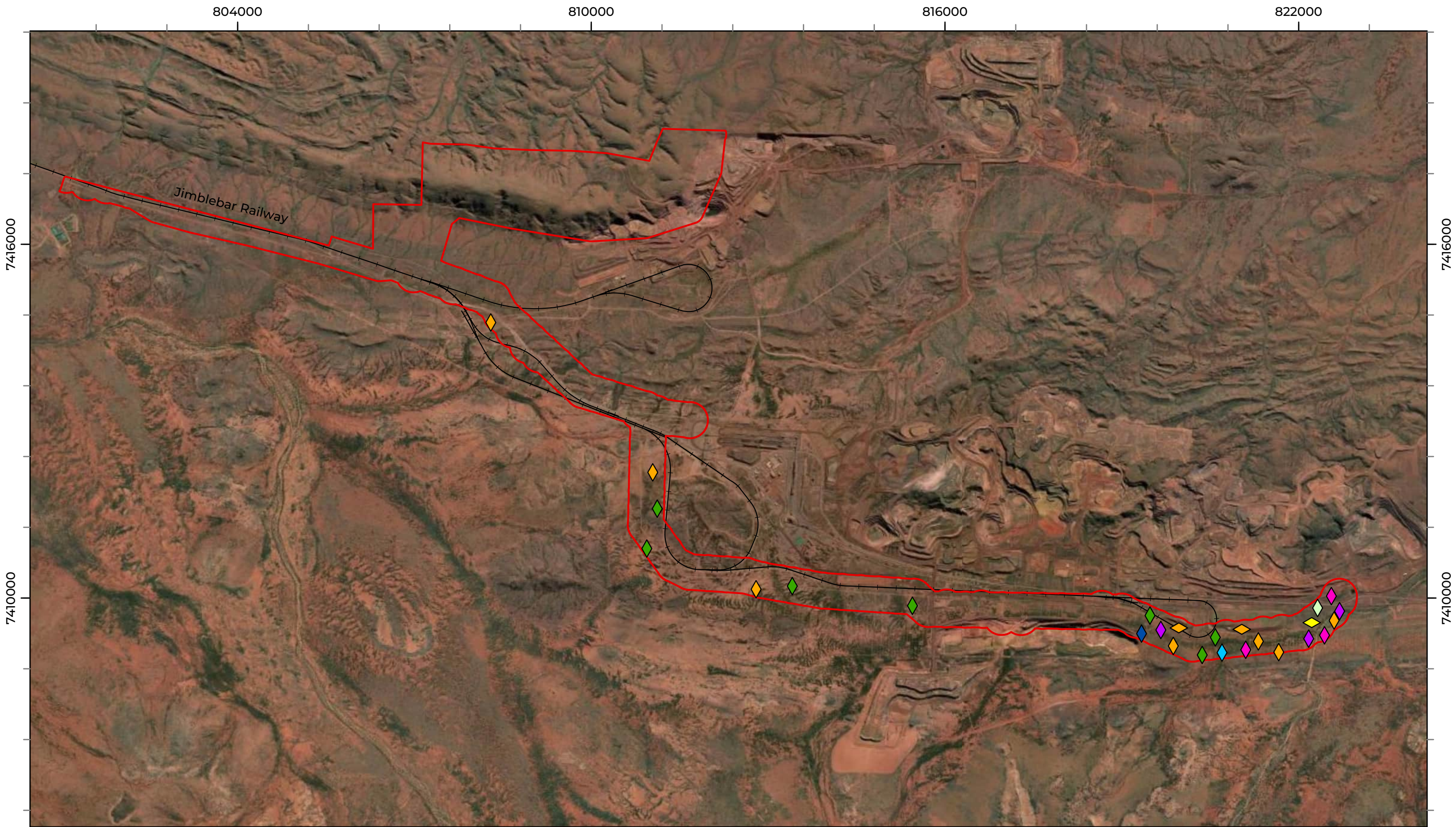
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Transverse Mercator Created: 29/11/2024



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Figure 4.4a: Introduced
flora recorded in the
Survey Area - West



LEGEND

- Survey Area
- Rail

Taxon

- | | |
|---------------------------|-------------------------------|
| <i>*Bidens bipinnata</i> | <i>*Citrullus amarus</i> |
| <i>*Cenchrus ciliaris</i> | <i>*Citrullus colocynthis</i> |
| <i>*Cenchrus setiger</i> | <i>*Cynodon dactylon</i> |
| <i>*Chloris virgata</i> | <i>*Echinochloa colona</i> |
| | <i>*Malvastrum americanum</i> |



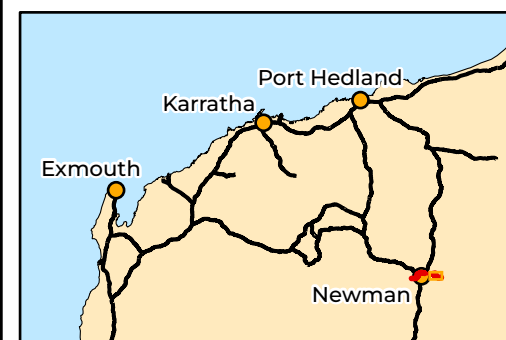
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Scale 1:60,000

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Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 29/11/2024



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Single Season Flora
and Vegetation Survey

Figure 4.4b: Introduced
flora recorded in the
Survey Area - East

Introduced flora were distributed primarily within drainage line, floodplain, and stony plain vegetation types. These landforms are known to present more optimal habitat, due to dispersal of seeds by water movement as well as higher water availability for germination and growth (Hill *et al.*, 2005; van der Meulen & Sindel, 2008). Furthermore, infestations of weeds spread via cattle is more prevalent on the lower landforms, compared to rocky, breakaway country and large hills and ranges.

The extent of invasive grasses, for example **Cenchrus ciliaris* and **Cenchrus setiger*, are likely to be underestimated across the Survey Area. Both grasses can create monocultures in suitable areas (disturbed water gaining areas, i.e., drainage lines, floodplains), where it can be difficult to distinguish individuals.

4.2.2 Vegetation

4.2.2.1 Broad Landforms

Landform, topography, and geology are major drivers of water and nutrient availability within the Pilbara and strongly influence the patterns of vegetation found across the landscape. Vegetation type classifications have been provided by BHP and incorporate broad landforms: Drainage Lines/ Floodplains (Floodplains (FP), Major Drainage Lines (MA), Medium Drainage Lines (ME) and Minor Drainage Lines (MI)), Gullies (GU), Hills (Hillcrests/ Upper Hillslopes (HC) and Hillslopes (HS)) and Plains (Calcrete Plains (CP), Sand Plains (SA) and Stony Plains (SP)).

Four broad landforms supporting 24 vegetation types were identified and mapped within the Survey Area (Table 4.9):

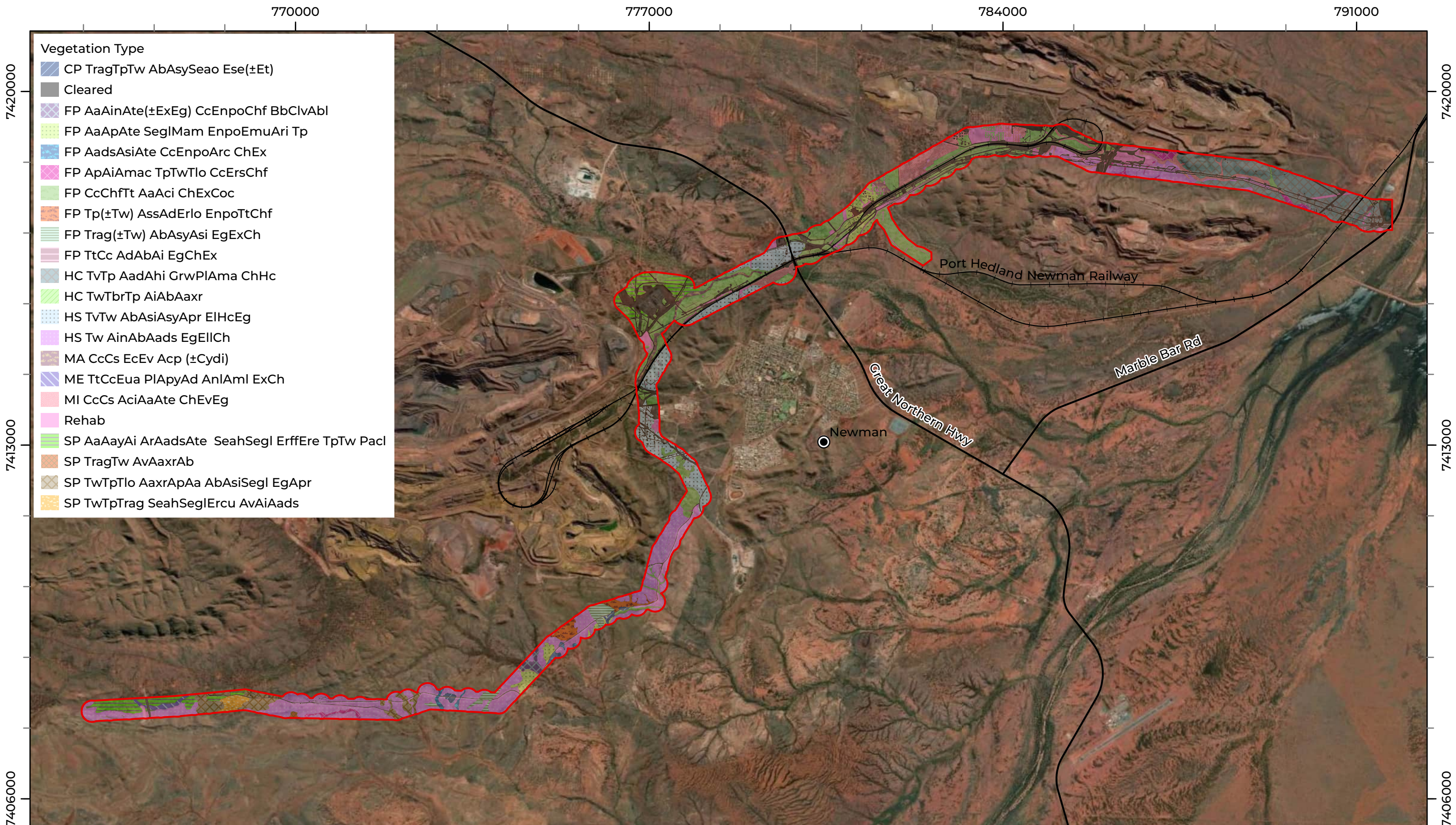
- Drainage Lines/ Floodplains – 13 vegetation types;
- Gullies– one vegetation type;
- Hills – four vegetation types; and
- Plains – six vegetation types.

The dominant broad landform based on coverage across the Survey Area was Hills (31.9 %, 1,336.9 ha), followed by Drainage Lines/ Floodplains (20.7 %, 866.8 ha), Plains (14.9 %, 623.8 ha), and Gullies (0.6 %, 26.9 ha) (remaining area made up of cleared and unsurveyed area).

4.2.2.2 Vegetation Types

A total of 24 vegetation types were described and delineated in the Survey Area based on four broad landforms (Table 4.9, Figure 4.5). The most common vegetation type was HC TvTp AadAhi GrwPIAma ChHc, comprising 11.7 % (488.8 ha) of the Survey Area. This vegetation type generally occupied the ironstone hills and subsequent hill sub landforms (lower-slopes, mid-slope, upper-slopes, hillcrests/summits) highest in the landscape across the Survey Area

In addition to the 24 vegetation types described and delineated from the Survey Area, two additional mapping units, Cleared and Rehab (Rehabilitated) (Table 4.9, Figure 4.5). The cleared unit contains cleared and/or disturbed areas including roads, informal tracks, infrastructure, disturbed areas not representing natural vegetation, and other areas void of vegetation from unnatural processes. The rehabilitation unit contained disturbed and/or cleared vegetation recovering from recent rehabilitation practices or naturally rehabilitated historic tracks. These areas were partially delineated from the disturbance layer provided by BHP and aerial imagery interpretation.



LEGEND

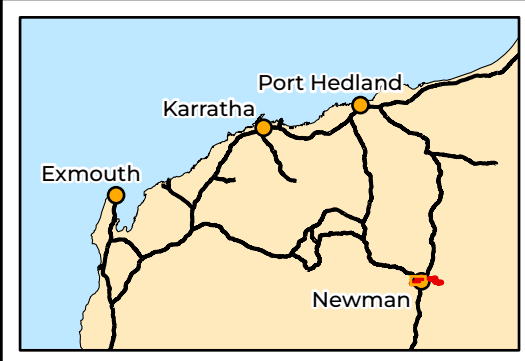
- Survey Area
- State Road
- Rail

 **Biologic**

Scale 1:70,000

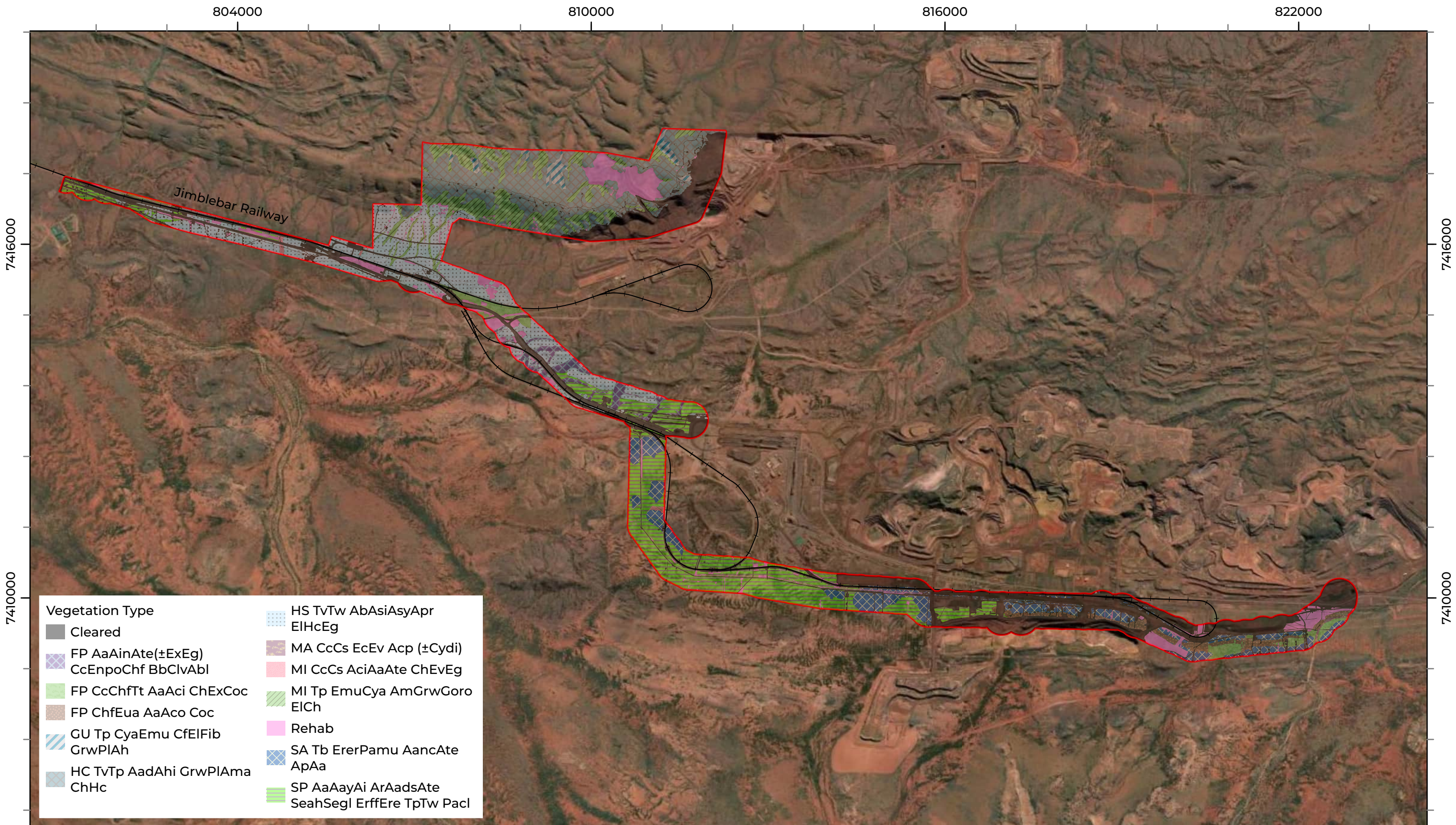
0 1 2 Km

Coordinate System: GDA 1994 MGA Zone 50 Transverse Mercator Created: 06/03/2025



BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 4.5a: Vegetation types
in the Survey Area - West



LEGEND

Survey Area

Rail

Biologic

Scale 1:60,000

0 1 2 Km

Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 06/03/2025

BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 4.5b: Vegetation types
in the Survey Area - East

Table 4.9: Vegetation types of the Survey Area

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Drainage lines /Floodplain				
*Cenchrus mid tussock grassland FP AaAinAte(±ExEg) CcEnpoChf BbClvAbl <i>Acacia aptaneura</i>, <i>Acacia incurvaneura</i> and <i>Acacia tetragonophylla</i> (± <i>Eucalyptus xerothermica</i>, <i>Eucalyptus gamophylla</i>) low open woodland over <i>*Cenchrus ciliaris</i>, <i>Enneapogon polyphyllus</i> and <i>Chrysopogon fallax</i> low open tussock grassland with <i>*Bidens bipinnata</i>, <i>Arivela viscosa</i> and <i>Abutilon lepidum</i> low scattered herbs on brown clay loam on drainage areas/ floodplains and minor drainage lines.	Vegetation type taken from (Biologic, 2022c).	50.3 ha 1.2 %	Significant flora present: None Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	
Acacia tall shrubland to tall open shrubland FP AaApAte SeglMam EnpoEmuAri Tp <i>Acacia aptaneura</i>, <i>Acacia paraneura</i> and <i>Acacia tetragonophylla</i> tall shrubland to tall open shrubland over <i>Senna glutinosa</i> subsp. <i>*luerssenii</i> and <i>Maireana melanocoma</i> mid to low scattered shrubs over <i>Enneapogon polyphyllus</i>, <i>Eriachne mucronata</i>, <i>Aristida inaequiglumis</i> and <i>Triodia pungens</i> low scattered tussock and hummock grasses on brown clay loam on stony plains and drainage areas/ floodplains.	<u>Relevés</u>: PWRR-16. Vegetation type taken from (Biologic, 2022c).	51.5 ha 1.2 %	Significant flora present: None Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	
Acacia tall to mid open shrubland FP AadsAsiAte CcEnpoArc ChEx <i>Acacia ?adsurgens</i>, <i>Acacia sibirica</i> and <i>Acacia tetragonophylla</i> tall to mid open shrubland over <i>*Cenchrus ciliaris</i>, <i>Enneapogon polyphyllus</i> and <i>Aristida contorta</i> low open tussock grassland with <i>Corymbia hamersleyensis</i> and <i>Eucalyptus xerothermica</i> low scattered trees on brown clay loam on drainage areas/ floodplains.	Vegetation type taken from (Biologic, 2022c).	10.2 ha 0.2 %	Significant flora present: None	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Acacia low open woodland FP ApAiAmac TpTwTlo CcErsChf <i>Acacia paraneura</i>, <i>Acacia ?incurvaneura</i> and <i>Acacia macraneura</i> low open woodland over <i>Triodia pungens</i>, <i>Triodia wiseana</i> and occasionally <i>Triodia longiceps</i> mid open hummock grassland over <i>*Cenchrus ciliaris</i>, <i>Eragrostis setifolia</i> and <i>Chrysopogon fallax</i> low open tussock grassland on red clay loam on drainage areas/ floodplains.	Vegetation type taken from (Biologic, 2020c).	19.6 ha 0.5 %	Significant flora present: None Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	
*Cenchrus tall open to closed tussock grassland FP CcChfTt AaAci ChExCoc <i>*Cenchrus ciliaris</i>, <i>Chrysopogon fallax</i>, <i>Themeda triandra</i> tall open to closed tussock grassland with <i>Acacia aptaneura</i> and <i>Acacia citrinoviridis</i> tall open shrubland with <i>Corymbia hamersleyana</i>, <i>Eucalyptus xerothermica</i> and <i>Corymbia candida</i> low open woodland on red-brown silty clay sand on drainage areas/ floodplains.	<u>Quadrats</u>: PWR-17, PWR-18, PWR-22, PWR-34 <u>Relevés</u>: PWRR-40.	340.9 ha 8.1 %	Significant flora present: Supports habitat for <i>Aristida lazaridis</i> (P3) and <i>Ipomoea racemigera</i> (P3). Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	
Chrysopogon mid tussock grassland FP ChfEua AaAco Coc <i>Chrysopogon fallax</i>, <i>Eulalia aurea</i> mid tussock grassland with <i>Acacia aptaneura</i>, <i>Acacia colei</i> var. <i>colei</i> tall sparse shrubland with <i>Corymbia candida</i> subsp. <i>candida</i> low isolated trees on red silty clay loam on drainage areas/ floodplains.	<u>Quadrats</u> : PWR-36	40.8 ha 1.0 %	Significant flora present: None Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Triodia low hummock grassland FP Tp(±Tw) AssAdErlo EnpoTtChf <i>Triodia pungens</i> (± <i>Triodia wiseana</i>) low hummock grassland with <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>, <i>Acacia dictyophleba</i> and <i>Eremophila longifolia</i> mid to tall sparse shrubland over <i>Enneapogon polyphyllus</i>, <i>Themeda triandra</i> and <i>Chrysopogon fallax</i> mid to low sparse tussock grassland on brown silty clay loam on drainage areas/ floodplains and minor drainage lines.	Vegetation type taken from (Biologic, 2022c).	23.0 ha 0.5 %	Significant flora present: None	
Triodia low hummock grassland FP Trag(±Tw) AbAsyAsi EgExCh Low hummock grassland of <i>Triodia angusta</i> (± <i>Triodia wiseana</i>) with mid to low scattered shrubs of <i>Acacia bivenosa</i>, <i>Acacia synchronica</i> and <i>Acacia sibirica</i> with occasional low scattered trees of <i>Eucalyptus gamophylla</i>, <i>Eucalyptus xerothermica</i> and <i>Corymbia hamersleyana</i> on red-brown clay loam on low slopes, drainage areas/ floodplains and undulating hills.	<u>Quadrats</u>: PWR-07 Vegetation type taken from (Biologic, 2022c).	23.7 ha 0.6 %	Significant flora present: None	
Themeda mid open tussock grassland FP TtCc AdAbAi EgChEx <i>Themeda triandra</i> and <i>*Cenchrus ciliaris</i> mid open tussock grassland with <i>Acacia dictyophleba</i>, <i>Acacia bivenosa</i> and <i>Acacia inaequilatera</i> mid to tall open shrubland with <i>Eucalyptus gamophylla</i>, <i>Corymbia hamersleyana</i> and <i>Eucalyptus xerothermica</i> low scattered trees on red sandy clay loam on drainage areas/ floodplains.	Vegetation type taken from (Biologic, 2020c).	1.1 ha <0.1 %	Significant flora present: None	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
*Cenchrus mid tussock grassland MA CcCs EcEv Acp (±Cydi) <i>*Cenchrus ciliaris</i> and <i>*Cenchrus setiger</i> mid tussock grassland with <i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i> and <i>Eucalyptus victrix</i> mid woodland over <i>Acacia coriacea</i> subsp. <i>pendens</i> tall open to sparse shrubland over (± <i>Cyperus difformis</i>) low isolated sedges on brown sand on major/ medium drainage lines.	<u>Quadrats</u>: PWR-32 <u>Relevés</u>: PWRR-14, PWRR-41	28.7 ha 0.7 %	Significant flora present: None Vegetation of ‘other’ significance: - Aligns with ‘major ephemeral watercourses’ Ecosystem at Risk (Kendrick, 2003); - Potentially aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003); and - Moderate to high potential for GDV.	
Themeda mid tussock grassland ME TtCcEua PIAPyAd AnlAml ExCh <i>Themeda triandra</i>, <i>*Cenchrus ciliaris</i> and <i>Eulalia aurea</i> mid tussock grassland with <i>Petalostylis labicheoides</i>, <i>Acacia pyrifolia</i> and <i>Acacia dictyophleba</i> mid to tall open shrubland over <i>Androcalva luteiflora</i> and <i>Acacia monticola</i> mid sparse shrubs with <i>Eucalyptus xerothermica</i> and <i>Corymbia hamersleyana</i> low scattered trees on red silty clay loam on medium drainage lines.	Vegetation type taken from (Biologic, 2020c, 2021).	8.1 ha 0.2 %	Significant flora present: None Vegetation of ‘other’ significance: Low potential for GDV.	
*Cenchrus mid closed tussock grassland MI CcCs AciAaAte ChEvEg <i>*Cenchrus ciliaris</i>, <i>*Cenchrus setiger</i> closed tussock grassland with <i>Acacia citrinoviridis</i>, <i>Acacia aptaneura</i>, <i>Acacia tetragonophylla</i> tall shrubland with <i>Corymbia hamersleyana</i>, <i>Eucalyptus victrix</i> and <i>Eucalyptus gamophylla</i> low open woodland on red-brown clayey sand on drainage areas/ floodplains and drainage lines.	<u>Quadrats</u>: PWR-20, PWR-28, PWR-40.	97.0 ha 2.3 %	Significant flora present: None Vegetation of ‘other’ significance: Aligns with ‘valley floor mulga’ Ecosystem at Risk (Kendrick, 2003).	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Triodia low hummock grassland MI Tp EmuCya AmGrwGoro ElCh <i>Triodia pungens</i> low hummock grassland with <i>Eriachne mucronata</i> and <i>Cymbopogon ambiguus</i> low sparse tussock grassland with <i>Acacia monticola</i>, <i>Grevillea wickhamii</i> and <i>Gossypium robinsonii</i> mid to tall open shrubland with <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Corymbia hamersleyana</i> low isolated trees on red loamy sand on minor drainage lines.	<u>Quadrats</u>: PWR-63, PWR-64.	172.0 ha 4.1 %	Significant flora present: None	
Gully				
Triodia mid open hummock grassland GU Tp CyaEmu CfElFib GrwPIAh <i>Triodia pungens</i> mid open hummock grassland with <i>Cymbopogon ambiguus</i> and <i>Eriachne mucronata</i> mid sparse tussock grassland with <i>Corymbia ferritcola</i>, <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Ficus brachypoda</i> low isolated trees over <i>Grevillea wickhamii</i>, <i>Petalostylis labicheoides</i> and <i>Acacia hamersleyensis</i> tall open shrubland on red-brown sandy clay loam on ironstone gullies.	<u>Quadrats</u>: PWR-45, PWR-46, PWR-48, PWR-51.	26.9 ha 0.6 %	Significant flora present: Supports habitat for <i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3).	
Hillcrest and Hillslope				
Triodia low open hummock grassland HC TvTp AadAhi GrwPIAma ChHc <i>Triodia vanleeuwenii</i> and <i>Triodia pungens</i> low open hummock grassland with <i>Acacia adoxa</i> var. <i>adoxo</i> and <i>Acacia hilliana</i> low sparse to open shrubland with <i>Grevillea wickhamii</i>, <i>Petalostylis labicheoides</i> and <i>Acacia maitlandii</i> tall isolated shrubs with <i>Corymbia hamersleyana</i> and <i>Hakea chordophylla</i> low isolated trees on red-brown sandy loam on ironstone hillcrests/ upper hillslopes and undulating low hills.	<u>Quadrats</u>: PWR-26, PWR-27, PWR-30, PWR-47, PWR-52, PWR-53, PWR-60, PWR-61 <u>Relevés</u>: PWRR-26, PWRR-27, PWRR-50, PWRR-62.	488.8 ha 11.7%	Significant flora present: Supports habitat for <i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3) and <i>Isotropis parviflora</i> (P3).	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Triodia mid hummock grassland HC TwTbrTp AiAbAaxr <i>Triodia wiseana</i>, <i>Triodia brizoides</i> and <i>Triodia pungens</i> mid hummock grassland with <i>Acacia inaequilatera</i>, <i>Acacia bivenosa</i> and <i>Acacia ?adsurgens</i> x <i>rhodophloia</i> mid open shrubland on red silty loam on hillcrests/ upper hillslopes and undulating low hills.	Vegetation type taken from (Biologic, 2020c).	0.4 ha <0.1 %	Significant flora present: None	
Triodia low open hummock grassland HS TvTw AbAsiAsyApr EIHCeEg <i>Triodia vanleeuwenii</i>, <i>Triodia wiseana</i> low open hummock grassland with <i>Acacia bivenosa</i>, <i>Acacia sibirica</i>, <i>Acacia synchronicia</i> and <i>Acacia pruinocarpa</i> tall sparse shrubland with <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>, <i>Hakea chordophylla</i> and <i>Eucalyptus gamophylla</i> low isolated trees on red-brown sandy clay loam on low undulating stony hills.	<u>Quadrats</u>: PWR-13, PWR-16, PWR-19, PWR-43, PWR-62 <u>Relevés</u>: PWRR-35	441.1 ha 10.5%	Significant flora present: Supports habitat for <i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3) and <i>Eremophila naaykensis</i> (P3).	
Triodia low hummock grassland HS Tw AinAbAads EgEILCh <i>Triodia wiseana</i> low hummock grassland with <i>Acacia inaequilatera</i>, <i>Acacia bivenosa</i> and <i>Acacia adsurgens</i> mid to tall sparse shrubland to scattered shrubs with <i>Eucalyptus gamophylla</i>, <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i> and <i>Corymbia hamersleyana</i> low scattered trees on brown silty loam on undulating hills and lower slopes.	Vegetation type taken from (Biologic, 2022c).	406.6 ha 9.7 %	Significant flora present: None	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Plains				
Triodia low hummock grassland CP TragTpTw AbAsySeao Ese(±Et) <i>Triodia angusta</i>, <i>Triodia pungens</i> and <i>Triodia wiseana</i> low hummock grassland with <i>Acacia bivenosa</i> (wispy form), <i>Acacia synchronicia</i> and <i>Senna artemisioides</i> subsp. <i>oligophylla</i> mid to tall sparse shrubland to scattered shrubs with <i>Eucalyptus socialis</i> subsp. <i>eucentrica</i> (± <i>Eucalyptus trivalva</i>) low scattered trees on red-brown clay loam on calcrete stony plains and platforms.	Vegetation type taken from (Biologic, 2022c).	6.2 ha 0.1 %	Significant flora present: None	
Triodia low hummock grassland SA Tb ErerPamu AancAte ApAa <i>Triodia basedowii</i> low hummock grassland with <i>Eragrostis eriopoda</i> and <i>Neurachne muelleri</i> low tussock grassland with <i>Acacia ancistrocarpa</i> and <i>Acacia tetragonophylla</i> mid open shrubland with <i>Acacia pruinocarpa</i> and <i>Acacia aptaneura</i> tall sparse shrubland on red sand on sand plains.	<u>Quadrats</u> : PWR-33, PWR-35.	140.7 ha 3.4 %	Significant flora present: None	
Acacia low open woodland SP AaAayAi ArAadsAte SeahSegl ErffEre TpTw Pacl <i>Acacia aptaneura</i>, <i>Acacia ayersiana</i> (hybrid) and <i>Acacia incurvaneura</i> low open woodland over <i>Acacia rhodophloia</i>, <i>Acacia adsurgens</i> and <i>Acacia tetragonophylla</i> tall open shrubland over <i>Senna artemisioides</i> subsp. <i>helmsii</i> and <i>Senna glutinosa</i> subsp. <i>xluerssenii</i> mid isolated shrubs over <i>Eremophila forrestii</i> subsp. <i>forrestii</i> and <i>Eremophila exilifolia</i> low isolated shrubs over <i>Triodia pungens</i> and <i>Triodia wiseana</i> mid scattered hummock grasses with <i>Paspalidium clementii</i> low scattered tussock grasses on red clay loam on stony plains.	<u>Quadrats</u>: PWR-38, PWR-39, PWR-41 <u>Relevés</u>: PWRR-12, PWRR-13, PWRR-31. Extrapolated vegetation type taken from (Biologic, 2020c, 2021).	409.7 ha 9.8 %	Significant flora present: Supports habitat for <i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3). Vegetation of 'other' significance: - Aligns with 'valley floor mulga' Ecosystem at Risk (Kendrick, 2003); - Contains sheet-flow dependent vegetation.	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Triodia mid hummock grassland SP TragTw AvAaxrAb <i>Triodia angusta</i> and <i>Triodia wiseana</i> mid hummock grassland with <i>Acacia victoriae</i>, <i>Acacia ?adsurgens</i> x <i>rhodophloia</i> and <i>Acacia bivenosa</i> mid to tall open shrubland on brown silty clay loam on stony plains.	Vegetation type taken from (Biologic, 2020c).	2 ha <0.1 %	Significant flora present: None	
Triodia mid hummock grassland SP TwTpTlo AaxrApAa AbAsiSegl EgApr <i>Triodia wiseana</i>, <i>Triodia pungens</i> and <i>Triodia ?longiceps</i> mid hummock grassland with <i>Acacia adsurgens</i> x <i>rhodophloia</i>, <i>Acacia paraneura</i> and <i>Acacia aptaneura</i> tall open shrubland with <i>Acacia bivenosa</i>, <i>Acacia sibirica</i> and <i>Senna glutinosa</i> subsp. <i>*luerssenii</i> mid sparse shrubland with <i>Eucalyptus gamophylla</i> and <i>Acacia pruinocarpa</i> low isolated trees on red clay loam on stony plains and drainage areas/ floodplains.	Vegetation type taken from (Biologic, 2020c, 2021).	52.4 ha 1.3 %	Significant flora present: None Vegetation of 'other' significance: Aligns with 'valley floor mulga' Ecosystem at Risk (Kendrick, 2003).	
Triodia mid open hummock grassland SP TwTpTrag SeahSeglErcu AvAiAads <i>Triodia wiseana</i>, <i>Triodia pungens</i> and occasionally <i>Triodia angusta</i> mid open hummock grassland with <i>Senna artemisioides</i> subsp. <i>helmsii</i>, <i>Senna glutinosa</i> subsp. <i>*luerssenii</i> and <i>Eremophila cuneifolia</i> mid open shrubland with <i>Acacia victoriae</i>, <i>Acacia ?incurvaneura</i> and <i>Acacia ?adsurgens</i> tall scattered shrubs on red silty loam on stony plains and undulating low hills.	Vegetation type taken from (Biologic, 2020c).	12.9 ha 0.3 %	Significant flora present: None	
Mapping Units				
Cleared Cleared areas including gravel tracks, drill pads and other areas cleared for infrastructure.		1,090.1 ha 26.0 %	n/a	

Vegetation Codes, Broad Floristic Formation & Description	Sample Sites	Survey Area Extent	Environmental Values & Features of Interest	Representative Photo
Rehab Rehabilitated Area Designated areas of rehabilitation.	<u>Relevés:</u> PWRR-33, PWRR-44.	242.2 ha 5.8%	n/a	

4.2.2.3 Significant Vegetation

There are no TECs that intersect the Survey Area and none of the vegetation types identified in the Survey Area resemble known TECs from the Pilbara. No PECs intersect the Survey Area and none of the vegetation types identified in the Survey Area resemble known PECs from the Pilbara.

Vegetation of Other Significance

Five vegetation types are significant through providing refuge for significant flora. They are:

- FP CcChfTt AaAci ChExCoc
 - *Aristida lazaridis* (P3), *Ipomoea racemigera* (P3)
- GU Tp CyaEmu CfElFib GrwPIAh
 - *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3)
- HC TvTp AadAhi GrwPIAma ChHc
 - *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P3), *Isotropis parviflora* (P3)
- HS TvTw AbAsiAsyApr ElHcEg
 - *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109) (P3), *Eremophila naaykensis* (P3)
- SP AaAayAi ArAadsAte SeahSegl ErffEre TpTw PacI
 - *Aristida jerichoensis* var. *subspinulifera* (P3)

However, these vegetation types are well-represented throughout the Pilbara and, as such, were considered to be of low local and regional significance.

Multiple vegetation types within the Survey Area are analogous with 'ecosystems at risk' (EAR) for the Hamersley IBRA subregion (Kendrick, 2003), which is the dominant IBRA subregion in the Survey Area (Table 4.15). EAR are ecosystems originally identified in the Pilbara bioregion as being vulnerable to human-induced threats such as cattle grazing, weed ingress and water shadow from linear infrastructure, but have no formal conservation listing. No further review of this work has been completed since 2003; as such, there is limited information available as to the current level of significance of EAR. For this reason, EAR are encompassed in "Vegetation of Other Significance" in this report (EPA, 2016b).

Vegetation types containing mulga species (*Acacia aneura* and/ or *Acacia aptaneura*) as the most dominant components of either open forest, woodland, open woodland, shrubland or open shrubland are considered to be the 'valley floor mulga' EAR. These vegetation types occur on valley floor landforms of floodplains and sandy/ stony plains. Most 'valley floor mulga' vegetation types also contained tussock/ bunch or hummock grasses as the grassland layer. Vegetation types aligning with 'valley floor mulga' include:

- FP AaAinAte($\pm$ ExEg) CcEnpoChf BbClvAbl;
- FP AaApAte SeglMam EnpoEmuAri Tp;
- FP ApAiAmac TpTwTlo CcErsChf;
- FP CcChfTt AaAci ChExCoc;
- FP ChfEua AaAco Coc;
- MI CcCs AciAaAte ChEvEg;
- SA Tb ErerPamu AancAte ApAa;
- SP AaAayAi ArAadsAte SeahSegl ErffEre TpTw PacI;
- SP TwTpTlo AaxrApAa AbAsiSegl EgApr; and
- SP TwTpTrag SeahSeglErcu AvAiAads.

These mulga over tussock grass ecosystems occur on loamy, friable soils susceptible to erosion, and are open to heavy grazing and fire, making them vulnerable to ecosystem degradation/ alteration and extend across approximately 29% of the Survey Area. These vegetation types are considered to be well-represented throughout the Pilbara and, as such, were considered to be of low local and regional significance.

Major ephemeral watercourses are also identified as an EAR. One vegetation type, MA CcCs EcEv Acp ($\pm$ Cydi), aligns with this EAR description. This vegetation type is relatively restricted within the Survey Area, covering 0.7%.

Groundwater Dependent Ecosystems

Two key riparian tree species, *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix*, were recorded during the field survey. *Eucalyptus camaldulensis* is primarily a facultative phreatophyte and is generally found near rivers and major creek systems with a shallow water table (2–5 m below ground) (Landman, 2001). In some locations, however, where soil moisture is consistently recharged by streamflow, *Eucalyptus camaldulensis* may not require groundwater and would be classed as a vadophyte (SKM, 2012)

Eucalyptus victrix is primarily a vadophyte and generally occurs in drier areas than *Eucalyptus camaldulensis*. Groundwater studies by Loomes (2010) have shown that the mean minimum water level depth occurring under *Eucalyptus victrix* populations was somewhat greater than that for *Eucalyptus camaldulensis*. The water use strategy of *Eucalyptus victrix* appears to be highly plastic and opportunistic, enabling survival in a wide range of ecohydrological settings (Pfautsch et al., 2014). *Eucalyptus victrix* was recorded at 11-point locations in the Survey Area, either as an isolated tree or scattered in the broader landscape. Of the four drainage line vegetation types mapped in the Survey Area, two were considered to potentially be reliant or partially reliant on groundwater:

- MA CcCs EcEv Acp ($\pm$ Cydi) – contains *Eucalyptus camaldulensis* subsp. *refulgens* and *Eucalyptus victrix*; and
- ME TtCcEua PlApyAd AnlAml ExCh – contains *E. victrix*.

Together, these two vegetation types were relatively restricted within the Survey Area (0.9% collectively).

Sheet-flow dependent ecosystems

Small areas of mulga banding indicative of sheet-flow dependent vegetation occur in the eastern portion of the Survey Area (to the south of the Jimblebar Hub), in vegetation type SP AaAayAi ArAadsAte SeahSegl ErffEre TpTw Pacl. This vegetation was rated in Good – Very Good condition, with the exception of areas that had been disturbed by drilling activity (Figure 4.5, Figure 4.6).

4.2.3 Vegetation condition

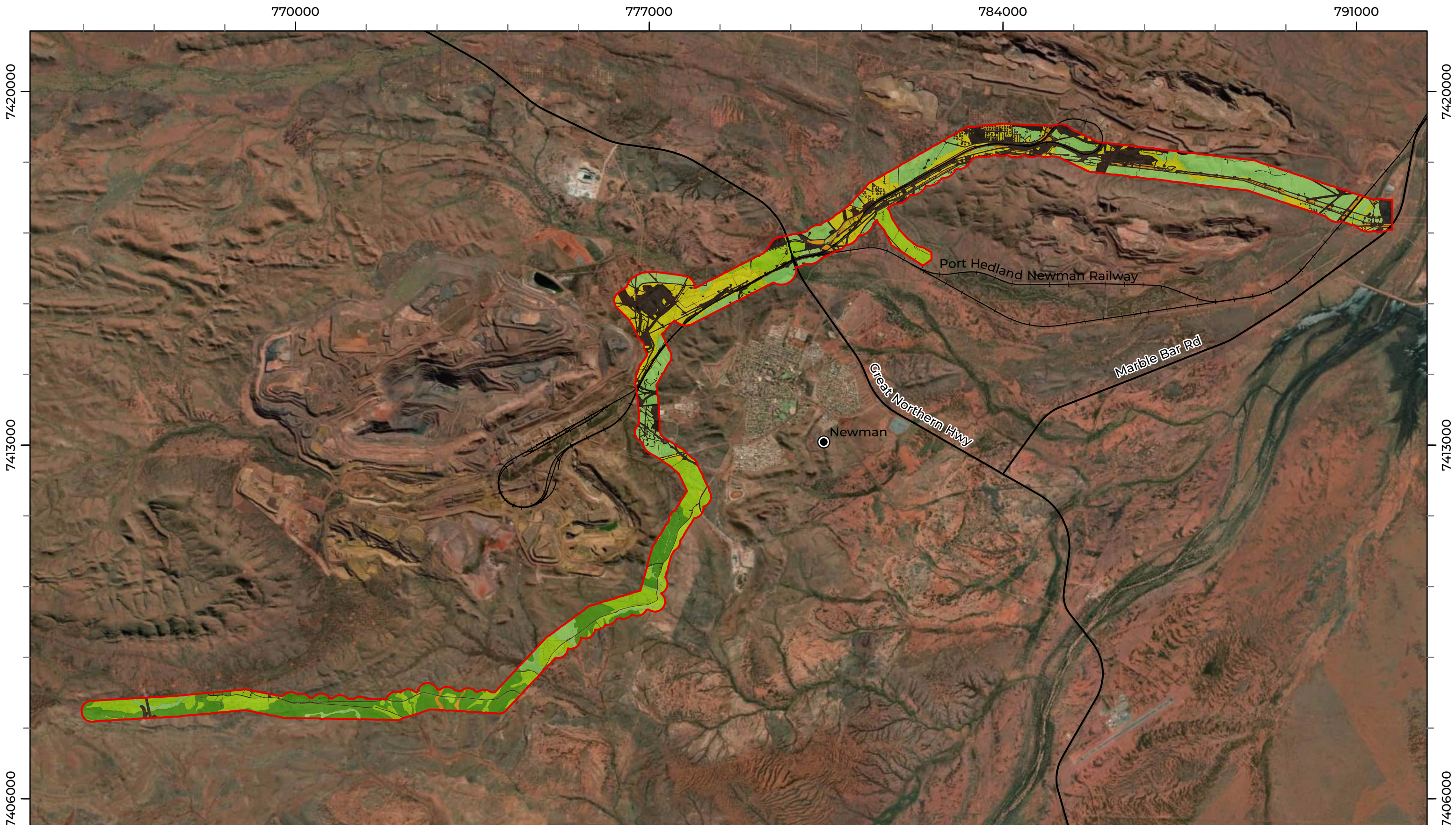
Vegetation condition within the Survey Area ranged from Excellent to Completely Degraded (Table 4.10, Figure 4.6). A total of 31.8 % (1,332.3 ha) of the Survey Area was recorded as Completely Degraded (mapped as Rehab and Cleared). Vegetation fringing these areas were often recorded as Degraded or Poor, due to the proximity of the Survey Area to the township, and intersection with operational areas and associated mine infrastructure throughout. Where weeds, trampling or tracks were observed in intact remnant vegetation, condition was rated as Good or Very Good.

Much of the Survey Area in Excellent condition (16.31%) was in the north of the eastern section of the Survey Area, in the hills and gullies. This vegetation has been largely undisturbed. Although remnants of previous drilling programs were evident.

Table 4.10: Vegetation condition and extent of the Survey Area

Condition	Extent (ha/%)	Comment
Excellent	683.0 / 16.3	Undisturbed vegetation in the north of the eastern section of the Survey Area and some in less disturbed, the west of the Survey Area.
Very Good	630.4 / 15.1	Less disturbed vegetation in the hills the eastern section of the Study Area and some in less disturbed, the west of the western Study Area; main disturbances are low weed invasion, minor trampling and dirt tracks
Good	838.5 / 20.0	Throughout the more disturbed areas of the Survey Area including vegetation surrounding the township, operations and infrastructure; High weed invasion, trampling, tracks and clearing, rubbish, evidence of human disturbance to vegetation strata
Poor	528.9 / 12.6	Vegetation flanking cleared or rehabilitated areas where vegetation strata has been completely disrupted; including vegetation surrounding the township, roads,

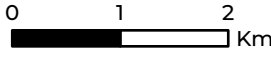
Condition	Extent (ha/%)	Comment
		vegetation between operations and infrastructure areas; High weed invasion, tracks and clearing, rubbish
Degraded	173.5 / 4.1	Mostly areas between roads, clearing, rehab, operations and infrastructure areas where vegetation still exists in very small patches
Completely Degraded (Rehab)	1,332.3 / 31.8	Using the BHP disturbance layer this was recorded of areas that have been previously disturbed, and it was evident from the aerial or ground-truthing that they are now revegetated.
Completely Degraded (Cleared)		Areas associated with roads, tracks, mining or exploration operations and infrastructure.



LEGEND

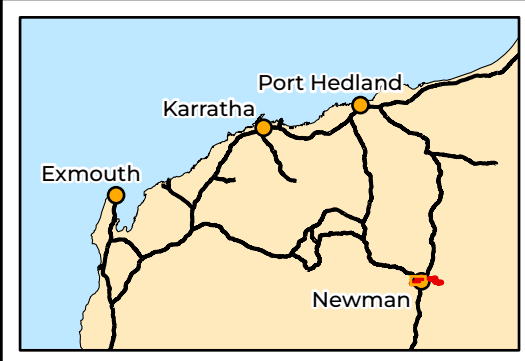
Survey Area	Vegetation Condition	Poor
State Road	Excellent	Degraded
Rail	Very Good	Completely Degraded
	Good	

**Biologic**



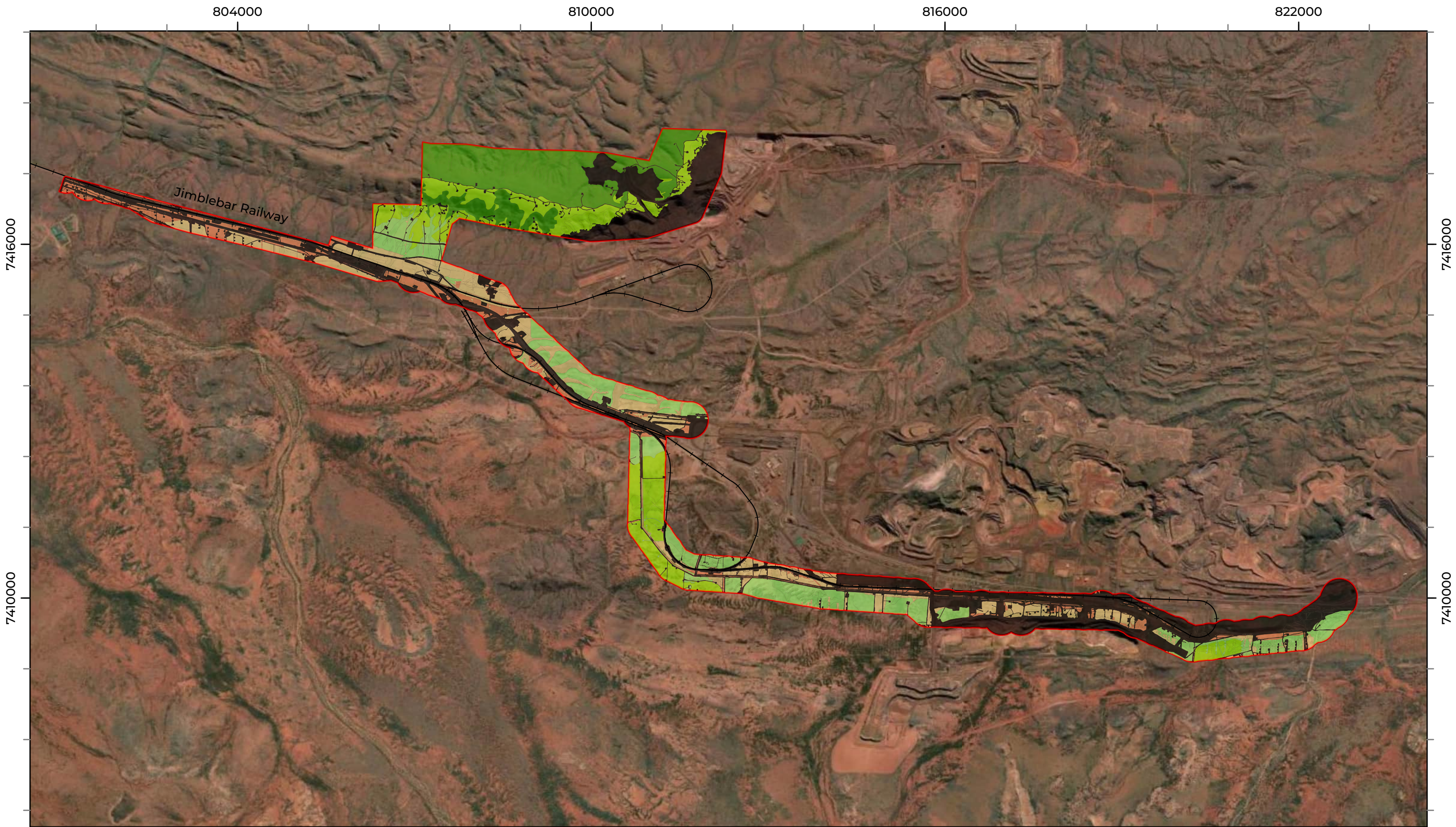
Scale 1:70,000

Coordinate System: GDA 1994 MGA Zone 50
Transverse Mercator Created: 06/03/2025



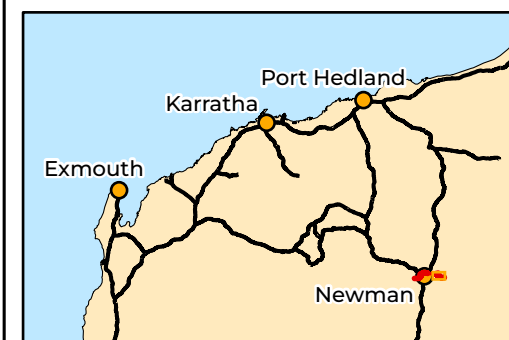
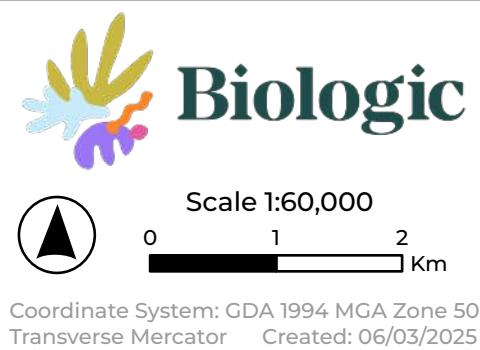
BHP WAIO
Power 2030
Single Season Flora
and Vegetation Survey

Figure 4.6a: Vegetation
condition in the
Survey Area - West



LEGEND

 Survey Area	Vegetation Condition	 Poor
 Rail	 Excellent	 Degraded
	 Very Good	 Completely Degraded
	 Good	



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Single Season Flora
and Vegetation Survey

Figure 4.6b: Vegetation
condition in the
Survey Area - East

5 Constraints and limitations

The EPA (2016b) outlines several potential limitations to flora and vegetation surveys. These aspects are assessed and discussed in Table 5.1.

Table 5.1: Survey limitations and constraints

Limitation	Constraint	Comment
Availability of contextual information at a regional and local scale	No	Sufficient contextual information was available for the Survey Area, including broad information on land systems and vegetation associations. The Survey Area is situated around the Newman townsite where an extensive amount of biological survey work has previously been undertaken. A comprehensive literature review was completed. Numerous flora and vegetation records were available through the seven databases and 20 previous reports reviewed as part of the desktop assessment.
Competency/ experience of the survey team, including experience in the bioregion surveyed	No	The survey was led by Carmel Winton, a Principal Botanist with over ten years' experience. All Senior Botanists involved in the field survey had more than the recommended five years' experience to manage a flora and vegetation field survey or lead field teams in the Pilbara bioregion (EPA, 2016b). The remaining team members had either 5 or more years' experience, or worked closely with a more experienced team member.
Proportion of flora recorded/ collected and any identification issues	No	The survey intensity (single-season detailed) was designed to capture most of the flora within the Survey Area. Several taxa (27 taxa or 6.7 % of the total taxa recorded) collected from the field were difficult to confidently identify to species or infraspecies level; a relatively low number of taxa when compared to total taxa recorded (402).
Survey timing, weather and season	No	The field survey was conducted over one field trip. The detailed survey trip occurred within the optimal survey period for the Eremaean (March – June) (EPA, 2016b). Conditions during the survey were adequate to complete the survey; generally fine and slightly overcast. Weather conditions did not present any survey limitations. The seasonal timing of the survey was appropriate for this level of single-season detailed survey for the Eremaean (March to June (wet season)) (EPA, 2016b). Weather and rainfall in the 6 months prior to survey were comparable to long term averages for the area (see Section 4.1.2.)
Disturbance that may have affected results, e.g., fire, flood	No	Disturbances within the Survey Area were mainly associated with mining and pastoralism, such as tracks, weeds, and cattle grazing. These disturbances are typical for the central Pilbara and did not affect the results.

Limitation	Constraint	Comment
Appropriate area fully surveyed (effort and extent)	No	The western section of the Survey Area was not ground-truthed during the field survey due to access constraints (Figure 4.2). However, this area has been previously surveyed in the last 5 years by Biologic with vegetation data available to inform the mapping. An area at the west of the eastern section of the Survey Area was not accessed for ground-truthing as the vegetation is inadequate for sampling at a detailed level as it is small patches and of low condition rating. Much of the vegetation in this area is in Poor to Degraded condition and occurs as small remnant patches between roads and cleared areas. This does not pose a limitation to the survey. Teams were unable to revisit known the known location of <i>Swainsona thompsoniana</i> (Section 4.2.1.2); however, this did not pose a limitation for the overall survey.
Access restrictions within the Survey Area	No	The Survey Area was accessed via mining, exploration and pastoral tracks which provided access across much of the Survey Area. Walking traverses were limited to a maximum distance of 1 km from the vehicle for safety reasons. As above, the westernmost extent of the western section of the Survey Area was not ground-truthed during the field survey due to access constraints (Figure 4.2). Access to this area was not available at the time of survey; however, has been previously subject to reconnaissance level survey by Biologic within the last 5 years, and as such is not thought to present a major limitation to the survey. Further surveys are scheduled in 2025 to assess this area. All other access was sufficient and did not pose any limitations on the survey.
Problems with data and analysis, including sampling bias	No	No limitations with data collection were encountered during the field survey, and no analysis was completed on the data.

6 Conclusions

A single-season detailed flora and vegetation survey was completed across the Survey Area from 29 April – 5 May 2024, over a total of 36 person days. A total of 35 quadrats, 14 relevés, and one vegetation mapping note were completed, as well as targeted survey for significant and introduced flora species, and opportunistic sampling. Access restrictions prevented ground-truthing to a small area at the westernmost extent of the western section of the Survey Area. This area had all been surveyed in the last 5 years and this potential limitation is not thought to impact the results of this flora and vegetation survey. Key results of the survey are as follows:

- A total of 375 confirmed vascular flora taxa, from 49 families and 144 genera, were recorded during the field survey, comprising 361 native flora taxa and 14 introduced flora taxa.
- Nine significant flora taxa have been recorded in the Survey Area (Confirmed or Previously Recorded):
 - Priority 2: *Goodenia hartiana* (previously recorded); and
 - Priority 3: *Aristida jerichoensis* var. *subspinulifera*, *Aristida lazaridis*, *Eragrostis* sp. Mt Robinson (S. van Leeuwen 4109), *Eremophila naaykensis*, *Ipomoea racemigera*, *Isotropis parviflora*, *Swainsona thompsoniana* (previously recorded) and *Triodia* sp. Mt Ella (M.E. Trudgen 12739).
- Post-survey review of the likelihood of significant flora occurring in the Survey Area assessed seven taxa remaining Possible to occur within the Survey Area, with the remaining taxa assessed as either Confirmed, Previously Confirmed, Unlikely or Highly Unlikely;
- Two taxa recorded in the Survey Area, *Euphorbia* aff. *ferdinandi* and *Hibiscus* aff. *campanulatus* were considered flora of other significance as they represent taxa with anomalous features;
- Five taxa recorded in the Survey Area represent range extensions of up to 95.8 km from the nearest known record and 21 taxa fill a minor gap in distribution (locality holes);
- Fourteen confirmed introduced taxa were recorded within the Survey Area, none of which are listed as WoNS or DPs;
- Twenty-four vegetation types were described and delineated in the Survey Area based on four broad landforms (Drainage Lines, Gorges/Gullies, Hills, Plains);
- None of the vegetation types recorded represented any of the known TECs or PECs listed under the BC Act or EPBC Act;

- Thirteen vegetation types potentially hold 'other' significance for providing habitat for significant flora, aligning with published Ecosystems at Risk, or containing GDV or sheet-flow dependent vegetation;
- Vegetation condition ranged from Excellent to Completely Degraded, with the majority (51.4 %) of vegetation considered to be in Good or higher condition.

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Appendix A: State and commonwealth conservation codes

Environment Protection and Biodiversity Conservation Act 1999

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

Category	Definition
Threatened Ecological Communities (TEC)	
Critically Endangered	An ecological community is eligible to be included in the critically endangered category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
Endangered	An ecological community is eligible to be included in the endangered category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
Vulnerable	An ecological community is eligible to be included in the vulnerable category at a particular time if, at that time: (a) it is not critically endangered nor endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

Biodiversity Conservation Act 2016

Category	Definition
Threatened Flora Species	
Critically Endangered (CR)	Threatened species considered to be “facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines”. Published under schedule 1 of the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for critically endangered flora.
Endangered (EN)	Threatened species considered to be “facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines”. Published under schedule 2 of the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for endangered flora.
Vulnerable (VU)	Threatened species considered to be “facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines”. Published under schedule 3 of the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for vulnerable flora.
Extinct (EX)	Species where “there is no reasonable doubt that the last member of the species has died”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act). Published as presumed extinct under schedule 4 of the <i>Wildlife Conservation (Rare Flora) Notice 2018</i> for extinct flora.
Extinct in the Wild (EW)	Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame

Category	Definition
	appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no threatened flora species listed as extinct in the wild.
Threatened Ecological Communities (TEC)	
Critically Endangered (CR)	An ecological community is eligible for listing in the category of critically endangered ecological community at a particular time if, at that time — (a) it is facing an extremely high risk of becoming eligible for listing as a collapsed ecological community in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines; and (b) listing in that category is otherwise in accordance with the ministerial guidelines.
Endangered (EN)	An ecological community is eligible for listing in the category of endangered ecological community at a particular time if, at that time — (a) it is not a critically endangered ecological community; and (b) it is facing a very high risk of becoming eligible for listing as a collapsed ecological community in the near future, as determined in accordance with criteria set out in the ministerial guidelines; and (c) listing in that category is otherwise in accordance with the ministerial guidelines.
Vulnerable (VU)	An ecological community is eligible for listing in the category of vulnerable ecological community at a particular time if, at that time — (a) it is not a critically endangered ecological community or an endangered ecological community; and (b) it is facing a high risk of becoming eligible for listing as a collapsed ecological community in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines; and (c) listing in that category is otherwise in accordance with the ministerial guidelines.
Collapsed	An ecological community is eligible for listing as a collapsed ecological community at a particular time if, at that time — (a) there is no reasonable doubt that the last occurrence of the ecological community has collapsed; or (b) the ecological community has been so extensively modified throughout its range that no occurrence of it is likely to recover — (i) its species composition or structure; or (ii) its species composition and structure.

Department of Biodiversity, Conservation and Attractions Priority Definitions

Category	Definition
Priority Flora Species	
Priority 1 (P1)	Poorly-known Species Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g., agricultural, or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.
Priority 2 (P2)	Poorly-known Species Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g., national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.
Priority 3 (P3)	Poorly-known Species Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.
Priority 4 (P4)	Rare, Near Threatened and other species in need of monitoring (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Category	Definition
Priority Ecological Communities (PEC)	
Priority 1 (P1)	Poorly-known ecological communities Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g., within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.
Priority 2 (P2)	Poorly-known Ecological Communities Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200ha). At least some occurrences are not believed to be under immediate threat (within approximately 10 years) of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.
Priority 3 (P3)	Poorly-known Ecological Communities (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: (ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat (within approximately 10 years), or; (iii) communities made up of large, and/or widespread occurrences, which may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, inappropriate fire regimes, clearing, hydrological change etc. Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.

Category	Definition
Priority 4 (P4)	Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring. (i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These communities are usually represented on conservation lands. (ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for a higher threat category. (iii) Ecological communities that have been removed from the list of threatened communities during the past five years.
Priority 5 (P5)	Conservation Dependent Ecological Communities Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Furthermore, any species or ecological communities that may be rare but for which there is insufficient information available to allocate a threatened status under the BC Act, can also be listed as Priority species by the WA Department of Biodiversity, Conservation and Attractions (DBCA)

Significant flora may extend beyond the assigned codes and in line with EPA (2016b) may include:

- Being identified as Threatened, Critically Endangered, Endangered, Vulnerable, Extinct or Extinct in the Wild species (State listed BC Act and/or commonwealth listed EPBC Act);
- Being listed as Priority Flora species (DBCA, 2023b);
- Locally endemic or associated with a restricted habitat type (e.g., surface water or groundwater dependent ecosystems);
- New species or anomalous features that indicate a potential new species;
- Range extensions or representative of outer population extent (particularly at the extremes of range, recently discovered range extensions or isolated outliers of the main range);
- Unusual species; restricted subspecies, varieties, naturally occurring hybrids, or complex taxonomic groups; or
- Relictual status, being representative of taxonomic groups that no longer occur widely in the broader landscape.

Significant vegetation may extend beyond the assigned codes and in line with EPA (2016b) may include:

- Being identified as Threatened Ecological Community (TEC), Critically Endangered, Endangered, Vulnerable or Collapsed ecological community (State listed BC Act and/or commonwealth listed EPBC Act);
- Identified as a Priority Ecological Community (PEC) (DBCA, 2023a);
- Restricted or endemic distribution;
- Degree of historical impact from threatening processes (such as mining or agricultural);
- A role as a refuge for significant flora; or
- Providing an important function required to maintain ecological integrity of a significant ecosystem.

Introduced flora

Legal Status Definitions of Listed Plants in Western Australia

Legal status	Definition
Declared Pest, Prohibited – s12	Prohibited organisms are declared pests by virtue of section 22(1) and many only be imported and keep subject to permits
Declared Pest – s22(2)	Declared pests must satisfy any applicable import requirements when imported and may be subject to control keeping requirements
Permitted – s11	Permitted organisms must satisfy applicable import requirements and import permits (where required)
Permitted Requires Permit – r73	Regulation 73 permitted organisms may be subject to restriction under legislation other and the BAM Act (2007)
Unlisted	Unlisted organisms are prohibited in WA
Control Categories	Definition
C1 Exclusion	Organisms should be excluded from parts or all of WA
C2 Eradication	Organisms should be eradicated from all or parts of WA
C3 Management	Organisms should have some form of management applied that will alleviate the harmful impact of the organism, reduce the numbers or distribution of the organism or prevent or contain the spread of the organism
Unassigned	Declared pests that are recognised as having a harmful impact under certain circumstances where their subsequent control requirements are determined by a plan or other legislative arrangements under the Act
Keeping Categories	Definition
Prohibited Keeping	Can only be kept under a permit or public display, education or scientific purposes
Restricted Keeping	Kept under a permit by private individuals due to low risk of becoming a problem for the environment
Exempt Keeping	No permit or conditions are required for keeping. Organism may be subject to restrictions under the Wildlife Conservation Act (1950)

Appendix B: Species list of the desktop assessment

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Acanthaceae	<i>Dicladantha forrestii</i>	•	•								
	<i>Dipteracanthus australasicus</i>	•	•								
	<i>Dipteracanthus australasicus</i> subsp. <i>australasicus</i>	•									
	<i>Rostellularia adscendens</i> var. <i>clementii</i>	•									
	<i>Rostellularia adscendens</i> var. <i>latifolia</i>			•				P3			
Aizoaceae	<i>Trianthema glossostigmum</i>	•	•								
	<i>Trianthema pilosum</i>	•	•								
	<i>Trianthema triquetrum</i>	•	•								
Alismataceae	<i>Sagittaria platyphylla</i>						•				Y
Amaranthaceae	<i>Aerva javanica</i>	•	•								Y
	<i>Alternanthera angustifolia</i>	•	•								
	<i>Alternanthera denticulata</i>	•									
	<i>Alternanthera nana</i>	•	•								
	<i>Alternanthera nodiflora</i>	•	•								
	<i>Alternanthera pungens</i>	•	•								Y
	<i>Amaranthus centralis</i>	•		•	•			P3			
	<i>Amaranthus cuspidifolius</i>	•	•								
	<i>Amaranthus induratus</i>	•									
	<i>Amaranthus mitchellii</i>	•	•								
	<i>Amaranthus undulatus</i>	•	•								
	<i>Gomphrena canescens</i>	•	•								
	<i>Gomphrena cunninghamii</i>	•	•								
	<i>Gomphrena kanisii</i>	•	•								
	<i>Gomphrena lanata</i>	•	•								
	<i>Gomphrena sordida</i>	•	•								
	<i>Ptilotus aervoides</i>	•	•								
	<i>Ptilotus aphyllus</i>	•	•								
	<i>Ptilotus astrolasius</i>	•	•								
	<i>Ptilotus auriculifolius</i>	•	•								
	<i>Ptilotus axillaris</i>	•	•								
	<i>Ptilotus calostachyus</i>	•	•								
	<i>Ptilotus carinatus</i>	•	•								
	<i>Ptilotus clementii</i>	•	•								
	<i>Ptilotus exaltatus</i>	•									
	<i>Ptilotus fusiformis</i>	•	•								
	<i>Ptilotus gaudichaudii</i>	•	•								
	<i>Ptilotus gomphrenoides</i>	•	•								
	<i>Ptilotus helichrysoides</i>	•									
	<i>Ptilotus helipteroides</i>	•	•								
	<i>Ptilotus incanus</i>	•	•								
	<i>Ptilotus nobilis</i>	•	•								
	<i>Ptilotus obovatus</i>	•	•								
	<i>Ptilotus polystachyus</i>	•	•								
	<i>Ptilotus roei</i>	•									
	<i>Ptilotus rotundifolius</i>	•	•								
	<i>Ptilotus schwartzii</i>	•	•								
	<i>Ptilotus xerophilus</i>		•								
Anacardiaceae	<i>Schinus molle</i>		•								Y
Apiaceae	<i>Daucus glochidiatus</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Apocynaceae	<i>Calotropis procera</i>						•				Y
	<i>Cryptostegia madagascariensis</i>						•				Y
	<i>Cynanchum floribundum</i>	•	•								
	<i>Gymnanthera cunninghamii</i>	•	•	•	•			P3			
	<i>Vincetoxicum lineare</i>	•									
Araceae	<i>Pistia stratiotes</i>						•				Y
	<i>Zantedeschia aethiopica</i>						•				Y
Araliaceae	<i>Astrotricha hamptonii</i>	•	•								
	<i>Hydrocotyle ranunculoides</i>						•				Y
	<i>Trachymene bialata</i>	•	•								
	<i>Trachymene glaucifolia</i>		•								
	<i>Trachymene oleracea</i>	•	•								
	<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	•									
	<i>Trachymene pilbarensis</i>	•									
Asparagaceae	<i>Asparagus asparagoides</i>						•				Y
Asteraceae	<i>Actinobole oldfieldianum</i>	•									
	<i>Bidens bipinnata</i>	•	•								Y
	<i>Bidens pilosa</i>	•									Y
	<i>Blumea tenella</i>	•									
	<i>Brachyscome rudallensis</i>	•	•								
	<i>Calocephalus beardii</i>	•	•								
	<i>Calocephalus pilbarensis</i>	•	•								
	<i>Calotis hispidula</i>	•	•								
	<i>Calotis latiuscula</i>	•	•								
	<i>Calotis multicaulis</i>	•	•								
	<i>Calotis plumulifera</i>	•	•								
	<i>Centipeda minima</i>	•	•								
	<i>Centipeda minima</i> subsp. <i>macrocephala</i>	•									
	<i>Centipeda thespidioides</i>	•	•								
	<i>Chondrilla juncea</i>						•				Y
	<i>Chrysocephalum apiculatum</i>	•	•								
	<i>Chrysocephalum apiculatum</i> subsp. <i>pilbarensis</i>	•									
	<i>Chrysocephalum gilesii</i>	•	•								
	<i>Chrysocephalum pterochaetum</i>	•	•								
	<i>Erigeron bonariensis</i>	•									Y
	<i>Erigeron canadensis</i>		•								Y
	<i>Flaveria trinervia</i>	•	•								Y
	<i>Gnephosis arachnoidea</i>	•	•								
	<i>Helichrysum oligochaetum</i>			•	•			P1			
	<i>Iotasperma sessilifolium</i>			•				P3			
	<i>Ixioclamys cuneifolia</i>	•	•								
	<i>Lactuca saligna</i>	•	•								Y
	<i>Leiocarpa semicalva</i>		•								
	<i>Leiocarpa semicalva</i> subsp. <i>semicalva</i>	•									
	<i>Minuria integerrima</i>	•	•								
	<i>Olearia fluvialis</i>	•									
	<i>Olearia stuartii</i>	•	•								
	<i>Onopordum acaulon</i>						•				Y
	<i>Peripleura arida</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Asteraceae cont.	<i>Peripleura virgata</i>	•	•								
	<i>Pluchea dentex</i>	•									
	<i>Pluchea dunlopia</i>	•	•								
	<i>Pluchea ferdinandi-muelleri</i>	•	•								
	<i>Pluchea rubelliflora</i>	•	•								
	<i>Podolepis eremaea</i>	•	•								
	<i>Pseudognaphalium luteoalbum</i>	•	•								
	<i>Pterocaulon serrulatum</i> var. <i>velutinum</i>	•									
	<i>Pterocaulon sphacelatum</i>	•	•								
	<i>Pterocaulon sphaeranthoides</i>	•	•								
	<i>Rhodanthe charsleyae</i>	•	•								
	<i>Rhodanthe floribunda</i>	•	•								
	<i>Rhodanthe humboldtiana</i>	•									
	<i>Rhodanthe margarethae</i>	•	•								
	<i>Rhodanthe polakii</i>	•	•								
	<i>Rhodanthe propinqua</i>	•									
	<i>Rhodanthe sterilescens</i>	•	•								
	<i>Rhodanthe stricta</i>	•	•								
	<i>Roebuckiella cheilocarpa</i>	•	•								
	<i>Roebuckiella similis</i>	•	•								
	<i>Rutidosia helichrysoides</i>	•	•								
	<i>Rutidosia helichrysoides</i> subsp. <i>helichrysoides</i>	•									
	<i>Schoenia cassiniana</i>	•									
	<i>Siemssenianthus capillaris</i>	•	•								
	<i>Silybum marianum</i>						•				Y
	<i>Sonchus oleraceus</i>	•	•								Y
	<i>Streptoglossa bubakii</i>	•									
	<i>Streptoglossa cylindriceps</i>	•	•								
	<i>Streptoglossa decurrens</i>	•	•								
	<i>Streptoglossa liatroides</i>	•	•								
	<i>Streptoglossa macrocephala</i>	•	•								
	<i>Streptoglossa odora</i>	•	•								
	<i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353)		•	•				P3			
	<i>Symphyotrichum squamatum</i>	•	•								Y
	<i>Vittadinia eremaea</i>	•	•								
	<i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684)	•		•	•			P3			
	<i>Xanthium spinosum</i>						•				Y
	<i>Xanthium strumarium</i>						•				Y
Boraginaceae	<i>Echium plantagineum</i>						•				Y
	<i>Euploca cunninghamii</i>	•	•								
	<i>Euploca heterantha</i>	•	•								
	<i>Euploca inexplicita</i>	•	•								
	<i>Euploca ovalifolia</i>		•								
	<i>Euploca pachyphylla</i>	•	•								
	<i>Euploca tanythrix</i>	•	•								
	<i>Euploca tenuifolia</i>	•	•								
	<i>Halgania erecta</i>	•	•								
	<i>Halgania solanacea</i>		•								
	<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 426)	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Boraginaceae cont.	<i>Trichodesma zeylanicum</i>	•	•								
	<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	•									
Brassicaceae	<i>Lepidium catapycnon</i>	•	•	•	•			P4			
	<i>Lepidium echinatum</i>	•	•								
	<i>Lepidium muelleri-ferdinandi</i>	•	•								
	<i>Lepidium oxytrichum</i>	•	•								
	<i>Lepidium pedicellosum</i>	•	•								
	<i>Lepidium phlebopetalum</i>	•	•								
	<i>Lepidium pholidogynum</i>	•	•								
	<i>Lepidium platypetalum</i>	•	•								
	<i>Menkea villosula</i>	•									
	<i>Stenopetalum anfractum</i>	•									
	<i>Stenopetalum decipiens</i>	•	•								
	<i>Stenopetalum nutans</i>	•	•								
	<i>Stenopetalum velutinum</i>	•	•								
Cactaceae	<i>Austrocylindropuntia cylindrica</i>						•				Y
	<i>Austrocylindropuntia subulata</i>						•				Y
	<i>Cylindropuntia fulgida</i>						•				Y
	<i>Cylindropuntia imbricata</i>						•				Y
	<i>Cylindropuntia kleiniae</i>						•				Y
	<i>Cylindropuntia pallida</i>						•				Y
	<i>Cylindropuntia tunicata</i>						•				Y
	<i>Opuntia elata</i>						•				Y
	<i>Opuntia elatior</i>						•				Y
	<i>Opuntia engelmannii</i>						•				Y
	<i>Opuntia ficus-indica</i>						•				Y
	<i>Opuntia microdasys</i>						•				Y
	<i>Opuntia monacantha.</i>						•				Y
	<i>Opuntia polyacantha</i>						•				Y
	<i>Opuntia puberula</i>						•				Y
	<i>Opuntia stricta</i>						•				Y
	<i>Opuntia tomentosa</i>						•				Y
Campanulaceae	<i>Wahlenbergia tumidifructa</i>	•	•								
Capparaceae	<i>Capparis lasiantha</i>	•	•								
	<i>Capparis spinosa</i>	•									
	<i>Capparis umbonata</i>	•	•								
Caryophyllaceae	<i>Polycarpaea corymbosa</i>	•	•								
	<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	•									
	<i>Polycarpaea holtzei</i>	•	•								
	<i>Polycarpaea involucrata</i>	•	•								
	<i>Polycarpaea longiflora</i>	•	•								
Celastraceae	<i>Macgregoria racemigera</i>	•	•								
	<i>Maytenus</i> sp. Mt Windell (S. van Leeuwen 846)	•									
	<i>Stackhousia intermedia</i>	•	•								
	<i>Stackhousia</i> sp. swollen gynophore (W.R. Barker 241)	•									
Characeae	<i>Chara fibrosa</i>		•								
Chenopodiaceae	<i>Atriplex codonocarpa</i>	•	•								
	<i>Atriplex lindleyi</i>		•								
	<i>Atriplex semilunaris</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Chenopodiaceae cont.	<i>Dysphania cristata</i>	•									
	<i>Dysphania kalpari</i>	•	•								
	<i>Dysphania melanocarpa</i>	•	•								
	<i>Dysphania rhadinostachya</i>		•								
	<i>Dysphania rhadinostachya</i> subsp. <i>inflata</i>	•									
	<i>Dysphania rhadinostachya</i> subsp. <i>rhadinostachya</i>	•									
	<i>Enchylaena tomentosa</i>	•									
	<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	•									
	<i>Maireana carnosa</i>	•	•								
	<i>Maireana georgei</i>	•	•								
	<i>Maireana melanocoma</i>	•	•								
	<i>Maireana planifolia</i>	•	•								
	<i>Maireana prosthecochaeta</i>			•	•			P3			
	<i>Maireana pyramidata</i>	•	•								
	<i>Maireana thesioides</i>	•	•								
	<i>Maireana tomentosa</i>	•	•								
	<i>Maireana triptera</i>	•									
	<i>Maireana villosa</i>	•	•								
	<i>Rhagodia eremaea</i>	•	•								
	<i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794)	•		•	•						
	<i>Salsola australis</i>	•	•								
	<i>Sclerolaena convexula</i>	•	•								
	<i>Sclerolaena cornishiana</i>	•	•								
	<i>Sclerolaena costata</i>	•	•								
	<i>Sclerolaena cuneata</i>	•	•								
	<i>Sclerolaena densiflora</i>	•	•								
	<i>Sclerolaena diacantha</i>	•	•								
	<i>Sclerolaena eriacantha</i>	•									
	<i>Sclerolaena lanicuspis</i>	•	•								
	<i>Sclerolaena minuta</i>	•	•								
	<i>Sclerolaena tetragona</i>	•									
	<i>Tecticornia disarticulata</i>	•	•								
Cleomaceae	<i>Areocleome oxalidea</i>	•	•								
	<i>Arivela viscosa</i>	•	•								
Colchicaceae	<i>Wurmbea deserticola</i>	•	•								
Commelinaceae	<i>Commelina ensifolia</i>	•	•								
Convolvulaceae	<i>Bonamia erecta</i>	•	•								
	<i>Bonamia pilbarensis</i>	•	•								
	<i>Bonamia rosea</i>	•	•								
	<i>Convolvulus clementii</i>	•	•								
	<i>Duperreya commixta</i>	•	•								
	<i>Evolvulus alsinoides</i>	•	•								
	<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	•									
	<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	•									
	<i>Ipomoea costata</i>	•									
	<i>Ipomoea lonchophylla</i>	•	•								
	<i>Ipomoea muelleri</i>	•	•								
	<i>Ipomoea plebeia</i>	•	•								
	<i>Ipomoea racemigera</i>	•	•	•	•			P3			

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Convolvulaceae cont.	<i>Operculina aequisejala</i>	•	•								
	<i>Polymeria ambigua</i>		•								
	<i>Polymeria calycina</i>	•	•								
Cucurbitaceae	<i>Austrobryonia pilbarensis</i>	•	•								
	<i>Citrullus amarus</i>	•	•								Y
	<i>Coccinia grandis</i>						•				Y
	<i>Cucumis variabilis</i>	•									
Cyperaceae	<i>Bulbostylis barbata</i>	•	•								
	<i>Bulbostylis turbinata</i>	•	•								
	<i>Cyperus betchei</i>		•								
	<i>Cyperus betchei</i> subsp. <i>commiscens</i>	•									
	<i>Cyperus bifax</i>	•	•								
	<i>Cyperus cunninghamii</i>	•	•								
	<i>Cyperus cunninghamii</i> subsp. <i>cunninghamii</i>	•									
	<i>Cyperus difformis</i>	•									
	<i>Cyperus iria</i>	•	•								
	<i>Cyperus ixiocarpus</i>	•	•								
	<i>Cyperus leptocarpus</i>	•	•								
	<i>Cyperus pulchellus</i>	•	•								
	<i>Cyperus squarrosus</i>	•	•								
	<i>Cyperus tenuiflorus</i>	•									Y
	<i>Cyperus vaginatus</i>	•	•								
	<i>Eleocharis pallens</i>	•	•								
	<i>Fimbristylis dichotoma</i>	•	•								
	<i>Fimbristylis elegans</i>	•	•								
	<i>Fimbristylis eremophila</i>	•	•								
	<i>Fimbristylis microcarya</i>	•	•								
	<i>Fimbristylis simulans</i>	•	•								
	<i>Schoenoplectiella dissachantha</i>	•									
	<i>Schoenoplectiella laevis</i>	•	•								
Ditrichaceae	<i>Eccremidium arcuatum</i>		•								
Droseraceae	<i>Drosera finlaysoniana</i>	•	•								
Elatinaceae	<i>Bergia pedicellaris</i>	•	•								
Euphorbiaceae	<i>Euphorbia australis</i>		•								
	<i>Euphorbia australis</i> var. <i>hispidula</i>	•									
	<i>Euphorbia australis</i> var. <i>subtomentosa</i>	•									
	<i>Euphorbia biconvexa</i>	•	•								
	<i>Euphorbia boophthona</i>	•	•								
	<i>Euphorbia careyi</i>	•	•								
	<i>Euphorbia coghlanii</i>	•	•								
	<i>Euphorbia drummondii</i>		•								Y
	<i>Euphorbia hirta</i>		•								Y
	<i>Euphorbia inappendiculata</i>		•								
	<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>	•		•				P2			
	<i>Euphorbia myrtoides</i>		•								
	<i>Euphorbia porcata</i>	•	•								
	<i>Euphorbia tannensis</i>	•	•								
	<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	•									
	<i>Jatropha gossypifolia</i>						•				Y

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae	<i>Acacia acradenia</i>	•	•								
	<i>Acacia adoxa</i>		•								
	<i>Acacia adoxa</i> var. <i>adoxo</i>	•									
	<i>Acacia adoxa</i> var. <i>adoxo</i> × <i>spondylophylla</i>	•									
	<i>Acacia adsurgens</i>	•	•								
	<i>Acacia ampliceps</i>	•	•								
	<i>Acacia ancistrocarpa</i>	•	•								
	<i>Acacia aneura</i>	•	•								
	<i>Acacia aneura</i> group (hybrid)	•									
	<i>Acacia aptaneura</i>	•	•								
	<i>Acacia arida</i>	•	•								
	<i>Acacia atkinsiana</i>	•	•								
	<i>Acacia ayersiana</i>	•	•								
	<i>Acacia ayersiana</i> hybrid	•									
	<i>Acacia balsamea</i>	•	•								
	<i>Acacia bivenosa</i>	•	•								
	<i>Acacia bivenosa</i> weeping variant	•									
	<i>Acacia bivenosa</i> × <i>sclerosperma</i> subsp. <i>sclerosperma</i>	•									
	<i>Acacia bromilowiana</i>	•		•	•			P4			
	<i>Acacia catenulata</i>		•								
	<i>Acacia catenulata</i> subsp. <i>occidentalis</i>	•									
	<i>Acacia citrinoviridis</i>	•	•								
	<i>Acacia clelandii</i>	•	•								
	<i>Acacia colei</i> var. <i>colei</i>	•									
	<i>Acacia colei</i> var. <i>ileocarpa</i>	•									
	<i>Acacia coriacea</i>	•	•								
	<i>Acacia coriacea</i> subsp. <i>pendens</i>	•									
	<i>Acacia corusca</i>	•	•	•				P1			
	<i>Acacia cowleana</i>		•								
	<i>Acacia cuspidifolia</i>	•	•								
	<i>Acacia dictyophleba</i>	•	•								
	<i>Acacia elachantha</i>	•	•								
	<i>Acacia eriopoda</i>	•	•								
	<i>Acacia fuscanaura</i>	•	•								
	<i>Acacia hamersleyensis</i>	•	•								
	<i>Acacia hilliana</i>	•	•								
	<i>Acacia inaequilatera</i>	•	•								
	<i>Acacia incurvaneura</i>	•	•								
	<i>Acacia kempeana</i>	•	•								
	<i>Acacia ligulata</i>	•	•								
	<i>Acacia macraneura</i>	•	•								
	<i>Acacia macraneura</i> hybrid	•									
	<i>Acacia macraneura</i> × <i>paraneura</i>	•									
	<i>Acacia maitlandii</i>	•	•								
	<i>Acacia marramamba</i>	•	•								
	<i>Acacia melleodora</i>	•	•								
	<i>Acacia monticola</i>	•	•								
	<i>Acacia mulganeura</i>	•	•								
	<i>Acacia orthocarpa</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	<i>Acacia pachyacra</i>	•	•								
	<i>Acacia pachycarpa</i>	•	•								
	<i>Acacia paraneura</i>	•	•								
	<i>Acacia pruinocarpa</i>	•	•								
	<i>Acacia pteraneura</i>	•	•								
	<i>Acacia ptychophylla</i>	•	•								
	<i>Acacia pyrifolia</i>		•								
	<i>Acacia pyrifolia</i> var. <i>morrisonii</i>	•									
	<i>Acacia pyrifolia</i> var. <i>pyrifolia</i>	•									
	<i>Acacia rhodophloia</i>	•	•								
	<i>Acacia rhodophloia</i> × <i>sibirica</i>	•	•								
	<i>Acacia sabulosa</i>		•								
	<i>Acacia sclerosperma</i>	•	•								
	<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>	•									
	<i>Acacia</i> section Juliflorae	•									
	<i>Acacia sericophylla</i>	•	•								
	<i>Acacia sibirica</i>	•	•								
	<i>Acacia</i> sp. Jimblebar (S. van Leeuwen 1342)	•									
	<i>Acacia</i> sp. Juliflorae - Pilbara	•									
	<i>Acacia spondylophylla</i>	•	•								
	<i>Acacia subcontorta</i>	•	•								
	<i>Acacia subtiliformis</i>	•	•	•	•			P3			
	<i>Acacia synchronicia</i>	•	•								
	<i>Acacia tenuissima</i>	•	•								
	<i>Acacia tetragonophylla</i>	•	•								
	<i>Acacia trachycarpa</i>	•	•								
	<i>Acacia trudgeniana</i>	•	•								
	<i>Acacia tumida</i>		•								
	<i>Acacia tumida</i> var. <i>pilbarensis</i>	•									
	<i>Acacia victoriae</i>	•	•								
	<i>Acacia wanyu</i>	•	•								
	<i>Aenictophyton reconditum</i>		•								
	<i>Aenictophyton reconditum</i> subsp. <i>macrophyllum</i>	•									
	<i>Aeschynomene indica</i>	•									
	<i>Alhagi maurorum</i>						•				Y
	<i>Cajanus marmoratus</i>	•									
	<i>Crotalaria cunninghamii</i>		•								
	<i>Crotalaria medicaginea</i>		•								
	<i>Crotalaria medicaginea</i> var. <i>neglecta</i>	•									
	<i>Crotalaria smithiana</i>	•	•	•				P3			
	<i>Cullen cinereum</i>	•	•								
	<i>Cullen graveolens</i>	•	•								
	<i>Cullen lachnostachys</i>	•	•								
	<i>Cullen leucanthum</i>	•	•								
	<i>Cullen leucochaites</i>	•	•								
	<i>Cullen pogonocarpum</i>	•	•								
	<i>Desmanthus virgatus</i>	•	•								Y
	<i>Desmodiopsis campylocaulon</i>	•	•								
	<i>Gastrolobium grandiflorum</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	<i>Glycine canescens</i>	•	•								
	<i>Gompholobium karijini</i> × <i>oreophilum</i>	•									
	<i>Gompholobium oreophilum</i>	•	•								
	<i>Gompholobium polyzygum</i>		•								
	<i>Grona filiformis</i>	•	•								
	<i>Indigofera colutea</i>	•	•								
	<i>Indigofera georgei</i>	•	•								
	<i>Indigofera gilesii</i>	•	•	•	•			P3			
	<i>Indigofera linnaei</i>	•									
	<i>Indigofera monophylla</i>	•	•								
	<i>Indigofera rugosa</i>	•	•								
	<i>Indigofera trita</i>	•									
	<i>Isotropis atropurpurea</i>	•	•								
	<i>Isotropis iophyta</i>	•	•								
	<i>Isotropis parviflora</i>	•	•	•	•			P3			
	<i>Jacksonia aculeata</i>	•	•								
	<i>Kennedia prorepens</i>	•	•								
	<i>Leptosema chambersii</i>	•	•								
	<i>Lotus cruentus</i>	•	•								
	<i>Mirbelia ramulosa</i>	•									
	<i>Mirbelia viminalis</i>	•	•								
	<i>Muelleranthus trifoliolatus</i>	•	•								
	<i>Neltuma glandulosa</i> × <i>velutina</i>						•				Y
	<i>Neptunia dimorphantha</i>	•									
	<i>Parkinsonia aculeata</i>						•				Y
	<i>Petalostylis cassioides</i>	•	•								
	<i>Petalostylis labicheoides</i>	•	•								
	<i>Rhynchosia australis</i>	•	•								
	<i>Rhynchosia minima</i>	•	•								
	<i>Senna alata</i>						•				Y
	<i>Senna artemisioides</i>	•	•								
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>	•									
	<i>Senna artemisioides</i> subsp. <i>helmsii</i>	•									
	<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	•									
	<i>Senna artemisioides</i> subsp. × <i>artemisioides</i>	•									
	<i>Senna artemisioides</i> subsp. × <i>sturtii</i>	•									
	<i>Senna ferraria</i>	•									
	<i>Senna glaucifolia</i>	•									
	<i>Senna glutinosa</i>	•	•								
	<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	•									
	<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	•									
	<i>Senna glutinosa</i> subsp. × <i>luerssenii</i>	•									
	<i>Senna hamersleyensis</i>	•	•								
	<i>Senna notabilis</i>	•	•								
	<i>Senna obtusifolia</i>						•				Y
	<i>Senna occidentalis</i>	•	•								Y
	<i>Senna oligoclada</i>	•									
	<i>Senna pleurocarpa</i>		•								
	<i>Senna</i> sp. Billabong (J.D. Alonzo 721)	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Fabaceae cont.	<i>Senna</i> sp. Meekatharra (E. Bailey 1-26)	•									
	<i>Senna stricta</i>	•	•								
	<i>Senna symonii</i>	•									
	<i>Senna venusta</i>	•	•								
	<i>Sesbania cannabina</i>	•	•								
	<i>Swainsona canescens</i>	•									
	<i>Swainsona decurrens</i>	•	•								
	<i>Swainsona formosa</i>		•								
	<i>Swainsona leeana</i>	•	•								
	<i>Swainsona thompsoniana</i>		•	•				P3			
	<i>Tephrosia densa</i>	•	•								
	<i>Tephrosia insolens</i>	•	•								
	<i>Tephrosia oxalidea</i>	•	•								
	<i>Tephrosia rosea</i>		•								
	<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	•									
	<i>Tephrosia</i> sp. Bungaroo Creek (M.E. Trudgen 1161)	•									
	<i>Tephrosia</i> sp. clay soils (S. van Leeuwen et al. PBS 273)	•	•								
	<i>Tephrosia</i> sp. deserts (J.R. Maconochie 143)	•	•								
	<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	•									
	<i>Tephrosia</i> sp. Northern (K.F. Kenneally 1195)	•									
	<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 356)	•									
	<i>Tephrosia supina</i>	•	•								
	<i>Ulex europaeus</i>						•				Y
	<i>Vigna lanceolata</i>		•								
	<i>Vigna lanceolata</i> var. <i>lanceolata</i>	•									
	<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)	•									
Frankeniaceae	<i>Frankenia setosa</i>	•	•								
Geraniaceae	<i>Erodium cygnorum</i>	•	•								
Goodeniaceae	<i>Brunonia australis</i>	•	•								
	<i>Brunonia australis</i> var. A Kimberley Flora (K.F. Kenneally 5452)	•									
	<i>Brunonia</i> sp. Long hairs (D.E. Symon 244)	•									
	<i>Dampiera candicans</i>	•	•								
	<i>Dampiera cinerea</i>	•	•								
	<i>Dampiera metallorum</i>			•	•			P3			
	<i>Goodenia armitiana</i>	•	•								
	<i>Goodenia azurea</i>	•	•								
	<i>Goodenia azurea</i> subsp. <i>hesperia</i>	•									
	<i>Goodenia berringbinensis</i>	•	•	•				P4			
	<i>Goodenia connata</i>	•									
	<i>Goodenia connata</i>		•								
	<i>Goodenia cusackiana</i>	•									
	<i>Goodenia forrestii</i>	•	•								
	<i>Goodenia glabrata</i>	•	•								
	<i>Goodenia hartiana</i>	•	•		•			P2			
	<i>Goodenia lamprosperma</i>	•	•								
	<i>Goodenia microptera</i>	•	•								
	<i>Goodenia muelleriana</i>	•	•								
	<i>Goodenia nuda</i>	•	•								
	<i>Goodenia pascua</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Goodeniaceae cont.	<i>Goodenia prostrata</i>	•	•								
	<i>Goodenia ramelii</i>	•	•								
	<i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727)	•		•	•			P3			
	<i>Goodenia</i> sp. Sandy Creek (R.D. Royce 1653)	•									
	<i>Goodenia stellata</i>	•									
	<i>Goodenia stobbsiana</i>	•	•								
	<i>Goodenia tenuiloba</i>	•	•								
	<i>Goodenia triodiophila</i>	•	•								
	<i>Goodenia vilmorinae</i>	•	•								
	<i>Scaevola acacioides</i>	•	•								
	<i>Scaevola browniana</i>	•	•								
	<i>Scaevola browniana</i> subsp. <i>browniana</i>	•									
	<i>Scaevola parvifolia</i>	•	•								
	<i>Scaevola parvifolia</i> subsp. <i>pilbarae</i>	•									
	<i>Scaevola</i> sp. Mt Nameless (P.A.S. Wurm 1443)	•									
	<i>Scaevola spinescens</i>	•	•								
Gyrostemonaceae	<i>Codonocarpus cotinifolius</i>	•	•								
Haloragaceae	<i>Gonocarpus ephemerus</i>	•	•								
	<i>Haloragis gossei</i>	•	•								
	<i>Haloragis gossei</i> var. <i>gossei</i>	•									
	<i>Haloragis maierae</i>	•	•								
Hemerocallidaceae	<i>Tricoryne</i> sp. Hamersley Range (S. van Leeuwen 915)	•									
Iridaceae	<i>Moraea flaccida</i>						•				Y
	<i>Moraea miniata</i>						•				Y
Lamiaceae	<i>Clerodendrum floribundum</i>		•								
	<i>Clerodendrum floribundum</i> var. <i>angustifolium</i>	•									
	<i>Dicrastylis cordifolia</i>	•	•								
	<i>Dicrastylis kumarinensis</i>	•	•								
	<i>Newcastelia cephalantha</i>	•	•								
	<i>Newcastelia clavipetala</i>	•									
	<i>Newcastelia hexarrhena</i>	•	•								
	<i>Newcastelia spodioptricha</i>	•									
	<i>Prostanthera albiflora</i>	•									
Lauraceae	<i>Cassytha capillaris</i>	•	•								
Linderniaceae	<i>Striga squamigera</i>		•								
Loganiaceae	<i>Mitrasacme connata</i>	•	•								
Loranthaceae	<i>Amyema bifurcata</i>	•	•								
	<i>Amyema fitzgeraldii</i>	•	•								
	<i>Amyema gibberula</i>		•								
	<i>Amyema gibberula</i> var. <i>gibberula</i>	•									
	<i>Amyema hilliana</i>	•	•								
	<i>Amyema preissii</i>	•	•								
	<i>Lysiana casuarinae</i>	•	•								
	<i>Lysiana murrayi</i>		•								
	<i>Lysiana subfalcata</i>		•								
Lythraceae	<i>Ammannia multiflora</i>	•	•								
	<i>Rotala diandra</i>	•	•								
Malvaceae	<i>Abutilon amplum</i>	•	•								
	<i>Abutilon cryptopetalum</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Malvaceae cont.	<i>Abutilon cunninghamii</i>	•	•								
	<i>Abutilon fraseri</i>	•	•								
	<i>Abutilon lepidum</i>	•	•								
	<i>Abutilon macrum</i>	•	•								
	<i>Abutilon malvifolium</i>	•	•								
	<i>Abutilon otocarpum</i>	•	•								
	<i>Abutilon oxycarpum</i> subsp. <i>Prostrate</i> (A.A. Mitchell PRP 1266)	•									
	<i>Abutilon</i> sp. <i>Dioicum</i> (A.A. Mitchell PRP 1618)	•									
	<i>Abutilon</i> sp. <i>Pilbara</i> (W.R. Barker 225)	•									
	<i>Androcalva loxophylla</i>	•	•								
	<i>Androcalva luteiflora</i>	•	•								
	<i>Corchorus crozophorifolius</i>	•	•								
	<i>Corchorus elachocarpus</i>	•									
	<i>Corchorus laniflorus</i>	•	•								
	<i>Corchorus lasiocarpus</i>	•	•								
	<i>Corchorus lasiocarpus</i> subsp. <i>lasiocarpus</i>	•									
	<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	•									
	<i>Corchorus sidoides</i>	•	•								
	<i>Corchorus sidoides</i> subsp. <i>sidoides</i>	•									
	<i>Corchorus</i> sp. <i>Hamersley Range hilltops</i> (S. van Leeuwen 3826)	•									
	<i>Corchorus tectus</i>	•	•								
	<i>Corchorus tridens</i>	•	•								
	<i>Corchorus walcottii</i>		•								
	<i>Gossypium australe</i>	•									
	<i>Gossypium hirsutum</i>	•									Y
	<i>Gossypium robinsonii</i>	•	•								
	<i>Gossypium sturtianum</i>		•								
	<i>Gossypium sturtianum</i> var. <i>sturtianum</i>	•									
	<i>Hibiscus arenicola</i>	•	•								
	<i>Hibiscus austrinus</i>		•								
	<i>Hibiscus austrinus</i> var. <i>austrinus</i>	•									
	<i>Hibiscus brachysiphonius</i>	•									
	<i>Hibiscus burtonii</i>	•	•								
	<i>Hibiscus campanulatus</i>	•						P3			
	<i>Hibiscus coatesii</i>	•	•								
	<i>Hibiscus haynaldii</i>	•	•								
	<i>Hibiscus</i> sp. <i>Gurinbiddy Range</i> (M.E. Trudgen MET 1578)	•		•				P2			
	<i>Hibiscus sturtii</i>	•	•								
	<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	•									
	<i>Hibiscus sturtii</i> var. <i>grandiflorus</i>	•									
	<i>Hibiscus sturtii</i> var. <i>truncatus</i>	•									
	<i>Hibiscus verdcourtii</i>	•	•								
	<i>Malvastrum americanum</i>	•	•								Y
	<i>Seringia exastia</i>	•	•								
	<i>Seringia nephrosperma</i>	•	•								
	<i>Sida arenicola</i>	•	•								
	<i>Sida arsinata</i>	•	•								
	<i>Sida brownii</i>	•	•								
	<i>Sida calyxhymenia</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Malvaceae cont.	<i>Sida cardiophylla</i>	•	•								
	<i>Sida echinocarpa</i>	•	•								
	<i>Sida ectogama</i>	•	•								
	<i>Sida fibulifera</i>	•	•								
	<i>Sida kingii</i>	•	•								
	<i>Sida platycalyx</i>	•									
	<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	•		•	•			P4			
	<i>Sida</i> sp. dark green fruits (S. van Leeuwen 226)	•									
	<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)	•	•								
	<i>Sida</i> sp. Kathleen Springs (A.C. Beauglehole 26934)	•									
	<i>Sida</i> sp. L (A.M. Ashby 422)	•									
	<i>Sida</i> sp. Pilbara (A.A. Mitchell PRP 1543)	•									
	<i>Sida</i> sp. Rabbit Flat (B.J. Carter 626)	•									
	<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	•									
	<i>Sida</i> sp. spiciform panicles (E. Leyland s.n. 14/8/90)	•	•								
	<i>Sida trichopoda</i>	•	•								
	<i>Triumfetta leptacantha</i>	•	•								
	<i>Triumfetta maconochieana</i>	•	•								
	<i>Waltheria virgata</i>	•	•								
Marsileaceae	<i>Marsilea costulifera</i>		•								
	<i>Marsilea drummondii</i>	•									
	<i>Marsilea exarata</i>	•	•								
	<i>Marsilea hirsuta</i>	•	•								
Molluginaceae	<i>Glinus lotoides</i>		•								
	<i>Hypertelis cerviana</i>	•	•								
	<i>Trigastrotheca molluginea</i>	•	•								
Montiaceae	<i>Calandrinia balonensis</i>	•									
	<i>Calandrinia ptychosperma</i>	•									
	<i>Calandrinia reticulata</i>	•									
	<i>Calandrinia schistorhiza</i>	•									
	<i>Calandrinia stagnensis</i>	•									
	<i>Calandrinia tepperiana</i>	•									
Myrtaceae	<i>Calytrix carinata</i>	•	•								
	<i>Corymbia aspera</i>	•	•								
	<i>Corymbia candida</i>	•	•								
	<i>Corymbia candida</i> subsp. <i>candida</i>	•									
	<i>Corymbia deserticola</i>	•	•								
	<i>Corymbia deserticola</i> subsp. <i>deserticola</i>	•									
	<i>Corymbia ferriticola</i>	•	•								
	<i>Corymbia hamersleyana</i>	•	•								
	<i>Corymbia lenziana</i>		•								
	<i>Corymbia opaca</i>	•	•								
	<i>Eucalyptus camaldulensis</i>		•								Y
	<i>Eucalyptus camaldulensis</i> subsp. <i>obtus</i>	•									Y
	<i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>	•									
	<i>Eucalyptus ewartiana</i>	•	•								
	<i>Eucalyptus gamophylla</i>	•	•								
	<i>Eucalyptus kingsmillii</i>	•	•								
	<i>Eucalyptus leucophloia</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Myrtaceae cont.	<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	•									
	<i>Eucalyptus lucasii</i>	•	•								
	<i>Eucalyptus pilbarensis</i>		•								
	<i>Eucalyptus repullulans</i>	•	•								
	<i>Eucalyptus rowleyi</i>			•				P3			
	<i>Eucalyptus socialis</i>	•	•								
	<i>Eucalyptus socialis</i> subsp. <i>eucentrica</i>	•									
	<i>Eucalyptus trivalva</i>	•	•								
	<i>Eucalyptus victrix</i>	•	•								
	<i>Eucalyptus victrix</i> × <i>xerothermica</i>	•									
	<i>Eucalyptus xerothermica</i>	•	•								
	<i>Lamarchea sulcata</i>	•	•								
	<i>Melaleuca bracteata</i>	•									
	<i>Melaleuca eleuterostachya</i>		•								
	<i>Melaleuca glomerata</i>	•	•								
	<i>Thryptomene wittweri</i>					•		T	VU	VU	
Nyctaginaceae	<i>Boerhavia coccinea</i>	•	•								
	<i>Boerhavia gardneri</i>	•	•								
	<i>Boerhavia repleta</i>	•	•								
Oleaceae	<i>Jasminum didymum</i> subsp. <i>lineare</i>	•									
Ophioglossaceae	<i>Ophioglossum lusitanicum</i>	•									
Orobanchaceae	<i>Buchnera linearis</i>	•									
	<i>Striga squamigera</i>	•									
Oxalidaceae	<i>Oxalis</i> sp. <i>Pilbara</i> (M.E. Trudgen 12725)			•				P3			
Phrymaceae	<i>Mimulus gracilis</i>	•	•								
	<i>Peplidium aithocheilum</i>	•									
	<i>Peplidium maritimum</i>	•	•								
Phyllanthaceae	<i>Cathetus virgatus</i>	•									
	<i>Dendrophyllanthus erwinii</i>	•									
	<i>Nellica maderaspatensis</i>	•									
	<i>Synostemon rhytidospermus</i>	•	•								
Plantaginaceae	<i>Stemodia grossa</i>	•									
	<i>Stemodia</i> sp. <i>Battle Hill</i> (A.L. Payne 1006)			•				P1			
	<i>Stemodia viscosa</i>	•	•								
Plumbaginaceae	<i>Plumbago zeylanica</i>	•	•								
Poaceae	<i>Acrachne racemosa</i>	•									
	<i>Alloteropsis cimicina</i>	•	•								
	<i>Amphipogon caricinus</i>	•	•								
	<i>Amphipogon sericeus</i>	•	•								
	<i>Aristida anthoxanthoides</i>		•								
	<i>Aristida burbridgeae</i>	•	•								
	<i>Aristida contorta</i>	•	•								
	<i>Aristida holathera</i>	•	•								
	<i>Aristida holathera</i> var. <i>holathera</i>	•									
	<i>Aristida inaequiglumis</i>	•	•								
	<i>Aristida jerichoensis</i>		•								
	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i>	•		•	•			P3			
	<i>Aristida latifolia</i>	•	•								
	<i>Aristida lazaridis</i>	•	•	•	•			P3			

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	<i>Aristida obscura</i>	•									
	<i>Astrebla elymoides</i>	•	•								
	<i>Astrebla pectinata</i>	•									
	<i>Austrostipa nitida</i>	•									
	<i>Cenchrus ciliaris</i>	•	•								Y
	<i>Cenchrus setiger</i>	•	•								Y
	<i>Chloris pectinata</i>	•	•								
	<i>Chloris pumilio</i>	•	•								
	<i>Chloris virgata</i>	•	•								Y
	<i>Chrysopogon fallax</i>	•	•								
	<i>Cymbopogon ambiguus</i>	•	•								
	<i>Cymbopogon obtectus</i>	•	•								
	<i>Cynodon convergens</i>	•	•								
	<i>Cynodon dactylon</i>	•	•								Y
	<i>Cynodon prostratus</i>	•	•								
	<i>Dactyloctenium radulans</i>	•	•								
	<i>Dichanthium fecundum</i>	•	•								
	<i>Dichanthium sericeum</i>	•	•								
	<i>Dichanthium sericeum</i> subsp. <i>humilius</i>	•									
	<i>Dichanthium sericeum</i> subsp. <i>sericeum</i>	•									
	<i>Digitaria ammophila</i>	•	•								
	<i>Digitaria brownii</i>	•	•								
	<i>Digitaria ctenantha</i>	•	•								
	<i>Digitaria longiflora</i>	•	•								
	<i>Diplachne fusca</i>		•								Y
	<i>Diplachne fusca</i> subsp. <i>muelleri</i>	•									
	<i>Echinochloa colona</i>	•	•								Y
	<i>Elytrophorus spicatus</i>	•	•								
	<i>Enneapogon avenaceus</i>	•									
	<i>Enneapogon caeruleus</i>	•	•								
	<i>Enneapogon lindleyanus</i>	•	•								
	<i>Enneapogon polyphyllus</i>	•	•								
	<i>Enneapogon robustissimus</i>	•	•								
	<i>Enteropogon ramosus</i>	•	•								
	<i>Eragrostis crateriformis</i>			•							
	<i>Eragrostis cumingii</i>	•	•								
	<i>Eragrostis dielsii</i>	•	•								
	<i>Eragrostis elongata</i>	•	•								
	<i>Eragrostis eriopoda</i>	•	•								
	<i>Eragrostis lanipes</i>	•	•								
	<i>Eragrostis leptocarpa</i>	•	•								
	<i>Eragrostis olida</i>	•	•								
	<i>Eragrostis pergracilis</i>	•									
	<i>Eragrostis setifolia</i>	•	•								
	<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109)			•				P3			
	<i>Eragrostis speciosa</i>	•	•								
	<i>Eragrostis tenella</i>	•									Y
	<i>Eragrostis tenellula</i>	•	•								
	<i>Eragrostis tenuifolia</i>		•								Y

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	<i>Eragrostis xerophila</i>	•	•								
	<i>Eriachne aristidea</i>	•	•								
	<i>Eriachne benthamii</i>	•									
	<i>Eriachne flaccida</i>	•									
	<i>Eriachne lanata</i>	•	•								
	<i>Eriachne mucronata</i>	•	•								
	<i>Eriachne obtusa</i>	•	•								
	<i>Eriachne ovata</i>	•									
	<i>Eriachne pulchella</i>	•	•								
	<i>Eriachne pulchella</i> subsp. <i>dominii</i>	•									
	<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	•									
	<i>Eriachne tenuiculmis</i>	•	•								
	<i>Eriochloa pseudoacrotricha</i>	•	•								
	<i>Eulalia aurea</i>	•	•								
	<i>Heteropogon contortus</i>		•								
	<i>Iseilema dolichotrichum</i>	•	•								
	<i>Iseilema eremaeum</i>	•	•								
	<i>Iseilema membranaceum</i>	•	•								
	<i>Iseilema vaginiflorum</i>	•	•								
	<i>Leptochloa digitata</i>	•	•								
	<i>Monachather paradoxus</i>	•	•								
	<i>Neurachne muelleri</i>	•	•								
	<i>Panicum australiense</i>	•									
	<i>Panicum australiense</i> var. <i>australiense</i>	•	•								
	<i>Panicum decompositum</i>	•	•								
	<i>Panicum effusum</i>	•	•								
	<i>Paspalidium clementii</i>	•	•								
	<i>Paspalidium constrictum</i>	•	•								
	<i>Paspalidium rarum</i>	•	•								
	<i>Perotis rara</i>	•	•								
	<i>Schizachyrium fragile</i>	•	•								
	<i>Setaria dielsii</i>	•	•								
	<i>Setaria surgens</i>	•	•								
	<i>Setaria verticillata</i>	•	•								Y
	<i>Sorghum plumosum</i>	•									
	<i>Sporobolus actinocladius</i>	•	•								
	<i>Sporobolus australasicus</i>	•	•								
	<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	•		•				P3			
	<i>Themeda</i> sp. Mt Barricade (M.E. Trudgen 2471)	•									
	<i>Themeda triandra</i>	•	•								
	<i>Thyridolepis mitchelliana</i>	•									
	<i>Thyridolepis xerophila</i>	•	•								
	<i>Tragus australianus</i>	•	•								
	<i>Triodia angusta</i>	•	•								
	<i>Triodia basedowii</i>	•	•								
	<i>Triodia bitextura</i>		•								
	<i>Triodia brizoides</i>	•	•								
	<i>Triodia longiceps</i>	•	•								
	<i>Triodia melvillei</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Poaceae cont.	<i>Triodia pungens</i>	•	•								
	<i>Triodia schinzii</i>	•	•								
	<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739)	•		•				P3			
	<i>Triodia vanleeuwenii</i>	•	•								
	<i>Triodia wiseana</i>	•	•								
	<i>Tripogonella loliiformis</i>	•									
	<i>Triraphis mollis</i>	•									
	<i>Urochloa piligera</i>	•	•								
	<i>Urochloa subquadripara</i>		•								
	<i>Xerochloa imberbis</i>	•									
Polygalaceae	<i>Polygala glaucifolia</i>	•	•								
	<i>Polygala isingii</i>	•	•								
Polygonaceae	<i>Rumex vesicarius</i>	•	•								Y
Portulacaceae	<i>Calandrinia ptychosperma</i>		•								
	<i>Calandrinia pumila</i>		•								
	<i>Calandrinia quadrivalvis</i>		•								
	<i>Calandrinia reticulata</i>		•								
	<i>Calandrinia schistorhiza</i>		•								
	<i>Portulaca cyclophylla</i>	•	•								
	<i>Portulaca decipiens</i>	•	•								
	<i>Portulaca filifolia</i>	•	•								
	<i>Portulaca intraterranea</i>	•	•								
	<i>Portulaca oleracea</i>	•	•								
Proteaceae	<i>Portulaca pilosa</i>	•									Y
	<i>Grevillea berryana</i>		•								
	<i>Grevillea eriostachya</i>		•								
	<i>Grevillea juncifolia</i>		•								
	<i>Grevillea juncifolia</i> subsp. <i>juncifolia</i>	•									
	<i>Grevillea pyramidalis</i>	•	•								
	<i>Grevillea saxicola</i>			•				P3			
	<i>Grevillea stenobotrya</i>	•									
	<i>Grevillea striata</i>	•	•								
	<i>Grevillea wickhamii</i>		•								
	<i>Grevillea wickhamii</i> subsp. <i>aprica</i>	•									
	<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	•									
	<i>Hakea chordophylla</i>	•	•								
	<i>Hakea lorea</i>	•	•								
	<i>Hakea lorea</i> subsp. <i>lorea</i>	•									
	<i>Hakea preissii</i>	•	•								
Pteridaceae	<i>Cheilanthes austrotenuifolia</i>	•	•								
	<i>Cheilanthes brownii</i>	•	•								
	<i>Cheilanthes lasiophylla</i>	•	•								
	<i>Cheilanthes sieberi</i>	•	•								
	<i>Cheilanthes sieberi</i> subsp. <i>pseudovellea</i>	•									
	<i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>	•									
Rhamnaceae	<i>Cryptandra monticola</i>	•	•								
	<i>Ventilago viminalis</i>	•	•								
	<i>Ziziphus mauritiana</i>						•				Y
Ricciaceae	<i>Riccia crinita</i>	•	•								

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Rosaceae	<i>Rubus anglocandicans</i>						•				Y
	<i>Rubus laudatus</i>						•				Y
	<i>Rubus rugosus</i>						•				Y
	<i>Rubus ulmifolius</i>						•				Y
Rubiaceae	<i>Dolichocarpa crouchiana</i>	•	•								
	<i>Paranotis</i> sp. Pilbara (H. Ajduk HAOP04a)			•				P1			
	<i>Psydrax latifolia</i>	•	•								
	<i>Psydrax suaveolens</i>	•	•								
	<i>Scleromitron galioides</i>	•	•								
	<i>Spermacoce brachystema</i>	•									
	<i>Synaptantha tillaeacea</i>	•									
Ruppiaceae	<i>Ruppia polycarpa</i>	•	•								
Santalaceae	<i>Anthobolus leptomerioides</i>	•	•								
	<i>Santalum lanceolatum</i>	•	•								
	<i>Santalum spicatum</i>	•	•								
Sapindaceae	<i>Diplopeltis stuartii</i>	•	•								
	<i>Diplopeltis stuartii</i> var. <i>stuartii</i>	•									
	<i>Dodonaea coriacea</i>	•	•								
	<i>Dodonaea lanceolata</i>		•								
	<i>Dodonaea lanceolata</i> var. <i>lanceolata</i>	•									
	<i>Dodonaea pachyneura</i>	•	•								
	<i>Dodonaea petiolaris</i>	•									
	<i>Dodonaea viscosa</i>	•	•								
Scrophulariaceae	<i>Eremophila canaliculata</i>	•	•								
	<i>Eremophila capricornica</i>	•	•	•	•			P1			
	<i>Eremophila clarkei</i>	•	•								
	<i>Eremophila compacta</i>	•	•								
	<i>Eremophila cuneifolia</i>	•	•								
	<i>Eremophila exilifolia</i>	•	•								
	<i>Eremophila forrestii</i>	•	•								
	<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	•									
	<i>Eremophila fraseri</i>	•	•								
	<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	•									
	<i>Eremophila galeata</i>	•									
	<i>Eremophila jucunda</i>		•								
	<i>Eremophila jucunda</i> subsp. <i>jucunda</i>	•									
	<i>Eremophila jucunda</i> subsp. <i>pulcherrima</i>	•									
	<i>Eremophila lachnocalyx</i>	•	•								
	<i>Eremophila lanceolata</i>	•	•								
	<i>Eremophila latrobei</i>	•	•								
	<i>Eremophila latrobei</i> subsp. <i>filiformis</i>	•									
	<i>Eremophila latrobei</i> subsp. <i>glabra</i>	•									
	<i>Eremophila latrobei</i> subsp. <i>latrobei</i>	•									
	<i>Eremophila longifolia</i>	•	•								
	<i>Eremophila maculata</i>		•								
	<i>Eremophila maculata</i> subsp. <i>brevifolia</i>	•									
	<i>Eremophila maculata</i> subsp. <i>maculata</i>	•									
	<i>Eremophila magnifica</i>		•								
	<i>Eremophila magnifica</i> subsp. <i>magnifica</i>	•		•				P4			

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Scrophulariaceae cont.	<i>Eremophila magnifica</i> subsp. <i>velutina</i>	•		•				P3			
	<i>Eremophila margarethae</i>	•	•								
	<i>Eremophila naaykensis</i>			•				P3			
	<i>Eremophila oppositifolia</i>		•								
	<i>Eremophila oppositifolia</i> subsp. <i>angustifolia</i>	•									
	<i>Eremophila phyllopoda</i>		•								
	<i>Eremophila pilosa</i>			•	•			P1			
	<i>Eremophila platycalyx</i>		•								
	<i>Eremophila platycalyx</i> subsp. Neds Creek (N.H. Speck 1228)	•									
	<i>Eremophila rhegos</i>			•				P1			
	<i>Eremophila rigida</i>	•	•	•	•			P3			
	<i>Eremophila</i> sp. West Angelas (S. van Leeuwen 4068)	•		•				P3			
	<i>Eremophila spongiocarpa</i>			•				P3			
	<i>Eremophila tietkensis</i>		•								
	<i>Eremophila youngii</i>		•								
	<i>Eremophila youngii</i> subsp. <i>lepidota</i>	•		•				P4			
	<i>Myoporum montanum</i>	•	•								
Solanaceae	<i>Nicotiana benthamiana</i>	•	•								
	<i>Nicotiana obliqua</i>	•									
	<i>Nicotiana occidentalis</i>	•	•								
	<i>Nicotiana rosulata</i>	•									
	<i>Nicotiana simulans</i>		•								
	<i>Solanum austropiceum</i>	•	•								
	<i>Solanum centrale</i>	•	•								
	<i>Solanum cleistogamum</i>	•	•								
	<i>Solanum diversiflorum</i>		•								
	<i>Solanum elaeagnifolium</i>						•				Y
	<i>Solanum elatius</i>	•	•								
	<i>Solanum horridum</i>	•									
	<i>Solanum lachnophyllum</i>	•									
	<i>Solanum lasiophyllum</i>	•	•								
	<i>Solanum linnaeanum</i>						•				Y
	<i>Solanum morrisonii</i>	•	•								
	<i>Solanum nigrum</i>	•									Y
	<i>Solanum piceum</i>	•	•								
	<i>Solanum sturtianum</i>		•								
Stylidiaceae	<i>Stylidium desertorum</i>		•								
	<i>Stylidium weeliwollii</i>			•				P3			
Tamaricaceae	<i>Tamarix aphylla</i>						•				Y
Thymelaeaceae	<i>Pimelea forrestiana</i>	•	•								
Typhaceae	<i>Typha domingensis</i>	•	•								
Verbenaceae	<i>Lantana camara</i>						•				Y
Violaceae	<i>Afrohybanthus aurantiacus</i>	•	•								
Zygophyllaceae	<i>Roepera eichleri</i>		•								
	<i>Roepera iodocarpa</i>	•									
	<i>Roepera similis</i>		•								
	<i>Tribulopsis angustifolia</i>		•								
	<i>Tribulus astrocarpus</i>	•	•								
	<i>Tribulus eichlerianus</i>	•									

Family	Taxon	Source						Conservation Status			Introduced
		NM	ALA	WAH	TPFL	EPBC	WAOL	DBCA	BC Act	EPBC Act	
Zygophyllaceae cont.	<i>Tribulus hirsutus</i>	•	•								
	<i>Tribulus macrocarpus</i>	•	•								
	<i>Tribulus suberosus</i>	•	•								
	<i>Tribulus terrestris</i>	•	•								Y

Appendix C: Introduced flora of the desktop assessment

Family	Taxon	Source			WoNS	DP	DBCA Weed Prioritisation	
		ALA	NM	WAOL			Impact	Invasiveness
Alismataceae	<i>Sagittaria platyphylla</i>			•	Yes	Yes	Not Assessed	Not Assessed
Amaranthaceae	<i>Aerva javanica</i>	•	•		No	No	High	Rapid
	<i>Alternanthera pungens</i>	•	•		No	No	Low	Slow
Anacardiaceae	<i>Schinus molle</i>	•			No	No	Not Assessed	Not Assessed
Apocynaceae	<i>Calotropis procera</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Cryptostegia madagascariensis</i>			•	No	Yes	Not Assessed	Not Assessed
Araceae	<i>Pistia stratiotes</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Zantedeschia aethiopica</i>			•	No	Yes	Not Assessed	Not Assessed
Araliaceae	<i>Hydrocotyle ranunculoides</i>			•	No	Yes	Not Assessed	Not Assessed
Asparagaceae	<i>Asparagus asparagoides</i>			•	Yes	Yes	Not Assessed	Not Assessed
Asteraceae	<i>Bidens bipinnata</i>	•	•		No	No	Unknown	Rapid
	<i>Bidens pilosa</i>		•		No	No	Unknown	Rapid
	<i>Chondrilla juncea</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Erigeron bonariensis</i>		•		No	No	Not Assessed	Not Assessed
	<i>Erigeron canadensis</i>	•			No	No	Not Assessed	Not Assessed
	<i>Flaveria trinervia</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Lactuca saligna</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Onopordum acaulon</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Silybum marianum</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Sonchus oleraceus</i>	•	•		No	No	Low	Rapid
	<i>Symphyotrichum squamatum</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Xanthium spinosum</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Xanthium strumarium</i>			•	No	Yes	Not Assessed	Not Assessed
Boraginaceae	<i>Echium plantagineum</i>			•	No	Yes	Not Assessed	Not Assessed
Cactaceae	<i>Austrocylindropuntia cylindrica</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Austrocylindropuntia subulata</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Cylindropuntia fulgida</i>			•	Yes	Yes	High	Slow
	<i>Cylindropuntia imbricata</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Cylindropuntia kleiniae</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Cylindropuntia pallida</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Cylindropuntia tunicata</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia elata</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia elatior</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia engelmannii</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia ficus-indica</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia microdasys</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia monacantha</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia polyacantha</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia puberula</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Opuntia stricta</i>			•	Yes	Yes	High	Rapid
	<i>Opuntia tomentosa</i>			•	Yes	Yes	Not Assessed	Not Assessed
Cucurbitaceae	<i>Citrullus amarus</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Coccinia grandis</i>			•	No	Yes	Not Assessed	Not Assessed
Cyperaceae	<i>Cyperus tenuiflorus</i>		•		No	No	Not Assessed	Not Assessed
Euphorbiaceae	<i>Euphorbia drummondii</i>	•			No	No	Not Assessed	Not Assessed
	<i>Euphorbia hirta</i>	•			No	No	Low	Slow

Family	Taxon	Source			WoNS	DP	DBCA Weed Prioritisation	
		ALA	NM	WAOL			Impact	Invasiveness
Euphorbiaceae cont.	<i>Jatropha gossypifolia</i>			•	Yes	Yes	Not Assessed	Not Assessed
Fabaceae	<i>Desmanthus virgatus</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Senna occidentalis</i>	•	•		No	No	Not Assessed	Not Assessed
	<i>Alhagi maurorum</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Neltuma glandulosa</i> × <i>velutina</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Parkinsonia aculeata</i>			•	Yes	Yes	High	Rapid
	<i>Senna alata</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Senna obtusifolia</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Ulex europaeus</i>			•	Yes	Yes	Not Assessed	Not Assessed
Iridaceae	<i>Moraea flaccida</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Moraea miniata</i>			•	No	Yes	Not Assessed	Not Assessed
Malvaceae	<i>Gossypium hirsutum</i>		•		No	No	Not Assessed	Not Assessed
	<i>Malvastrum americanum</i>	•	•		No	No	High	Rapid
Myrtaceae	<i>Eucalyptus camaldulensis</i>	•			No	No	Low	Slow
	<i>Eucalyptus camaldulensis</i> subsp. <i>obtusa</i>		•		No	No	Not Assessed	Not Assessed
Poaceae	<i>Cenchrus ciliaris</i>	•	•		No	No	High	Rapid
	<i>Cenchrus setiger</i>	•	•		No	No	High	Rapid
	<i>Chloris virgata</i>	•	•		No	No	High	Rapid
	<i>Cynodon dactylon</i>	•	•		No	No	High	Rapid
	<i>Diplachne fusca</i>	•			No	No	Not Assessed	Not Assessed
	<i>Echinochloa colona</i>	•	•		No	No	High	Rapid
	<i>Eragrostis tenella</i>		•		No	No	Not Assessed	Not Assessed
	<i>Eragrostis tenuifolia</i>	•			No	No	Not Assessed	Not Assessed
	<i>Setaria verticillata</i>	•	•		No	No	High	Rapid
Polygonaceae	<i>Rumex vesicarius</i>	•	•		No	No	Not Assessed	Not Assessed
Portulacaceae	<i>Portulaca pilosa</i>		•		No	No	Not Assessed	Not Assessed
Rhamnaceae	<i>Ziziphus mauritiana</i>			•	No	Yes	Not Assessed	Not Assessed
Rosaceae	<i>Rubus anglocandicans</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Rubus laudatus</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Rubus rugosus</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Rubus ulmifolius</i>			•	Yes	Yes	Not Assessed	Not Assessed
Solanaceae	<i>Solanum elaeagnifolium</i>			•	Yes	Yes	Not Assessed	Not Assessed
	<i>Solanum linnaeanum</i>			•	No	Yes	Not Assessed	Not Assessed
	<i>Solanum nigrum</i>		•		No	No	Low	Rapid
Tamaricaceae	<i>Tamarix aphylla</i>			•	Yes	Yes	Not Assessed	Not Assessed
Verbenaceae	<i>Lantana camara</i>			•	Yes	Yes	Not Assessed	Not Assessed
Zygophyllaceae	<i>Tribulus terrestris</i>	•	•		No	No	Unknown	Medium

Appendix D: Key findings of the desktop assessment

		Caramulla Creek	East Jimblebar and Caramulla	Shearers East	Coombanbunna Well	Jumbuck
Survey Details	Reference	Astron (2019)	Biologic (2019a)	Biologic (2019b)	Biologic (2020a)	Biologic (2020b)
	Type	Reconnaissance	Detailed	Reconnaissance	Detailed	Reconnaissance
	Client	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd
	Location	Caramulla Creek, 65 km NE of Newman	48 km E of Newman	Shearers East, tenement E52/3456-1 47 km E of Newman	Tenements E52/3361 and E52/3360, 3 km S Mt Whaleback Mine, & 7 km SW of Newman	Tenement E52/3628, 4 km S of Jimblebar mine site and 28 km ESE of Newman
	Size (ha)	16, 814	10, 318	924	1,745	3, 159
	Timing	October 2018	April 2019	October 2018	March 2019	October 2018
Methods	Desktop Assessment (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Quadrat #	-	63	-	44	-
	Relevé #	63	14	50	6	83
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Other Methods	38 Mapping Notes	119 sites historical surveys	Opportunistic sampling	-	-
Results	Taxa	196	221	112	185	124
	Families	40	37	25	34	25
	Genera	106	95	51	91	48
	Vegetation Types	27	13	17	9	4
	Vegetation Condition	Poor to Excellent	Degraded to Excellent	Degraded to Very Good	Completely Degraded to Excellent	Degraded to Very Good
	Weeds #	7	6	2	9	2
Significant Findings	Threatened/ Priority Flora	Two Priority Flora Recorded • <i>Crotalaria smithiana</i> (P3) • <i>Triodia ?birriliburu</i> (P3)	Two Priority Flora Recorded • <i>Eremophila capricornica</i> (P1) • <i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794) (P3)² • <i>Goodenia nuda</i> (P4)¹	None recorded	None Recorded	None Recorded
	Threatened/ Priority Ecological Communities	None Recorded	None recorded	None recorded	None Recorded	None Recorded
	WoNS and DPP Weeds	None Recorded	None recorded	None recorded	None Recorded	None Recorded
	Range Extensions	None Recorded	None recorded	None recorded	None Recorded	None Recorded
	Other significant findings	-	Four vegetation associations are indicated to potentially be Groundwater Dependent Ecosystems	Jimblebar Creek is potentially a GDE due to presence of the facultative phreatophyte <i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i> .	-	Shovelanna Creek and the unnamed creek are considered Groundwater Dependent Ecosystem (GDE) due to the presence of the facultative phreatophyte <i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>
Other	Limitations of Survey	Dry conditions may have limited presence of annual and ephemeral taxa	Dry conditions may have limited presence of annual and ephemeral taxa. Perennial species were generally lacking flowering/ fruiting material	Seasonal conditions prior to the survey were considered below optimal.	Dry conditions may have limited presence of annual and ephemeral taxa. Reduced flowering/ fruiting from perennial taxa	Dry conditions may have limited presence of annual and ephemeral taxa
	Proximity	26 km E	4.2 km E	4.5 km E	Partially overlaps western Survey Area	2.1 km S

¹ *Goodenia nuda* (P4) is no longer considered a Priority taxon.

² *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) is no longer considered a Priority taxon.

		Western Ridge	Western Creek and an Unnamed Creek	Western Ridge Pipeline	Great Northern Highway	Jimblebar Wye Rail Junction
Survey Details	Reference	Biologic (2021)	Biologic (2022a)	Biologic (2022c)	Eco Logical (2012)	Ecologia (2005)
	Type	Detailed	Detailed	Reconnaissance	Reconnaissance	Vegetation Assessment
	Client	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	Mine and Ports Development Joint Venture
	Location	Western Ridge Exploration Tenement, 8 km SW of Newman	Western Creek and an Unnamed Creek, 27 km SW to 7 km SE of Newman	Western Ridge, 23 km SW to 10 km E of Newman	Three sites along the Great Northern Highway: Site 1 - ~3.8 km SE of Newman Site 2 - ~9 km NW of Newman Site 3 - ~98 km WNW Of Newman	Jimblebar Wye Junction
	Size (ha)	4,765	2,392.5	2,169	Not provided	3.24 to be cleared (0.68 Community Type 1, 0.94 Community Type 2 and 1.62 Riparian Vegetation)
	Timing	April 2020	March, October and November 2021 and March 2022	March 2021 and 2022	August 2011	July 2005
Methods	Desktop Assessment (Yes/No)	Yes	Yes	Yes	Yes	-
	Quadrat #	80	57	-	8	-
	Relevé #	1	3	148 (+21 from Paddy's Bore Survey Area)	-	-
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Other Methods	Opportunistic sampling	47 vegetation mapping notes & opportunistic sampling	46 vegetation mapping notes & opportunistic sampling	Opportunistic sampling	-
Results	Taxa	379	291	279	52	-
	Families	49	42	38	14	-
	Genera	147	141	115	26	-
	Vegetation Types	21	9	29	7	3
	Vegetation Condition	Poor to Excellent	Degraded to Very Good	Completely Degraded to Excellent	Degraded to Excellent	-
	Weeds #	11	21	11	1	1
Significant Findings	Threatened/ Priority Flora	Five Priority Flora Recorded: <i>Isotropis parviflora</i> (P2)⁵ <i>Eremophila</i> sp. Hamersley Range (K. Walker KW 136) (P3)² <i>Gymnanthera cunninghamii</i> (P3) <i>Indigofera gilesii</i> (P3) <i>Goodenia nuda</i> (P4)¹	Four Priority Flora Recorded: <i>Aristida lazaridis</i> (P2)⁵ <i>Ipomoea racemigera</i> (P2)⁵ <i>Gymnanthera cunninghamii</i> (P3) <i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727) (P3)	Two Priority Flora Recorded: <i>Ipomoea racemigera</i> (P2)⁵ <i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794) (P3)⁴	None recorded	Two Priority Flora Recorded <i>Gymnanthera cunninghamii</i> (P3) <i>Eremophila</i> sp. Ophthalmia Range (P1)³
	Threatened/ Priority Ecological Communities	None recorded	None recorded	None recorded	None recorded	None recorded
	WoNS and DPP Weeds	None recorded	None recorded	None recorded	None recorded	None Recorded
	Range Extensions	None recorded	Five range extensions and five locality holes	Seven range extensions and two locality holes	None recorded	None Recorded
	Other significant findings	Some evidence of phreatophytic vegetation. Several mesophytic/ hydrophytic flora species were observed.	Four vegetation types considered significant for other reasons, including those considered to be 'ecosystems at risk' for the Hamersley subregion. Two vegetation types considered to be Groundwater Dependent Vegetation.	Five vegetation types considered significant for other reasons, including those considered to be 'ecosystems at risk' for the Hamersley subregion. Two vegetation types considered to be groundwater dependent vegetation. One vegetation type considered to be a sheet-flow dependent ecosystem.	-	-
Other	Limitations of Survey	No substantial limitations	No substantial limitations	No substantial limitations	No substantial limitations	No substantial limitations
	Proximity	Partially overlaps western section of the Survey Area	7.5 km E	Partially overlaps western section of the Survey Area	4.1 km NW at closest point (Site 2)	1.5 km NE

¹ *Goodenia nuda* (P4) is no longer considered a Priority taxon.

² *Eremophila* sp. Hamersley Range (K. Walker KW 136) (P3) is currently known as *Eremophila naaykensis* (P3).

³ *Eremophila* sp. Ophthalmia Range (P1) is currently known as *Eremophila margarethae* and is no longer considered a Priority taxon.

⁴ *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) is no longer considered a Priority taxon.

⁵ Species is now Priority 3.

		Jimblebar Wye Repeater 9 Access Road	Southern Borefield (L47/642 and L47/735)	Orebody 31	Dynasty and West Jimblebar	Jimblebar Creek Baseline
Survey Details	Reference	ENV (2008c)	(Maia, 2018)	Onshore (2014a)	Onshore (2015a)	Onshore (2015b)
	Type	Detailed	Detailed	Targeted	Detailed	Detailed
	Client	Calibre Engenium Joint Venture Pty Ltd	Roy Hill	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd
	Location	Repeater 9 Access Road (3 km by 40 km corridor at Jimblebar-Wye), 14 km NE of Newman	Roy Hill's Southern Borefield (RHSB) and RHSB Extension and Marillana stations, 37 km NE of Newman	SE Pilbara Orebody 31 Project Area (OB31), direct E Orebody 17/18 (OB17/18), 40 km E of Newman	Dynasty and West Jimblebar tenements, ~25 km E of Newman	6 m N of Jimblebar Iron Ore Mine, E of OB31. Along 20 km length of creek line, 40 km E of Newman
	Size (ha)	12	L47/642 Tenement 75,902 L47/735 Tenement- 48, 267	-	3,385	-
	Timing	June 2008	Jul. – Aug. 2009 (GGE) October 2017 and April 2018	April 2014	February and March 2015	September 2014
Methods	Desktop Assessment (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Quadrat #	6	49	-	29	13
	Relevé #	1	1	-	142	81
	Targeted Searching (Yes/No)		Yes	Yes	Yes	Yes
	Other Methods		Traverses (174 km)	Transects (NS to EW 0.5 – 1 km)	Opportunistic sampling	-
Results	Taxa	163	253	-	263	167
	Families	39	34	-	36	39
	Genera	95	106	-	106	97
	Vegetation Types	3	9	-	26	7
	Vegetation Condition	Completely Degraded to Very Good	Degraded to Excellent	-		Good to Excellent
	Weeds #	14	9	-	4	3
Significant Findings	Threatened/ Priority Flora	Two Priority Flora Recorded <i>Eremophila</i> sp. Ophthalmia Range (P1)³ <i>Rostellularia adscendens</i> subsp. <i>adscendens</i> var. <i>latifolia</i>(P3)⁴	One Priority Flora Recorded <i>Goodenia nuda</i> (P4)¹	Three Priority Flora Recorded <i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794) (P3)² <i>Triodia</i> sp. Mt Ella (M.E. Trudgen 17794) (P3) <i>Goodenia nuda</i> (P4)¹	Three Priority Flora Recorded: <i>Ipomoea racemigera</i> (P2)⁵ <i>Goodenia berringbinensis</i> (P4) <i>Goodenia nuda</i> (P4)¹	None Recorded
	Threatened/ Priority Ecological Communities	None Recorded	None recorded	None recorded	None recorded	None Recorded
	WoNS and DPP Weeds	None Recorded	None recorded	None recorded	None recorded	None Recorded
	Range Extensions	None Recorded	13 Range extensions	Three Range Extensions Recorded <i>Acacia clelandii</i> (400 km N) (12 locations on N half of study area)	Five range extensions	Three Range Extensions Recorded <i>Chamaecrista symonii</i> (200 km N) <i>Eragrostis speciosa</i> (200 km SE) <i>Halgania erecta</i> (60 km SE)
	Other significant findings	-	-	-	-	-
Other	Limitations of Survey	No substantial limitations	Historic burns and grazing may affect vegetation assemblages particularly in NE section of RHSB area.	Poor vehicle access restricted on foot access to wider target areas.	No substantial limitations	Dry conditions may have limited presence of annual and ephemeral taxa
	Proximity	1.8 km N	~29.5 km N	3.1 km N / 2.7 km E	Partially overlaps eastern section of the Survey Area	6.2 km N

¹ *Goodenia nuda* (P4) is no longer considered a Priority taxon.

⁴ *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) is no longer considered a Priority taxon.

³ *Eremophila* sp. Ophthalmia Range (P1) is currently known as *Eremophila margarethae* and is no longer considered a Priority taxon.

⁴ *Rostellularia adscendens* subsp. *adscendens* var. *latifolia* (P3) is currently considered *Rostellularia adscendens* var. *latifolia* (P3).

⁵ Species is now a Priority 3 taxon.

		Acacia sp. East Fortescue Survey – Orebody 31	Caramulla	Shearers West	Jimblebar North	South West Jimblebar
Survey Details	Reference	Onshore (2015c)	Onshore (2018a)	Onshore (2018b)	Onshore (2019)	Syrinx (2014)
	Type	Targeted	Reconnaissance and Targeted	Detailed	Reconnaissance and Targeted	Detailed
	Client	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd	BHP Billiton Iron Ore Pty Ltd
	Location	Phase 1 – known pop. in BHP Iron Ore tenure Phase 2 –N of Newman to SE Jimblebar, Karijini National Park, Mt Channer, Snowy Mountain & Turee Creek East region, NW from BHPBIOs Rocklea tenement to W Pannawonica Phase 3 – Jigalong, Balfour, Newman SE, Newman SW and Karijini	46 km E of Newman	42 km E of Newman	50 km E of Newman, 10 km NE of BHP WAIOS Jimblebar Wheelarra Hill mine E52/1776 tenement	Jimblebar lease AML7000266, adjacent to Jimblebar/Wheelarra Hill mine (to N), ~40 km E of Newman
	Size (ha)	65 (Phase 1)	12,500	15 km2	1, 680	20.52
	Timing	Phase 1 - March 2015 Phase 3 – August 2023	February and June 2018	May 2018	September 2018	March 2011, August, and September 2013
Methods	Desktop Assessment (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Quadrat #	-	-	49	-	38
	Relevé #	-	115	-	174	-
	Targeted Searching (Yes/No)	Yes	Yes	Yes	Yes	Yes
	Other Methods	Transects	-	-	-	-
Results	Taxa	1	-	264	-	330
	Families	1	-	38	-	44
	Genera	1	-	110	-	137
	Vegetation Types	-	12	9	14	9
	Vegetation Condition	-	Good to Excellent	Completely Degraded to Very Good	Degraded to Excellent	Very Good to Excellent
	Weeds #	-	5	6	2	7
Significant Findings	Threatened/ Priority Flora	One Priority Flora Recorded • <i>Acacia corusca</i> (P1) ²	Five Priority Flora Recorded • <i>Eremophila capricornica</i> (P1) • <i>Ipomea racemigera</i> (P2) ⁴ • <i>Crotalaria smithiana</i> (P3) • <i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794) (P3) ³ • <i>Goodenia nuda</i> (P4) ¹	None Recorded	Two Priority Flora Recorded • <i>Eremophila capricornica</i> (P1) • <i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794) (P3) ³	Three Priority Flora Recorded • <i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P1) • <i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684) (P1) ⁴ • <i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i> (P2) ⁴
	Threatened/ Priority Ecological Communities	None recorded	None recorded	None Recorded	None recorded	None Recorded
	WoNS and DPP Weeds	None recorded	None recorded	None Recorded	None recorded	None Recorded
	Range Extensions	None recorded	None recorded	Two Range Extensions Recorded • <i>Euphorbia multifaria</i> (150 km SE) • <i>Ipomea coptica</i> (100 km S)	None recorded	Five Range Extensions Recorded: <i>Abutilon malvifolium</i> , <i>Brachyscome ciliaris</i> var. <i>ciliaris</i> , <i>Euphorbia porcata</i> , <i>Leptochloa fusca</i> subsp. <i>muelleri</i> , <i>Tephrosia sphaerospora</i>
	Other significant findings	6 localised populations 3 delineated populations recorded 567 plants, across 8.1 ha: Populations: 1a.) 209 plants (p) 2 hectares (ha), 1b.) 105 p 3 ha, 1c. 34 p 0.5 ha, 2.) 114 p 2 ha, 3a.) 72 p 0.5 ha and 3b.) 33 p 0.1 ha.	-	-	-	-
Other	Limitations of Survey	Poor vehicle access restricted on foot access to wider target areas.	Conducted when conditions were poor (Feb.), under estimation of ephemeral flora. Access in some areas limited	No substantial limitations	Limited rainfall produced poor conditions led to possible under estimation of ephemeral flora and annuals.	No substantial limitations
	Proximity	2.7 km N	7.5 km E	~0.5 km S	~2.6 km N	~0.8 km S

¹ *Goodenia nuda* (P4) is no longer considered a Priority taxa.
² *Acacia corusca* (P1) was previously recorded as *Acacia* sp. East Fortescue.
³ *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3) is no longer considered a Priority taxon.
⁴ Species is now a Priority 3 taxon.

Appendix E: Assessment of occurrence

Taxon	Conservation code			Habit and habitat	Habitat within Survey Area	Within current known distribution	Proximity from Survey Area	Source	Post-survey likelihood
	DBCA	BC Act	EPBC Act						
Pre-survey likelihood - Confirmed									
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739)	P3			Perennial, grass-like or herb, 0.4 m high. Light orange-brown, pebbly loam. Amongst rocks & outcrops, gully slopes.	Yes	Yes	Within	A; C; L	Confirmed
<i>Goodenia hartiana</i>	P2			Erect to spreading, multistemmed perennial, herb or shrub (sub-shrub). Fl. blue-purple. Sand. Sand dune swales, sandhills.	Yes	No	Within	A; C; D	Previously Recorded
<i>Swainsona thompsoniana</i>	P3			Prostrate annual herb, to 0.2 m high, Fl. blue, Mar-Sep, Nov-Dec. Higher altitude floodplains, top of hilltops and cracking clays on red-brown clay.	Yes	Yes	Within	A; D	Previously Recorded
Pre-survey likelihood – Highly Likely									
<i>Ipomoea racemigera</i>	P3			Creeping annual, herb or climber. Fl. white.	Yes	Yes	0.7 km W	A; C; D; O	Confirmed
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i>	P3			Compactly tufted perennial, grass-like or herb, 0.3-0.8 m high, lemma groove muricate. Hardpan plains.	Yes	Yes	0.4 km S	A; C; Q	Confirmed
<i>Eremophila naaykensis</i>	P3			Erect shrub, 1-3 m high. Fl. White/pale blue. Red brown sandy clay loam. Upper slopes, gullies, gorges.	Yes	Yes	0.1 km NW	A; C	Confirmed
<i>Isotropis parviflora</i>	P3			Shrub, 0.1 m high. Fl. white/pink, Mar. Valley slope of ironstone plateau.	Yes	Yes	0.4 km N	A; C; D	Confirmed
<i>Euphorbia inappendiculata</i> var. <i>inappendiculate</i>	P3			Prostrate annual herb, to 0.1 m high. Red brown clay loam. Flat plain, cracking clay floodplain, gentle slopes.	Yes	Yes	1 km S	A; C; Q	Possible
<i>Gymnanthera cunninghamii</i>	P3			Erect shrub, 1-2 m high. Fl. cream-yellow-green, Jan to Dec. Sandy soils.	Yes	Yes	1.8 km NNE	A; C; D; J	Possible
<i>Indigofera gilesii</i>	P3			Shrub, to 1.5 m high. Fl. purple-pink, May or Aug. Pebbly loam. Amongst boulders & outcrops, hills.	Yes	Yes	1.3 km NNW	A; C; D	Possible
<i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684)	P3			Erect annual herb, 0.3-1 m high. Fl. cream, Mar-May, Jul-Sept. Red-brown sandy loam. Drainage areas, floodplains, flat and/or stony plains.	Yes	Yes	1.6 km S	A; C; Q	Possible
<i>Lepidium catapycnon</i>	P4			Open, woody perennial, herb or shrub, 0.2-0.3 m high, stems zigzag. Fl. white, Oct. Skeletal soils. Hillsides.	Yes	Adjacent	4.7 km W	A; C; D	Possible
Pre-survey likelihood – Likely									
<i>Goodenia berringbinensis</i>	P4			Ascending annual, herb, 0.1-0.3 m high. Fl. yellow, Oct. Red sandy loam. Along watercourses.	Yes	Yes	4.4 km WSW	A; C; D	Possible
<i>Acacia corusca</i>	P1			Shrub, 1.5-5(-7) m high. Red brown sandy loam soils. Hill slopes, hillcrests, drainage lines.	Yes	Adjacent	3.7 km NE	A; C; D; N	Unlikely
<i>Eremophila magnifica</i> subsp. <i>magnifica</i>	P4			Shrub, 0.5-1.5 m high. Fl. blue, Aug to Nov. Skeletal soils over ironstone. Rocky screes.	No	Adjacent	0.6 km WNW	A; C	Unlikely
Pre-survey likelihood – Possible									
<i>Aristida lazaridis</i>	P3			Tufted perennial, grass-like or herb, 0.4-1.5 m high. Fl. green/purple, Apr. Sand or loam.	Yes	No	28.7 km WNW	A; C; D	Confirmed
<i>Crotalaria smithiana</i>	P3			Annual, herb, to 0.4 m high. Fl. yellow, Jun. Regeneration site on floodplain.	No	Adjacent	14.9 km N	A; C; D; E; O	Unlikely
<i>Eremophila capricornica</i>	P1			Compact shrub, 0.2-0.5(-0.75) m high. Fl. blue-purple. Red brown loam soil. Hardpan plain over granite.	Possible	Adjacent	5 km ENE	A; C; D; F; O; P	Highly Unlikely
<i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727)	P3			Open, erect annual or biennial, herb, to 0.2 m high. Fl. yellow. Red-brown clay soil, calcrete pebbles. Low undulating plain, swampy plains.	Possible	Yes	3.3 km SSW	A; C	Highly Unlikely
<i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3			Erect or decumbent annual herb, multi-stemmed to 0.25 m tall. Fl. pink, June. Clay-loam. Cracking clay, colluvium/alluvium, sheet-flow, sub-saline flats, ironstone flats.	Yes	Adjacent	7.7 km WNW	A; D	Highly Unlikely
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	P3			Tussocky perennial, grass-like or herb, 0.9-1.8 m high. Fl. Aug. Red clay. Clay pan, grass plain.	Yes	No	19.5 km N	A; C	Highly Unlikely

Taxon	Conservation code			Habit and habitat	Habitat within Survey Area	Within current known distribution	Proximity from Survey Area	Source	Post-survey likelihood
	DBCA	BC Act	EPBC Act						
<i>Acacia bromilowiana</i>	P4			Tree or shrub, to 12 m high, bark dark grey, fibrous; inflorescence in spikes. Fl. yellow/pink, Jul to Aug. Red skeletal stony loam, orange-brown pebbly, gravel loam, laterite, banded ironstone, basalt. Rocky hills, breakaways, scree slopes, gorges, creek beds.	Yes	No	31.6 km NW	A; C	Highly Unlikely
<i>Eremophila youngii</i> subsp. <i>lepidota</i>	P4			Dense, spreading shrub, (0.2-)1-3 m high. Fl. purple-red-pink, Jan or Mar or Jun or Aug to Sep. Stony red sandy loam. Flats plains, floodplains, sometimes semi-saline, clay flats.	Yes	Adjacent	9 km NNE	A; C	Highly Unlikely
Pre-survey likelihood – Unlikely									
<i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2			Erect slender shrub, 1-3 m high. Fl. pale purple. Loamy skeletal soils. Gorge with ironstone outcropping, gullies, drainage line.	Yes	No	38.8 km NNW	A; C	Unlikely
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109)	P3			Tussock-forming perennial, grass-like or herb, to 0.3 m high. Fl. Sep. Red-brown skeletal soils, ironstone. Steep slopes, summits.	Yes	No	43.2 km NW	A	Confirmed
<i>Eremophila</i> sp. West Angelas (S. van Leeuwen 4068)	P3			Spindly shrub, 0.4-3 m high. Skeletal brown-red soil or loam. Hill slopes and summits.	Yes	No	31.6 km NW	A; C	Unlikely
<i>Oxalis</i> sp. Pilbara (M.E. Trudgen 12725)	P3			Annual herb, 0.1-0.3 m high. Fl. Yellow. Brown sandy loam or clay. Gorge, ironstone outcrops, gully, shaded areas, creek lines.	Yes	No	39.8 km NW	A	Unlikely
<i>Eremophila magnifica</i> subsp. <i>velutina</i>	P3			Shrub, 0.5-1.5 m high. Fl. blue-purple, Aug to Sep. Skeletal soils over ironstone. Summits.	No	Yes	26.1 km S	A; C	Unlikely
<i>Eremophila pilosa</i>	P1			Shrub, ca 0.8 m high. Fl. purple, Sep. Sandplain.	Yes	No	38 km E	A	Highly Unlikely
<i>Eremophila rhegos</i>	P1			Erect shrub, ca 1 m high. Fl. blue-purple-white, Sep. Skeletal stony loam over granite.	No	No	35.3 km SSE	A	Highly Unlikely
<i>Helichrysum oligochaetum</i>	P1			Erect annual, herb, to ca 0.25 m high. Fl. yellow, Aug to Nov. Red clay. Alluvial plains.	Yes	No	63.4 km N	A	Highly Unlikely
<i>Hibiscus campanulatus</i>	P3			Erect bushy shrub, 1-3.5 m high. Fl. White/pale pink. Brown loamy to skeletal soils. Rocky gullies, ironstone range.	Yes	No	137.9 km SSW	C	Highly Unlikely
<i>Paranotis</i> sp. Pilbara (H. Ajduk HAOP04a)	P1			Ephemeral herb, somewhat identifiable when dead. Flowers and fruit in Feb - Mar. White flowers. Occurring in clay like terraces adjacent to flat broad drainage line on hardpan in the Hamersley, recorded primarily at Coondiner Creek.	Yes	No	28.1 km NW	A	Highly Unlikely
<i>Stemodia</i> sp. Battle Hill (A.L. Payne 1006)	P1			Low shrub. Cracking clay. Floodplain.	Yes	No	65.9 km N	A	Highly Unlikely
<i>Acacia subtiliformis</i>	P3			Spindly, slender, erect shrub, to 3.5 m high, phyllodes green; inflorescence in heads to 6 mm diameter; peduncles red. Fl. yellow, Jun. On rocky calcrete plateau.	Yes	No	27.6 km NW	A; C; D	Highly Unlikely
<i>Amaranthus centralis</i>	P3			Annual herb, decumbent or erect to 0.6 m high. Grows in red sand in ephemeral watercourses, sandy to clayey loam on riverbanks and edges of permanent pools in eucalypt lined channels, or acacia shrubland	Yes	No	25.8 km N	A; C	Highly Unlikely
<i>Eremophila rigida</i>	P3			Bushy shrub, 0.3-4 m high. Fl. cream, Sep. Red sand alluvium. Hardpan plains, stony clay depressions.	Yes	No	17.9 km SE	A; C; D	Highly Unlikely
<i>Eucalyptus rowleyi</i>	P3			Mallee, 3-5 m. Lignotuber present. Smooth grey to tan brown bark. Lanceolate leaves. Fruit barrel shaped with pedicel. 3/4 valves. Disc deeply descending. Red sandy loams on plains and minor and broad flood-out plains.	Yes	No	57.4 km N	A	Highly Unlikely
<i>Grevillea saxicola</i>	P3			Tree or shrub, to 8 m high, rough bark on trunks and stems. Fl. creamy white. Skeletal red brown sandy loam with ironstone pebble cover. Rocky gully, drainage lines, steep cliff, low rocky hills.	Yes	No	51 km NW	A	Highly Unlikely
<i>Iotasperma sessilifolium</i>	P3			Erect herb. Fl. pink. Cracking clay, black loam. Edges of waterholes, plains.	Yes	No	55.6 km N	A	Highly Unlikely

Taxon	Conservation code			Habit and habitat	Habitat within Survey Area	Within current known distribution	Proximity from Survey Area	Source	Post-survey likelihood
	DBCA	BC Act	EPBC Act						
<i>Maireana prosthochaeta</i>	P3			Open, densely leaved shrub, 0.3-0.6 m high. Laterite. Hills, salty places.	No	No	32 km SSW	A	Highly Unlikely
<i>Rostellularia adscendens</i> var. <i>latifolia</i>	P3			Herb or shrub, 0.1-0.3 m high. Fl. blue-purple-violet, Apr to May. Ironstone soils. Near creeks, rocky hills.	Yes	No	59.6 km NW	A; K	Highly Unlikely
<i>Stylidium weeliwolli</i>	P3			Annual, herb, 0.1-0.25 m high, throat appendages 4, rod-shaped. Fl. pink & red, Aug to Sep. Gritty sand soil, sandy clay. Edge of watercourses	Yes	No	55.1 km NW	A	Highly Unlikely
Pre-survey likelihood – Highly Unlikely									
<i>Thryptomene wittweri</i>	T	VU	VU	Spreading or rounded shrub, 0.5-1.5(-2.1) m high. Fl. white-cream, Apr or Jul or Aug. Skeletal red stony soils. Breakaways, stony creek beds	No	No	120 km NW	B	Highly Unlikely
<i>Dampiera metallorum</i>	P3			Rounded, multistemmed perennial, herb, to 0.5 m high. Fl. blue, Apr or Jun to Oct. Skeletal red-brown gravelly soil over banded ironstone. Steep slopes, summits of hills.	No	No	44.9 km WNW	A	Highly Unlikely
<i>Triodia ?birriliburu</i>	P3			Stoloniferous, tussock-forming perennial, grass-like or herb, 1 m high. Foliage non-resinous, leaf blades amphistomatous (hard-type). Fl. Apr-Jun, Aug. On or beside sand dunes.	No	No	64.9 km SE	E	Highly Unlikely
<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	P4			Spreading shrub, to 0.5 m high. Fl. yellow, Aug. Skeletal red soils pockets. Steep slope.	No	No	38.94 km NNW	A; C	Highly Unlikely

Source key: A = DBCA (TPFL &/or WAH database search results); B = Protected Matters Search Tool (EPBC database search results); C = NatureMap (database search results); D = Atlas of Living Australia (ALA) database search results)); E = Astron (2019); F = Biologic (2019a); G = Ecologia (2005); H = ENV (2008a); I = Onshore (2014); J = Onshore (2015b); K = Onshore (2018a); L = Onshore (2019); M = Syrinx (2014).

Appendix F: Sample site data

Power 2030 Site PWR-07

Date 2/05/2024
Described by CvdB, EL
Type Quadrat 50m x 50m
Location MGA Zone 50
 775893 mE; 7409761 mN
 119.6994 E -23.398695 S



Veg Condition Very Good

Soil Silty Clay Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Undulating Low Hills

Vegetation *Triodia angusta* low hummock grassland with *Acacia synchronicia*, *Acacia tetragonophylla*, *Eremophila cuneifolia* tall to mid sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over low scattered chenopod shrubs.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1	PWR07.02	
<i>Acacia synchronicia</i>	1	2.8		
<i>Acacia tetragonophylla</i>	0.2	3.5		
<i>Aristida contorta</i>	0.1	0.2		
<i>Arivela viscosa</i>	0.1	0.1		
<i>Digitaria brownii</i>	0.1	0.2		
<i>Enneapogon caerulescens</i>	0.1	0.2		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eremophila cuneifolia</i>	0.5	1.2		
<i>Eriachne mucronata</i>	0.1	0.3		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.1		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	2	5		
<i>Euploca tenuifolia</i>	0.1	0.1	PWR07.03	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Goodenia forrestii</i>	0.1	0.1		
<i>Goodenia microptera</i>	0.1	0.2		
<i>Goodenia muelleriana</i>	0.1	0.1	PWR07.01	
<i>Maireana ?georgei</i>	0.1	0.3	PWR07.06	
<i>Maireana ?melanocoma</i>	0.1	0.4	PWR07.04	
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus schwartzii</i> var. <i>schwartzii</i>	0.1	0.3		
<i>Sclerolaena eriacantha</i>	0.1	0.2	PWR07.05	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.3		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.3		
<i>Senna glutinosa</i> subsp. <i>*luerissenii</i>	0.1	0.7		
<i>Senna sericea</i>	0.1	0.2		
<i>Solanum lasiophyllum</i>	0.1	0.3		
<i>Tribulus hirsutus</i>	0.1	0.1		
<i>Triodia angusta</i>	35	0.5		
<i>Triodia wiseana</i>	0.5	0.4		

Power 2030 Site PWR-08

Date 2/05/2024
Described by KJ, AS
Type Quadrat 50m x 50m
Location MGA Zone 50
 776446 mE; 7410002 mN
 119.7047 E -23.396429 S

Veg Condition Excellent
Soil Clay Loam
Rock Type Dolerite
Fire Age Old (6+ yr)
Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia pungens* low hummock grassland with *Acacia inaequilatera* tall isolated shrubs.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Acacia atkinsiana</i>	0.1	0.7		
<i>Acacia dictyophleba</i>	0.1	1		
<i>Acacia inaequilatera</i>	1.5	3.2		
<i>Aristida contorta</i>	0.1	0.2		
<i>Arivela viscosa</i>	0.1	0.3		
<i>Bonamia pilbarensis</i>	0.1	0.1	KJAS001.08	
* <i>Cenchrus ciliaris</i>	0.1	0.1		
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	0.1	0.7		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Cymbopogon ambiguus</i>	0.1	0.3		
<i>Dendrophyllanthus erwinii</i>	0.1	0.1	KJAS001.03	
<i>Dolichocarpa crouchiana</i>	0.1	0.2		
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon caerulescens</i>	0.1	0.2		
<i>Enneapogon polyphyllus</i>	0.1	0.1	KJAS001.07	
<i>Eriachne mucronata</i>	0.1	0.2		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	0.1	0.1		
<i>Euploca</i> sp. indet.	0.1	0.3	KJAS001.10	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.1	KJAS001.13	
<i>Goodenia muelleriana</i>	0.5	0.2	PWR07.01	
<i>Halgania solanacea</i>	0.1	0.1	KJAS001.05	
<i>Haloragis gossei</i> var. <i>gossei</i>	0.1	0.1		
<i>Hibiscus ?coatesii</i>	0.1	0.1	KJAS001.11	
<i>Indigofera monophylla</i>	0.1	0.5		
<i>Paspalidium clementii</i>	0.1	0.1	KJAS001.04	
<i>Polygala glaucifolia</i>	0.1	0.1	KJAS001.15	
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus auriculifolius</i>	0.1	0.1	KJAS001.01	
<i>Ptilotus clementii</i>	0.1	0.1	KJAS001.06	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus helipteroides</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	1		
<i>Ptilotus rotundifolius</i>	0.1	0.5	KJAS001.12	
<i>Scaevola amblyanthera</i>	0.1	0.2	KJAS001.09	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.5		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1		
<i>Swainsona ?elegantoides</i>	1	0.1	KJAS001.14	
<i>Themeda triandra</i>	0.1	0.3		
<i>Tribulus hirsutus</i>	1	0.1		
<i>Triodia pungens</i>	35	0.5		

Power 2030 Site PWR-13

Date 3/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 50
 777914 mE; 7412477 mN
 119.7186 E -23.373849 S
Veg Condition Excellent
Soil Silty Loam
Rock Type Quartz
Fire Age Old (6+ yr)
Habitat Undulating Low Hills
Vegetation *Triodia wiseana*, *Triodia vanleeuwenii* low open hummock grassland with *Acacia bivenosa*, *Acacia sibirica* tall sparse shrubland over *Senna artemisioides* subsp. *oligophylla* mid sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aneura</i>	0.1	1.5	PWR13.05	
<i>Acacia bivenosa</i>	3	2.5		
<i>Acacia pruinocarpa</i>	0.1	1.3		
<i>Acacia sibirica</i>	1	2.2	PWR13.04	
<i>Acacia tetragonophylla</i>	0.1	2		
<i>Afrohybanthus aurantiacus</i>	0.1	0.1		
<i>Corchorus crozophorifolius</i>	0.1	0.6	PWR26.15	
<i>Cucumis variabilis</i>	0.1	0		
<i>Cymbopogon ambiguus</i>	0.1	0.7		
<i>Dendrophyllanthus erwinii</i>	0.1	0.1		
<i>Digitaria brownii</i>	0.1	0.3	PWR33.09	
<i>Dolichocarpa crouchiana</i>	0.1	0.1	PWR13.02	
<i>Duperreya commixta</i>	0.1	0		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	0.1	1.6		
<i>Enneapogon caerulescens</i>	0.1	0.2	PWR52.04	
<i>Enneapogon polyphyllus</i>	0.1	0.2	PWR33.27	
<i>Enneapogon robustissimus</i>	0.1	0.6	PWR13.07	
<i>Eriachne mucronata</i>	0.1	0.4		
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.1	PWR22.04	
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	0.1	0.5	PWR13.01	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Goodenia muelleriana</i>	0.1	0.1	RBopp.03	
<i>Goodenia stobbsiana</i>	0.1	0.3		
<i>Hakea chordophylla</i>	0.1	4		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	0.3		
<i>Indigofera monophylla</i>	0.1	0.8	PWR13.10	
<i>Isotropis atropurpurea</i>	0.1	1.2		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Paspalidium basicladum</i>	0.1	0.2		
<i>Psyrax latifolia</i>	0.1	0.1		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus calostachyus</i>	0.1	0.1		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.7		
<i>Ptilotus</i> sp. Indet	0.1	0.1	PWR13.11	
<i>Salsola australis</i>	0.1	0.6		
<i>Santalum lanceolatum</i>	0.1	1		
<i>Scaevola amblyanthera</i> var. <i>centralis</i>	0.1	0.4	PWR13.12	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	1	1.2		
<i>Senna glutinosa</i> subsp. <i>×luerssenii</i>	0.1	1		
<i>Sida echinocarpa</i>	0.1	0.8	PWR13.08	
<i>Solanum cleistogamum</i>	0.1	0.3		
<i>Solanum lasiophyllum</i>	0.1	0.6		
<i>Stackhousia</i> sp. indet.	0.1	0.1	KG.PWR.01	
<i>Swainsona ?elegantoides</i>	0.1	0.1	PWR13.06	
<i>Tephrosia</i> sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)	0.1	0.1		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	0.2		
<i>Tribulus hirsutus</i>	0.1	0.1	PWR26.10	
<i>Tribulus suberosus</i>	0.1	0.8		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.1		
<i>Triodia vanleeuwenii</i>	5	0.3		
<i>Triodia wiseana</i>	18	0.5		

Power 2030 Site PWR-16

Date 3/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 50
 777227 mE; 7414424 mN
 119.7116 E -23.356395 S

Veg Condition Very Good

Soil Loamy Sand

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia vanleeuwenii*, *Triodia pungens* low hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia*, *Hakea chordophylla* low woodland over *Senna glutinosa* subsp. *glutinosa*, *Acacia aptaneura* mid to tall isolated shrubs.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.2		
<i>Acacia aptaneura</i>	0.5	2	PWR16.01	
<i>Acacia bivenosa</i>	0.1	1.6		
<i>Acacia pachyacra</i>	0.1	0.5		
<i>Acacia pruinocarpa</i>	0.5	3		
<i>Acacia synchronica</i>	0.1	1.7		
<i>Acacia tenuissima</i>	0.1	1.7		
<i>Amyema sanguinea</i> var. <i>sanguinea</i>	0.1	0	PWR16.02	
<i>Aristida inaequiglumis</i>	0.1	0.8	PWRR27.01	
<i>Arivela viscosa</i>	0.1	0.1		
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	0.1	0.7		
<i>Cymbopogon ambiguus</i>	0.1	0.8		
<i>Cymbopogon obtectus</i>	0.1	0.3		
<i>Eriachne lanata</i>	1	0.2		
<i>Eriachne mucronata</i>	2	0.4		
<i>Eucalyptus gamophylla</i>	0.5	1.6		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	5	5		
<i>Goodenia triodiophila</i>	0.1	0.4		
<i>Hakea chordophylla</i>	1	3		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Psydrax latifolia</i>	0.1	1		
<i>Ptilotus astrolasius</i>	0.1	0.1		
<i>Ptilotus calostachyus</i>	0.1	1		
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	1		
<i>Ptilotus rotundifolius</i>	0.1	0.4		
<i>Senna glaucifolia</i>	0.1	1.6		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.5	0.5		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	2		
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	0.1	0.4		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Sida arenicola</i>	0.1	1		
<i>Solanum cleistogamum</i>	0.1	0.4		
<i>Solanum lasiophyllum</i>	0.1	0.2		
<i>Tribulus suberosus</i>	0.1	0.6		
<i>Triodia pungens</i>	5	0.4		
<i>Triodia vanleeuwenii</i>	38	0.4		

Power 2030 Site PWR-17

Date 3/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 50
 777412 mE; 7415663 mN
 119.7131 E -23.345192 S

Veg Condition Good

Soil Clayey Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation **Cenchrus ciliaris*, **Cenchrus setiger*, *Themeda triandra* closed tall tussock grassland with *Acacia aptaneura*, *Acacia citrinoviridis*, *Acacia sibirica* tall open shrubland with *Corymbia hamersleyana*, *Hakea lorea* subsp. *lorea*, *Corymbia candida* subsp. *candida* low open woodland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon amplum</i>	0.1	0.3		
<i>Abutilon fraseri</i>	0.1	0.4		
<i>Abutilon otocarpum</i>	0.1	0.3		
<i>Acacia aptaneura</i>	3	4		
<i>Acacia citrinoviridis</i>	7	4.5		
<i>Acacia dictyophleba</i>	0.5	1.3		
<i>Acacia pyrifolia</i>	0.5	2.5		
<i>Acacia sibirica</i>	2.5	4		
* <i>Aerva javanica</i>	0.1	0.6		
<i>Arivela viscosa</i>	0.1	0.2		
* <i>Bidens bipinnata</i>	0.1	0.3		
<i>Boerhavia coccinea</i>	0.1	0.1		
* <i>Cenchrus ciliaris</i>	80	1		
* <i>Cenchrus setiger</i>	5	1		
<i>Chrysopogon fallax</i>	1	1.3		
<i>Corymbia candida</i> subsp. <i>candida</i>	1.5	6.5		
<i>Corymbia hamersleyana</i>	4	5		
<i>Cucumis variabilis</i>	0.1	0		
<i>Duperreya commixta</i>	0.1	0		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Enteropogon ramosus</i>	0.1	0.5		
<i>Eragrostis eriopoda</i>	0.1	0.6		
<i>Eragrostis xerophila</i>	0.1	0.6	PWR17.01	
<i>Eremophila longifolia</i>	0.1	4.5		
<i>Hakea lorea</i> subsp. <i>lorea</i>	3	7		
<i>Isotropis iophyta</i>	0.1	1.2		
* <i>Malvastrum americanum</i>	0.1	0.7		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Pterocaulon sphacelatum</i>	0.5	0.6		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.7		
<i>Rhagodia eremaea</i>	0.1	1		
<i>Rhynchosia minima</i>	0.1	0		
<i>Salsola australis</i>	0.1	0.1		
<i>Sclerolaena convexula</i>	0.1	0.2	PWR17.02	
<i>Senna artemisioides</i> subsp. <i>filifolia</i>	0.1	2.2		
<i>Sida fibulifera</i>	0.1	0.1		
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.1		
<i>Themeda triandra</i>	1.5	1		
<i>Trianthema triquetrum</i>	0.1	0.2		
* <i>Tribulus terrestris</i>	0.1	0.1	PWR17.03	
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	1		

Power 2030 Site PWR-18

Date 3/05/2024
Described by KJ, EL, AS
Type Quadrat 50m x 50m
Location MGA Zone 50
 778443 mE; 7416180 mN
 119.7231 E -23.340347 S

Veg Condition Poor

Soil Silty Loam

Rock Type CID

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation **Cenchrus ciliaris* mid tussock grassland with *Corymbia candida* subsp. *candida* low open woodland over *Acacia citrinoviridis* tall sparse shrubland over *Triodia pungens* sparse mid hummock grassland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	0.1	2.5	PWR18.03	
<i>Acacia citrinoviridis</i>	2	3.5		
<i>Acacia dictyophleba</i>	0.1	2.4		
<i>Acacia pyrifolia</i>	1	3		
<i>Acacia synchronicia</i>	0.1	0.3		
<i>Acacia tetragonophylla</i>	0.1	1		
<i>Amyema fitzgeraldii</i>	0.1	0.1	PWR18.03	
<i>Aristida contorta</i>	0.1	0.2		
<i>Aristida inaequiglumis</i>	0.1	0.4		
<i>Arivela viscosa</i>	1	0.8		
<i>Boerhavia coccinea</i>	0.1	0.1		
* <i>Cenchrus ciliaris</i>	40	0.6		
* <i>Cenchrus setiger</i>	1	0.6		
<i>Chrysopogon fallax</i>	0.1	0.6		
<i>Corymbia candida</i> subsp. <i>candida</i>	3	5		
<i>Corymbia hamersleyana</i>	0.1	8		
<i>Cymbopogon obtectus</i>	0.1	0.5	PWR19.08	
<i>Dipteracanthus australasicus</i> subsp. <i>australasicus</i>	0.1	0.2		
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon caeruleus</i>	0.1	0.1		
<i>Enneapogon lindleyanus</i>	0.1	0.4		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eragrostis eriopoda</i>	1	0.4		
<i>Eriachne mucronata</i>	0.1	0.2		
<i>Eulalia aurea</i>	0.1	0.2		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.1		
<i>Euploca tenuifolia</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	0.1		
<i>Glycine canescens</i>	0.1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.2	KJAS001.13	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	3.5		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.3		
<i>Indigofera georgei</i>	0.1	0.5		
<i>Indigofera linnaei</i>	0.1	0.2		
<i>Isotropis iophyta</i>	0.1	0.7		
<i>Melhania oblongifolia</i>	0.1	0.2		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Petalostylis labicheoides</i>	0.1	2		
<i>Polymeria ambigua</i>	0.1	0.1		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Pterocaulon sphacelatum</i>	0.5	0.4		
<i>Ptilotus ?calostachyus</i>	0.1	0.3		
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus helipteroides</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.5	0.4		
<i>Rhagodia eremaea</i>	0.1	1		
<i>Rhynchosia minima</i>	0.1	0.1		
<i>Salsola australis</i>	0.1	0.3		
<i>Scaevola amblyanthera</i>	0.1	0.2		
<i>Sclerolaena convexula</i>	0.1	0.2	PWR18.05	
<i>Sclerolaena cornishiana</i>	0.1	0.2	PWR18.04	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.4		
<i>Sida echinocarpa</i>	0.1	0.1		
<i>Sida fibulifera</i>	0.1	0.2	PWR18.01	
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.3		
<i>Solanum horridum</i>	0.1	0.2	PWR19.06	
<i>Solanum lasiophyllum</i>	0.1	0.3		
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	0.1	0.1		
<i>Themeda triandra</i>	2	0.7		
<i>Trianthema pilosum</i>	0.1	0.1	PWR18.02	
<i>Trianthema triquetrum</i>	0.1	0.1		
<i>Tribulus astrocarpus</i>	0.1	0.1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	1		
<i>Triodia pungens</i>	3	0.6		
<i>Waltheria indica</i>	0.1	0.6		

Power 2030 Site PWR-19

Date 3/05/2024
Described by KJ, EL, AS
Type Quadrat 50m x 50m
Location MGA Zone 50
 779352 mE; 7416737 mN
 119.7319 E -23.335169 S

Veg Condition Excellent

Soil Sandy Clay Loam

Rock Type CID

Fire Age Old (6+ yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia pungens*, *Triodia vanleeuwenii* mid hummock grassland with *Acacia bivenosa* mid sparse shrubland with *Hakea chordophylla* tall isolated shrubs.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Acacia bivenosa</i>	8	1.9		
<i>Acacia dictyophleba</i>	0.1	0.6		
<i>Acacia pruinocarpa</i>	0.1	3.5		
<i>Acacia synchronica</i>	0.1	0.5	PWR19.14	
<i>Acacia tetragonophylla</i>	0.1	2		
<i>Anthobolus leptomerioides</i>	0.1	1.1	PWR19.13	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.2		
<i>Aristida pruinosa</i>	0.1	0.4	PWR19.01	
* <i>Cenchrus ciliaris</i>	0.1	0.6		
<i>Corchorus lasiocarpus</i>	0.1	0.5	PWR19.10	
<i>Corymbia candida</i> subsp. <i>candida</i>	0.1	4.2	PWR19.02	
<i>Cymbopogon ambiguus</i>	0.1	0.6		
<i>Cymbopogon obtectus</i>	0.1	0.5	PWR19.08	
<i>Dampiera candicans</i>	0.1	0.3		
<i>Dolichocarpa crouchiana</i>	0.1	0.1		
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon lindleyanus</i>	0.1	0.7		
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	0.1	0.5	PWR19.12	
<i>Eremophila latrobei</i>	0.1	1.8	PWR19.03	
<i>Eriachne mucronata</i>	0.1	0.3		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gomphrena cunninghamii</i>	0	0.2		
<i>Gomphrena kanisii</i>	0.1	0.2	KJAS001.13	
<i>Goodenia stobbsiana</i>	0.1	0.3		
<i>Hakea chordophylla</i>	0.5	4		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	0.5		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.3	PWR19.04	
<i>Indigofera monophylla</i>	0.1	0.2		
<i>Maireana ?planifolia</i>	0.1	0.1	PWR19.07	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Ptilotus astrolasius</i>	0.1	0.4		
<i>Ptilotus calostachyus</i>	0.1	0.2		
<i>Ptilotus clementii</i>	0.1	0.1	PWR19.11	
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.8		
<i>Ptilotus rotundifolius</i>	0.1	1		
<i>Rhynchosia minima</i>	0.1	0.1		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	2.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	1.9		
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	0.1	0.6		
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.3	PWR19.05	
<i>Solanum horridum</i>	0.1	0.4	PWR19.06	
<i>Solanum lasiophyllum</i>	0.1	0.5		
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	0	0.4		
<i>Themeda triandra</i>	0.1	0.3		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	0.1		
<i>Trianthema pilosum</i>	0.1	0.1	PWR19.09	
<i>Tribulus suberosus</i>	0.1	0.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.1		
<i>Triodia pungens</i>	35	0.4		
<i>Triodia vanleeuwenii</i>	15	0.4		

Power 2030 Site PWR-20

Date 30/04/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 50
 779606 mE; 7416391 mN
 119.7344 E -23.338246 S

Veg Condition Good

Soil Clayey Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation **Cenchrus ciliaris*, **Cenchrus setiger* closed tussock grassland with *Acacia citrinoviridis*,
Acacia aptaneura tall shrubland with *Corymbia candida* subsp. *candida*, *Eucalyptus*
victrix low open woodland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon amplum</i>	0.1	0.6		
<i>Abutilon fraseri</i>	0.1	0.4	PWR20.01	
<i>Abutilon lepidum</i>	0.1	0.8	PWR20.04	
<i>Acacia aptaneura</i>	9	7	PWR20.03	
<i>Acacia citrinoviridis</i>	28	8		
<i>Acacia pyrifolia</i>	0.1	1.2		
<i>Acacia tetragonophylla</i>	0.1	3.2		
<i>Amyema fitzgeraldii</i>	0.1	0	PWR20.02	In Mulga
<i>Anthobolus leptomerioides</i>	0.1	1.7		
<i>Arivela viscosa</i>	0.1	0.3		
* <i>Bidens bipinnata</i>	0.1	0.2		
* <i>Cenchrus ciliaris</i>	40	0.5		
* <i>Cenchrus setiger</i>	32	0.5		
<i>Chrysopogon fallax</i>	0.3	1		
<i>Convolvulus</i> sp. indet.	0.1	0		
<i>Corymbia candida</i> subsp. <i>candida</i>	1	10		
<i>Cucumis variabilis</i>	0.1	0		
<i>Duperreya commixta</i>	0.1	0		
<i>Eucalyptus victrix</i>	3	8		
<i>Euphorbia</i> sp. indet. (bi/tri)	0.1	0.4		
<i>Evolvulus alsinoides</i>	0.1	0.1		
<i>Glycine canescens</i>	0.1	0		
<i>Isotropis iophyta</i>	0.1	1.8		
* <i>Malvastrum americanum</i>	0.1	0.6		
<i>Pterocaulon sphacelatum</i>	0.1	0.5		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.5		
<i>Rhagodia eremaea</i>	0.5	1.5		
<i>Setaria dielsii</i>	0.1	0.3		
<i>Solanum cleistogamum</i>	0.1	0.3		
<i>Solanum lasiophyllum</i>	0.1	0.3		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Tribulus suberosus</i>	0.1	0.3		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.6		
<i>Triodia pungens</i>	0.2	1		

Power 2030 Site PWR-22

Date 30/04/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 50
 782018 mE; 7417006 mN
 119.7579 E -23.332286 S

Veg Condition Very Good

Soil Sandy Loam

Rock Type Dolerite

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Triodia pungens* tall hummock grassland with **Cenchrus ciliaris*, *Themeda triandra*, *Chrysopogon fallax* mid sparse tussock grassland over *Arivela viscosa*, *Trianthema pilosum* low sparse herbland with *Acacia dictyophleba*, *Acacia pachyacra* low sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>	0.1	0.2	PWR22.14	
<i>Acacia aptaneura</i>	0.1	1.2	PWR22.18	
<i>Acacia dictyophleba</i>	2	1.2		
<i>Acacia pachyacra</i>	1	1.5		
<i>Acacia pruinocarpa</i>	0.1	1.6		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.2	PWR22.16	
<i>Aristida hygrometrica</i>	0.5	0.4	PWR22.15	
<i>Arivela viscosa</i>	2	0.5		
<i>Boerhavia coccinea</i>	0.1	0.1	PWR22.17	
<i>*Cenchrus ciliaris</i>	6	0.8		
<i>Chrysopogon fallax</i>	1	1		
<i>Corymbia candida</i> subsp. <i>candida</i>	0.1	1.6		
<i>Corymbia hamersleyana</i>	0.1	6		
<i>Dendrophyllanthus erwinii</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eragrostis eriopoda</i>	0.1	0.4		
<i>Eulalia simonii</i>	0.1	0.5	PWR22.10	
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.3	PWR22.04	
<i>Euphorbia boophthona</i>	0.1	0.2	PWR22.08	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.3		
<i>Goodenia vilmorinae</i>	0.1	0.2	PWR22.20	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	2.5		
<i>Hibiscus burtonii</i>	0.1	0.4	PWR22.12	
<i>Indigofera linnaei</i>	0.1	0.1	PWR22.02	
<i>Ipomoea polymorpha</i>	0.1	0.5	PWR22.03	
<i>Maireana planifolia</i>	0.1	0.3	PWR22.22	
<i>Neurachne muelleri</i>	0.1	0.4		
<i>Panicum australiense</i> var. <i>australiense</i>	0.1	0.2	PWR22.11	
<i>Paspalidium rarum</i>	0.1	0.2	PWR22.06	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Perotis rara</i>	0.1	0.1		
<i>Polymeria mollis</i>	0.1	0.1	PWR22.13	
<i>Ptilotus ?clementii</i>	0.1	0.1		
<i>Ptilotus calostachyus</i>	0.1	0.2		
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus helipteroides</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.6		
<i>Ptilotus polystachyus</i>	0.1	0.3	PWR22.21	
<i>Salsola australis</i>	0.1	0.3		
<i>Senna artemisioides</i> subsp. <i>*artemisioides</i>	0.1	1.2	PWR22.19	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.5		
<i>Senna notabilis</i>	0.1	0.2		
<i>Sida fibulifera</i>	0.1	0.2	PWR22.09	
<i>Themeda triandra</i>	2	0.6		
<i>Trianthema pilosum</i>	5	0.2	PWR22.01	
<i>Tribulopsis angustifolia</i>	0.1	0.1	PWR22.07	
<i>Tribulus macrocarpus</i>	0.1	0.1	PWR22.05	
<i>Triodia pungens</i>	25	1		
<i>Vigna</i> sp. indet.	0.1	0.1		

Power 2030 Site PWR-26

Date 30/04/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 50
 785157 mE; 7418874 mN
 119.7882 E -23.314883 S

Veg Condition Very Good

Soil Silty Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Hillslope

Vegetation *Acacia bivenosa*, *Senna glutinosa* subsp. **luerssenii* mid open shrubland over *Triodia vanleeuwenii* low sparse hummock grassland with *Ptilotus astrolasius*, *Acacia synchronicia*, *Solanum lasiophyllum* low sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adsurgens</i>	0.1	1.2	PWR26.17	
<i>Acacia ancistrocarpa</i>	0.1	1.2		
<i>Acacia bivenosa</i>	7	1.5		
<i>Acacia synchronicia</i>	0.1	0.6		
<i>Acacia tenuissima</i>	0.1	0.8	PWR26.05	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.3	PWR22.16	
<i>Aristida inaequiglumis</i>	0.1	0.5	PWR26.12	
<i>Arivela viscosa</i>	0.1	0.1		
<i>Bonamia pilbarensis</i>	0.1	0.1	PWR26.14	
<i>Corchorus crozophorifolius</i>	0.1	0.5	PWR26.15	
<i>Dysphania</i> sp. indet.	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.1		
<i>Eragrostis eriopoda</i>	0.1	0.4	PWR26.18	
<i>Eremophila latrobei</i>	0.1	1		
<i>Eriachne aristidea</i>	0.1	0.1	PWR26.07	
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	0.1	0.2	PWR26.02	
<i>Fimbristylis simulans</i>	0.1	0.1	PWR26.01	
<i>Gomphrena kanisii</i>	0.1	0.1	PWR26.09	
<i>Goodenia muelleriana</i>	0.1	0.3	PWR26.16	
<i>Hakea chordophylla</i>	0.1	2.5		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	0.3		
<i>Hibiscus</i> sp. indet.	0.1	0.4	PWR26.04	
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Paspalidium clementii</i>	0.1	0.1	PWR26.03	
<i>Ptilotus astrolasius</i>	0.1	0.4		
<i>Ptilotus calostachyus</i>	0.1	0.3		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus helipteroides</i>	0.1	0.1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.3		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Senna glutinosa</i> subsp. <i>×luerssenii</i>	5	1.6		
<i>Sida</i> sp. indet. 1	0.1	0.4	PWR26.11	
<i>Sida</i> sp. indet. 2	0.1	0.5	PWR26.08	
<i>Solanum lasiophyllum</i>	0.1	0.7	PWR26.06	
<i>Tribulus hirsutus</i>	0.5	0.2	PWR26.10	
<i>Triodia vanleeuwenii</i>	5	0.3		
<i>Triodia wiseana</i>	0.5	0.3		

Power 2030 Site PWR-27

Date 30/04/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 50
 788600 mE; 7418465 mN
 119.8219 E -23.317973 S

Veg Condition Excellent

Soil Sandy Loam

Rock Type Granite

Fire Age Old (6+ yr)

Habitat Hillslope

Vegetation *Triodia vanleeuwenii* low hummock grassland over *Acacia hilliana*, *Acacia adoxa* low sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	2	0.5		
<i>Acacia bivenosa</i>	1	0.8		
<i>Acacia hilliana</i>	4	0.5		
<i>Amphipogon sericeus</i>	0.1	0.2		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.4		
<i>Calytrix carinata</i>	0.1	1.4		
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	0.1	0.4		
<i>Corymbia hamersleyana</i>	0.5	3.5		
<i>Cymbopogon obtectus</i>	0.1	0.6		
<i>Dampiera candicans</i>	0.1	0.6		
<i>Dodonaea coriacea</i>	0.1	1.6		
<i>Dolichocarpa crouchiana</i>	0.1	0.2		
<i>Duperreya commixta</i>	0.5	0		
<i>Enneapogon polyphyllus</i>	0.1	0.1		
<i>Eremophila latrobei</i> subsp. <i>latrobei</i>	0.1	1.8		
<i>Eriachne mucronata</i>	0.1	0.6		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	4	5		
<i>Fimbristylis dichotoma</i>	0.1	0.1	PWR27.01	
<i>Goodenia stobbsiana</i>	0.1	0.1		
<i>Goodenia triodiophila</i>	0.5	0.4		
<i>Hakea chordophylla</i>	0.1	1.9		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	1.8		
<i>Hibiscus coatesii</i>	0.1	0.6		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.4		
<i>Indigofera monophylla</i>	0.5	0.3		
<i>Neurachne muelleri</i>	0.1	0.5		
<i>Paspalidium clementii</i>	0.1	0.4	PWR27.03	
<i>Petalostylis labicheoides</i>	0.1	1.2		
<i>Polygala isingii</i>	0.1	0.1	PWR27.02	
<i>Psydrax latifolia</i>	0.1	2.2		
<i>Ptilotus astrolasius</i>	0.1	0.4		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus calostachyus</i>	0.1	1		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.6		
<i>Schizachyrium fragile</i>	0.1	0.2		
<i>Senna ferraria</i>	0.1	0.4		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	2.1		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.5	2		
<i>Senna glutinosa</i> subsp. <i>*luerksenii</i>	0.1	1.9		
<i>Sida arenicola</i>	0.1	1.3		
<i>Solanum centrale</i>	0.1	0.4		
<i>Solanum cleistogamum</i>	0.1	0.4		
<i>Solanum lasiophyllum</i>	0.1	0.5		
<i>Tephrosia insolens</i>	0.1	0.3	PWR27.04	
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	0.3		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.1		
<i>Triodia pungens</i>	5	0.5		
<i>Triodia vanleeuwenii</i>	50	0.5		

Power 2030 Site PWR-28

Date 30/04/2024
Described by CJW, RO
Type Quadrat 100m x 25m
Location MGA Zone 50
 788633 mE; 7418360 mN
 119.8223 E -23.318915 S

Veg Condition Good

Soil Sandy Loam

Rock Type Granite

Fire Age Old (6+ yr)

Habitat Medium Drainage Line

Vegetation **Cenchrus ciliaris* mid tussock grassland with *Acacia citrinoviridis* tall shrubland with *Corymbia hamersleyana* low open woodland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon fraseri</i>	0.1	0.4	PWR20.01	
<i>Acacia citrinoviridis</i>	42	5		
<i>Acacia dictyophleba</i>	0.1	0.5		
<i>Acacia pyrifolia</i>	2	1.2		
<i>Afrohybanthus aurantiacus</i>	0.1	0.6		
<i>Androcalva luteiflora</i>	0.1	1.1		
<i>Arivela viscosa</i>	0.5	0.9		
* <i>Bidens bipinnata</i>	0.1	0.4		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Bonamia erecta</i>	0.1	0.5		
* <i>Cenchrus ciliaris</i>	60	0.5		
<i>Corchorus crozophorifolius</i>	0.1	0.6		
<i>Corchorus tridens</i>	0.1	0.2		
<i>Corymbia hamersleyana</i>	3	8		
<i>Cucumis variabilis</i>	0.1	0		
<i>Cymbopogon ambiguus</i>	0.1	1		
<i>Cymbopogon obtectus</i>	0.1	0.6		
<i>Duperreya commixta</i>	0.1	0		
<i>Dysphania rhadinostachya</i>	0.1	0.2		
<i>Eriachne mucronata</i>	0.1	0.2		
<i>Eriachne tenuiculmis</i>	0.1	0.4		
<i>Eucalyptus gamophylla</i>	0.5	4		
<i>Euphorbia biconvexa</i>	0.1	0.2		
<i>Euphorbia boophthona</i>	0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Glycine canescens</i>	0.1	0		
<i>Gossypium robinsonii</i>	0.1	1		
<i>Hibiscus</i> aff. <i>campanulatus</i>	0.1	0.7	PWR28.01	
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Isotropis iophyta</i>	0.1	1		
<i>Jasminum didymum</i> subsp. <i>lineare</i>	0.1	0		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Neurachne muelleri</i>	0.1	0.4		
<i>Notoleptopus decaisnei</i>	0.1	0.15		
<i>Petalostylis labicheoides</i>	0.1	2		
<i>Polymeria ambigua</i>	0.1	0		
<i>Pterocaulon sphacelatum</i>	0.1	0.3		
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.4		
<i>Ptilotus polystachyus</i>	0.1	0.5		
<i>Rhagodia eremaea</i>	0.1	1.9		
<i>Rhynchosia minima</i>	0.1	0		
<i>Santalum lanceolatum</i>	3	1.2		
<i>Senna artemisioides</i> subsp. <i>*artemisioides</i>	0.1	1.8		
<i>Solanum lasiophyllum</i>	0.1	0.5		
<i>Solanum phlomoides</i>	0.1	0.5		
<i>Tephrosia rosea</i> var. Fortescue creeks (M.I.H. Brooker 2186)	1.5	0.4		
<i>Themeda triandra</i>	1	0.5		
<i>Tribulopsis angustifolia</i>	0.1	0.1		
<i>Tribulus macrocarpus</i>	0.1	0.1	PWR28.02	
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.5		
<i>Triodia pungens</i>	2	1.2		

Power 2030 Site PWR-30

Date 30/04/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 50
 790484 mE; 7417485 mN
 119.8405 E -23.326488 S

Veg Condition Very Good

Soil Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Triodia pungens* mid hummock grassland with **Cenchrus ciliaris*, **Cenchrus setiger*
 mid tussock grassland with *Acacia sclerosperma*, *Acacia synchronicia* tall open
 shrubland over *Ptilotus obovatus* var. *obovatus* low sparse shrubland with *Eucalyptus*
xerothermica low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon fraseri</i>	0.1	0.5		
<i>Abutilon otocarpum</i>	0.1	0.4		
<i>Abutilon</i> sp. Pilbara (W.R. Barker 2025)	0.1	0.6	PWR30.03	
<i>Acacia bivenosa</i>	1	2		
<i>Acacia macraneura</i>	3	2.5	PWR30.06	
<i>Acacia sclerosperma</i>	20	4		
<i>Acacia synchronicia</i>	7	2.2		
<i>Aristida contorta</i>	1	0.3		
<i>Aristida inaequiglumis</i>	0.1	0.6		
<i>Arivela viscosa</i>	18	0.5		
<i>Boerhavia coccinea</i>	0.5	0.1		
<i>Capparis lasiantha</i>	0.1	1.5		
<i>*Cenchrus ciliaris</i>	28	1		
<i>*Cenchrus setiger</i>	8	1		
<i>Chrysopogon fallax</i>	0.1	1.3		
<i>Codonocarpus cotinifolius</i>	0.1	2		
<i>Corchorus tridens</i>	0.5	0.3		
<i>Cymbopogon obtectus</i>	0.1	0.6		
<i>Dipteracanthus australasicus</i> subsp. <i>australasicus</i>	2	0.4		
<i>Duperreya commixta</i>	0.1	0		
<i>Dysphania rhadinostachya</i>	0.1	0.2		
<i>Enneapogon polyphyllus</i>	3	0.3		
<i>Eragrostis eriopoda</i>	3	0.6		
<i>Eragrostis tenellula</i>	0.5	0.2		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.1		
<i>Eucalyptus gamophylla</i>	0.1	2.5		
<i>Eucalyptus xerothermica</i>	3.5	10		
<i>Eulalia aurea</i>	1	0.5		
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.2	PWR30.02	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Euphorbia boophthona</i>	0.1	0.4		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.2		
<i>Gomphrena kanisii</i>	0.1	0.3	PWR30.04	
<i>Goodenia prostrata</i>	0.5	0.1		
<i>Goodenia vilmoriniae</i>	0.1	0.4		
<i>Hibiscus burtonii</i>	0.1	0.4		
<i>Hibiscus sturtii</i> var. <i>campylochlamys</i>	0.1	0.3		
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	0.1	0.3		
<i>Ipomoea polymorpha</i>	0.1	0.1	PWR30.05	
<i>Maireana planifolia</i>	2	0.5		
<i>Neurachne muelleri</i>	1.5	0.5		
<i>Panicum australiense</i> var. <i>australiense</i>	0.1	0.3		
<i>Paspalidium clementii</i>	0.1	0.3	PWR27.03	
<i>Perotis rara</i>	0.1	0.3		
<i>Portulaca oleracea</i>	0.5	0.1		
<i>Ptilotus exaltatus</i>	0.5	0.2		
<i>Ptilotus fusiformis</i>	0.1	0.4		
<i>Ptilotus gaudichaudii</i>	0.1	0.3		
<i>Ptilotus helipteroides</i>	1.5	0.2		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	1	0.5		
<i>Rhagodia eremaea</i>	0.5	1.2		
<i>Rhynchosia minima</i>	0.1	0		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.5	1.1		
<i>Senna notabilis</i>	0.1	0.3		
<i>Sida fibulifera</i>	0.1	0.1		
<i>Solanum lasiophyllum</i>	0.1	0.6		
<i>Sporobolus australasicus</i>	1	0.3		
<i>Streptoglossa</i> sp. indet.	0.1	0.3		
<i>Stylobasium spathulatum</i>	0.1	0.9		
<i>Trianthema pilosum</i>	0.2	0.1		
<i>Trianthema triquetrum</i>	0.1	0.1		
<i>Tribulus astrocarpus</i>	1	0.1		
<i>Tribulus macrocarpus</i>	5	0.1	PWR28.02	
* <i>Tribulus terrestris</i>	3	0.1	PWR30.01	
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.5	0.4		
<i>Triodia pungens</i>	58	1.3		
<i>Vincetoxicum lineare</i>	0.1	0		

Power 2030 Site PWR-32

Date 1/05/2024
Described by CJW, RO
Type Quadrat 100m x 25m
Location MGA Zone 51
 209177 mE; 7410232 mN
 120.1547 E -23.391863 S

Veg Condition Good

Soil Sand

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Acacia coriacea* subsp. *pendens* tall shrubland over **Cenchrus ciliaris*, **Cenchrus setiger* mid tussock grassland with *Eucalyptus victrix* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon amplum</i>	0.1	1.1		
<i>Abutilon otocarpum</i>	0.1	0.2		
<i>Acacia coriacea</i> subsp. <i>pendens</i>	32	4.5		
<i>Acacia dictyophleba</i>	0.1	2.8		
<i>Acacia pyrifolia</i>	0.1	1		
<i>Acacia sclerosperma</i>	0.1	0.3		
<i>Amyema fitzgeraldii</i>	0.1	0	PWR20.02	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.5		
<i>Arivela viscosa</i>	0.1	0.1		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>*Cenchrus ciliaris</i>	35	0.6		
<i>*Cenchrus setiger</i>	1	1		
<i>Chrysopogon fallax</i>	0.5	1.9		
<i>*Citrus amarus</i>	0.1	0.2	CROP.05	
<i>Corchorus tridens</i>	0.1	0.1		
<i>Corymbia hamersleyana</i>	1	5		
<i>*Cynodon dactylon</i>	0.1	0.3		
<i>Dactyloctenium radulans</i>	0.1	0.1		
<i>Digitaria ctenantha</i>	0.1	0.4		
<i>Eragrostis cumingii</i>	0.1	0.3		
<i>Eucalyptus victrix</i>	1	8		
<i>Eulalia aurea</i>	0.1	1		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.1		
<i>Euphorbia trigonosperma</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Glycine canescens</i>	0.1	0		
<i>Gomphrena kanisii</i>	0.1	0.2	PWR30.04	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	3.5		
<i>Hibiscus burtonii</i>	0.1	0.1		
<i>Indigofera linnaei</i>	0.1	0.1		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ipomoea muelleri</i>	0.1	0		
<i>Ipomoea polymorpha</i>	0.1	0.2	PWR30.05	
<i>Ipomoea racemigera</i> (P3)	0.1	0	PWR32.01	
<i>Isotropis iophyta</i>	0.1	0.6		
<i>Polygala glaucifolia</i>	0.1	0.1	PWR38.04	
<i>Portulaca oleracea</i>	0.1	0.3		
<i>Pterocaulon sphacelatum</i>	0.1	0.4		
<i>Rhynchosia minima</i>	0.1	0		
<i>Salsola australis</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. <i>filifolia</i>	0.1	1.1		
<i>Sida fibulifera</i>	0.1	0.1		
<i>Sida</i> sp. spiciform panicles (E. Leyland s.n. 14/8/90)	0.1	1.4		
<i>Solanum lasiophyllum</i>	0.1	0.3		
<i>Tephrosia rosea</i> var. <i>Fortescue</i> creeks (M.I.H. Brooker 2186)	0.1	0.6		
<i>Trianthema triquetrum</i>	0.1	0.1		
<i>Tribulus occidentalis</i>	0.1	0.1	CROP.04	
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.4		
<i>Triodia longiceps</i>	1	0.7		

Power 2030 Site PWR-33

Date 1/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 51
 207082 mE; 7409623 mN
 120.1341 E -23.396980 S

Veg Condition Very Good

Soil Sandy Loam

Rock Type Dolerite

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Triodia basedowii* mid open hummock grassland over *Neurachne muelleri*, *Eulalia aurea* low sparse tussock grassland with *Acacia aptaneura* low isolated trees over *Goodenia prostrata* low sparse herbland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	1	5	PWR33.21	
<i>Acacia coleii</i>	0.1	1.2		
<i>Acacia dictyophleba</i>	0.1	0.4		
<i>Acacia pachyacra</i>	0.1	1		
<i>Acacia tetragonophylla</i>	0.1	1.4		
<i>Acacia xiphophylla</i>	0.1	2.2		
<i>Afrohybanthus aurantiacus</i>	0.1	0.4		
<i>Areocleome oxalidea</i>	0.1	0.1		
<i>Aristida holathera</i> var. <i>holathera</i>	0.5	0.3	PWR22.16	
<i>Aristida inaequiglumis</i>	0.1	0.5	PWR26.12	
<i>Arivela viscosa</i>	0.1	0.2		
* <i>Bidens bipinnata</i>	0.1	0.1		
<i>Bonamia erecta</i>	0.1	0.6	PWR33.26	
<i>Bulbostylis barbata</i>	0.1	0.1		
<i>Calytrix carinata</i>	0.1	1.2	PWR33.18	
<i>Codonocarpus cotinifolius</i>	0.1	2		
<i>Cymbopogon ambiguus</i>	0.1	0.4		
<i>Dactyloctenium radulans</i>	0.1	0.1		
<i>Dendrophyllanthus erwinii</i>	0.1	0.1		
<i>Dicrastylis cordifolia</i>	0.1	0.6	PWR33.18	
<i>Digitaria brownii</i>	0.1	0.4	PWR33.09	
<i>Dodonaea coriacea</i>	0.1	0.5		
<i>Duperreya commixta</i>	0.1	0		
<i>Dysphania kalpari</i>	0.1	0.1	PWR33.12	
<i>Dysphania rhadinostachya</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.2	PWR33.27	
<i>Eragrostis eriopoda</i>	0.1	0.3		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	0.1	0.7		
<i>Eremophila lanceolata</i>	0.1	0.5	PWR33.13	
<i>Eremophila longifolia</i>	0.1	1.5		
<i>Eremophila margarethae</i>	0.1	1.6	PWR33.22	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Eriachne aristidea</i>	0.1	0.1	PWR26.07	
<i>Eriachne mucronata</i>	0.1	0.4	PWR33.10	
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	0.1	0.1	PWR26.02	
<i>Eucalyptus socialis</i>	0.1	4.5	PWR33.01	
<i>Eulalia aurea</i>	2	0.6		
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.1	PWR22.04	
<i>Euphorbia boophthona</i>	0.1	0.3	PWR22.08	
<i>Euploca tenuifolia</i>	0.1	0.1	PWR33.14	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.2		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gomphrena kanisii</i>	0.1	0.1	PWR26.09	
<i>Gomphrena lanata</i>	0.1	0.1	PWR33.06	
<i>Goodenia prostrata</i>	0.1	0.1	PWR33.08	
<i>Goodenia vilmorinae</i>	0.1	0.2	PWR22.20	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	2.4		
<i>Hibiscus burtonii</i>	0.1	0.4		
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.1	0.3	PWR33.24	
<i>Ipomoea calobra</i>	0.1	0	PWR33.11	
<i>Kennedia prorepens</i>	0.1	0.4	PWR33.07	
<i>Leichhardtia australis</i>	0.1	0		
<i>Maireana planifolia</i>	0.1	0.4	PWR33.15	
<i>Neurachne muelleri</i>	3	0.4		
<i>Panicum australiense</i> var. <i>australiense</i>	0.1	0.2	PWR22.11	
<i>Panicum effusum</i>	0.1	0.3	PWR33.04	
<i>Paspalidium rarum</i>	0.1	0.1	PWR33.16	
<i>Perotis rara</i>	0.1	0.1		
<i>Polycarpaea corymbosa</i> var. <i>corymbosa</i>	0.1	0.1	PWR33.02	
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Ptilotus calostachyus</i>	0.1	0.3		
<i>Ptilotus exaltatus</i>	0.1	0.4		
<i>Ptilotus gaudichaudii</i>	0.1	0.3		
<i>Ptilotus helipteroides</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.5		
<i>Salsola australis</i>	0.1	0.2		
<i>Schizachyrium fragile</i>	0.1	0.2	PWR33.03	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	1.5	PWR33.19	
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	0.1	0.5		
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida fibulifera</i>	0.1	0.2	PWR22.09	
<i>Sida platycalyx</i>	0.1	0.3		
<i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32)	0.1	0.3	PWR33.25	
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.2		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	0.2		
<i>Trianthema triquetrum</i>	0.1	0.1		
<i>Tribulopsis angustifolia</i>	0.1	0.1	PWR22.07	
<i>Tribulus astrocarpus</i>	0.1	0.1		
<i>Tribulus macrocarpus</i>	0.1	0.1	PWR22.05	
<i>Triodia basedowii</i>	15	0.6	PWR33.28	

Power 2030 Site PWR-34

Date 1/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 51
 207637 mE; 7409747 mN
 120.1395 E -23.395960 S

Veg Condition Very Good

Soil Silty Clay Loam

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Aristida inaequiglumis*, *Chrysopogon fallax* mid tussock grassland with *Acacia aptaneura*, *Corymbia candida* subsp. *candida*, *Eucalyptus xerothermica* low open woodland over *Dichanthium sericeum* subsp. *humilius*, *Dactyloctenium radulans* low sparse tussock grassland with *Alternanthera angustifolia* low sparse herbland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon cryptopetalum</i>	0.1	0.3	PWR34.40	
<i>Abutilon macrum</i>	0.1	0.5	PWR34.14	
<i>Abutilon otocarpum</i>	0.1	0.2	PWR22.14	
<i>Acacia aneura</i>	1	5	PWR34.31	
<i>Acacia aptaneura</i>	7	5	PWR34.29	
<i>Acacia colei</i>	0.1	1.2		
<i>Acacia tetragonophylla</i>	0.1	1.2		
<i>Alternanthera angustifolia</i>	2	0.1	PWR34.27	
<i>Amyema fitzgeraldii</i>	0.1	0	PWR34.28	
<i>Aristida contorta</i>	0.1	0.4	PWR34.37	
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.3	PWR22.16	
<i>Aristida inaequiglumis</i>	18	0.5	PWR26.12	
<i>Arivela viscosa</i>	0.1	0.3		
* <i>Bidens bipinnata</i>	2	0.3		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Boerhavia repleta</i>	0.1	0.2	PWR34.11	
<i>Calandrinia ptychosperma</i>	0.1	0.1	PWR34.23	
* <i>Cenchrus ciliaris</i>	2	0.5		
<i>Centipeda minima</i>	0.1	0.1		
<i>Chloris pumilio</i>	0.1	0.3	PWR34.16	
* <i>Chloris virgata</i>	0.1	0.5	PWR34.05	
<i>Chrysopogon fallax</i>	14	0.8		
* <i>Citrullus amarus</i>	0.1	0.1	PWR34.38	
<i>Convolvulus clementii</i>	0.1	0	PWR34.20	
<i>Corchorus tridens</i>	0.1	0.5	PWR34.03	
<i>Corymbia candida</i> subsp. <i>candida</i>	1	8		
<i>Cucumis variabilis</i>	0.1	0		
<i>Cyperus iria</i>	0.1	0.1	PWR34.22	
<i>Dactyloctenium radulans</i>	0.1	0.1		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Dendrophyllanthus erwinii</i>	0.1	0.1		
<i>Dichanthium sericeum</i> subsp. <i>humilius</i>	1	0.3	PWR34.21	
<i>Digitaria brownii</i>	0.1	0.5	PWR33.09	
<i>Digitaria ctenantha</i>	0.1	0.6	PWR34.34	
<i>Duperreya commixta</i>	0.1	0		
<i>Dysphania glomulifera</i> subsp. <i>eremaea</i>	0.1	0.1	PWR34.13	
<i>Dysphania rhadinostachya</i> subsp. <i>inflata</i>	0.1	0.1	PWR34.12	
<i>Enteropogon ramosus</i>	0.1	0.4	PWR34.04	
<i>Eragrostis cumingii</i>	0.1	0.2	PWR34.25	
<i>Eragrostis dielsii</i>	0.1	0.4	PWR34.02	
<i>Eragrostis leptocarpa</i>	0.1	0.3	PWR34.18	
<i>Eragrostis tenellula</i>	0.1	0.3	PWR34.19	
<i>Eriachne aristidea</i>	0.1	0.5	PWR34.39	
<i>Eriachne mucronata</i>	0.5	0.5	PWR33.10	
<i>Eucalyptus xerothermica</i>	2	11		
<i>Eulalia aurea</i>	0.1	0.4		
<i>Euphorbia boophthona</i>	0.1	0.2	PWR22.08	
<i>Euphorbia</i> sp. indet. (bi/tri)	0.1	0.2		
<i>Euploca tenuifolia</i>	0.1	0.1	PWR33.14	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gomphrena lanata</i>	0.1	0.1	PWR34.26	
<i>Goodenia prostrata</i>	0.1	0.1	PWR33.08	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	1.2		
<i>Indigofera colutea</i>	0.1	0.1		
<i>Indigofera linnaei</i>	0.1	0.1	PWR22.02	
<i>Ipomoea calobra</i>	0.1	0	PWR34.08	
<i>Iseilema membranaceum</i>	0.1	0.2	PWR34.07	
<i>Isotropis iophyta</i>	0.1	1		
* <i>Malvastrum americanum</i>	0.1	0.5		
<i>Marsilea exarata</i>	0.1	0.1	PWR34.01	
<i>Panicum effusum</i>	0.1	0.3	PWR33.04	
<i>Paspalidium clementii</i>	0.1	0.2	PWR34.24	
<i>Paspalidium rarum</i>	0.1	0.1	PWR33.16	
<i>Perotis rara</i>	0.1	0.1		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Pterocaulon sphacelatum</i>	0.1	0.1		
<i>Ptilotus aervoides</i>	0.1	0.1	PWR34.09	
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.6		
<i>Rhynchosia minima</i>	0.1	0.1		
<i>Rutidosia helichrysoides</i> subsp. <i>helichrysoides</i>	0.1	0.4	PWR34.35	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.6		
<i>Senna artemisioides</i> subsp. <i>helmsii</i> x <i>oligophylla</i>	0.1	1.4	PWR34.33	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	1.4	PWR33.19	
<i>Sida fibulifera</i>	0.1	0.2	PWR34.15	
<i>Sida platycalyx</i>	0.1	0.3		
<i>Sida</i> sp. Golden calyces glabrous (H.N. Foote 32)	0.1	0.1	PWR33.25	
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.2		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Spermacoce brachystema</i>	0.1	0.3	PWR34.10	
<i>Sporobolus australasicus</i>	0.1	0.1		
<i>Streptoglossa bubakii</i>	0.1	0.2		
<i>Synaptantha tillaeacea</i>	0.1	0.1	PWR34.17	
<i>Themeda triandra</i>	0.1	0.6		
<i>Trianthema triquetrum</i>	0.1	0.1		

Power 2030 Site PWR-35

Date 1/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 51
 208348 mE; 7409727 mN
 120.1465 E -23.396271 S

Veg Condition Very Good

Soil Sand

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Sand Plain

Vegetation *Triodia basedowii* low hummock grassland with *Eragrostis eriopoda*, *Neurachne muelleri* low tussock grassland with *Acacia ancistrocarpa*, *Acacia tetragonophylla* mid open shrubland with *Acacia pruinocarpa*, *Acacia aptaneura* tall sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>	0.1	0.2		
<i>Acacia ancistrocarpa</i>	7	2.3	PWR35.02	
<i>Acacia aptaneura</i>	4	3	PWR35.01	
<i>Acacia maitlandii</i>	0.1	2		
<i>Acacia pachyacra</i>	0.1	1.6		
<i>Acacia pruinocarpa</i>	2	4		
<i>Acacia tetragonophylla</i>	3	1.8		
<i>Acacia trudgeniana</i>	0.1	1.7		
<i>Afrohybanthus aurantiacus</i>	0.1	0.3		
<i>Amphipogon sericeus</i>	0.1	0.2		
<i>Aristida contorta</i>	0.1	0.2		
<i>Aristida holathera</i> var. <i>holathera</i>	2	0.5		
<i>Aristida inaequiglumis</i>	0.5	1.3		
<i>Aristida pruinosa</i>	0.1	0.7	PWR35.09	
<i>Arivela viscosa</i>	0.1	0.3		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Bonamia erecta</i>	0.1	0.3		
<i>Bulbostylis barbata</i>	0.1	0.1		
* <i>Cenchrus ciliaris</i>	0.1	0.3		
<i>Chrysopogon fallax</i>	0.1	1.2		
<i>Corchorus sidoides</i> subsp. <i>sidoides</i>	0.1	0.5	PWR35.07	
<i>Corymbia hamersleyana</i>	0.1	2.1		
<i>Dactyloctenium radulans</i>	0.1	0.1		
<i>Dicrastylis cordifolia</i>	0.1	0.4		
<i>Dodonaea coriacea</i>	0.1	0.5		
<i>Duperreya commixta</i>	0.1	0		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	0.1	0.4		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eragrostis dielsii</i>	0.1	0.4	PWR35.08	
<i>Eragrostis eriopoda</i>	31	0.4	PWR35.05	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	0.1	1.2	CROP.03	
<i>Eriachne aristidea</i>	0.1	0.2		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.2		
<i>Eulalia aurea</i>	0.1	0.3		
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.4	PWR35.04	
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.3	PWR30.04	
<i>Goodenia stobbsiana</i>	0.1	0.2		
<i>Goodenia triodiophila</i>	0.1	0.3		
<i>Goodenia vilmorinae</i>	0.1	0.4		
<i>Hakea chordophylla</i>	0.1	2		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	2.2		
<i>Hibiscus burtonii</i>	0.1	0.4		
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	0.1	1		
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.1	0.3		
<i>Indigofera monophylla</i>	0.1	0.2		
<i>Isotropis iophyta</i>	0.1	0.3		
<i>Melhania oblongifolia</i>	0.1	0.1		
<i>Neurachne muelleri</i>	18	0.5		
<i>Perotis rara</i>	0.1	0.1		
<i>Ptilotus calostachyus</i>	0.1	0.8		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Scaevola parvifolia</i> subsp. <i>pilbarae</i>	0.1	0.4		
<i>Sclerolaena cornishiana</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	1.6		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	2.7		
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	1	1.3		
<i>Senna notabilis</i>	0.1	0.1		
<i>Seringia exastia</i>	0.1	0.3		
<i>Sida arenicola</i>	0.1	1.1		
<i>Sida cardiophylla</i>	0.1	0.5	PWR35.06	
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.6		
<i>Solanum lasiophyllum</i>	0.1	0.1		
<i>Themeda triandra</i>	0.1	1		
<i>Trianthema pilosum</i>	0.1	0.1		
<i>Tribulopsis angustifolia</i>	0.1	0.1		
<i>Trigastrotheca molluginea</i>	0.1	0.1		
<i>Triodia basedowii</i>	42	1	PWR35.03	
<i>Triodia vanleeuwenii</i>	1	0.5		

Power 2030 Site PWR-36

Date 4/05/2024
Described by KJ, AS
Type Quadrat 50m x 50m
Location MGA Zone 51
 206372 mE; 7409948 mN
 120.1272 E -23.393916 S

Veg Condition Excellent

Soil Silty Clay Loam

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Chrysopogon fallax*, *Eulalia aurea* mid tussock grassland with *Acacia aptaneura*, *Acacia colei* var. *colei* tall sparse shrubland with *Corymbia candida* subsp. *candida* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon cryptopetalum</i>	0.1	0.3	PWR36.07	
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Abutilon macrum</i>	0.1	0.3	PWR36.08	
<i>Acacia ancistrocarpa</i>	0.1	2.4		
<i>Acacia aptaneura</i>	6	6	PWRR13.04	
<i>Acacia bivenosa</i>	0.1	1.6		
<i>Acacia colei</i>	2	2.5		
<i>Acacia dictyophleba</i>	0.1	1.5		
<i>Acacia maitlandii</i>	0.1	1.6		
<i>Acacia tetragonophylla</i>	0.1	1.8		
<i>Afrohybanthus aurantiacus</i>	0.1	0.4		
<i>Alternanthera nana</i>	0.1	0.2		
<i>Amyema fitzgeraldii</i>	0.1	0.1	PWR18.03	
<i>Aristida contorta</i>	0.1	0.2		
<i>Aristida inaequiglumis</i>	0.1	0.4		
<i>Arivela viscosa</i>	0.1	0.4		
* <i>Bidens bipinnata</i>	0.1	0.2		
* <i>Cenchrus ciliaris</i>	0.1	0.5		
<i>Chrysocephalum gilesii</i>	0.1	0.3	PWR36.04	
<i>Chrysopogon fallax</i>	20	0.7		
* <i>Citrullus colocynthis</i>	0.1	0.1		
<i>Convolvulus clementii</i>	0.1	0.1		
<i>Corchorus tridens</i>	0.1	0.1		
<i>Corymbia candida</i> subsp. <i>candida</i>	0.1	5		
<i>Corymbia deserticola</i>	0.1	7		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Cymbopogon obtectus</i>	0.1	0.3	PWR19.08	
* <i>Cynodon dactylon</i>	0.1	0.4	PWR36.12	
<i>Dactyloctenium radulans</i>	0.1	0.1		
<i>Dicrastylis cordifolia</i>	0.1	0.3	PWR36.14	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Digitaria brownii</i>	0.1	0.5	PWR36.11	
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.3		
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	0.1	1.8	PWR19.12	
<i>Eremophila lanceolata</i>	0.1	0.3		
<i>Eucalyptus repullulans</i>	0.1	4.5	PWR36.01	
<i>Eulalia aurea</i>	10	0.5		
<i>Euphorbia</i> sp. indet. (bi/tri)	0.1	0.1		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>decumbens</i>	0.1	0.3	PWR36.06	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.2	KJAS001.13	
<i>Goodenia triodiophila</i>	0.1	0.4	PWR36.05	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	1		
<i>Indigofera linnaei</i>	0.1	0.3		
<i>Ipomoea calobra</i>	0.1	0.1	PWR36.02	
<i>Iseilema dolichotrichum</i>	0.1	0.3	PWR36.09	
<i>Isotropis iophyta</i>	0.1	1		
* <i>Malvastrum americanum</i>	0.1	0.4		
<i>Neurachne muelleri</i>	2	0.4		
<i>Paspalidium rarum</i>	0.1	0.3	PWR36.10	
<i>Perotis rara</i>	0.1	0.1		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Pterocaulon sphacelatum</i>	0.1	0.4		
<i>Ptilotus exaltatus</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Rhynchosia minima</i>	0.1	0.1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.6		
<i>Senna notabilis</i>	0.1	0.3		
<i>Senna venusta</i>	0.1	0.1		
<i>Sesbania cannabina</i>	0.1	0.4		
<i>Sida fibulifera</i>	0.1	0.2	PWR18.01	
<i>Sida rohlena</i>	0.1	0.5		
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.3		
<i>Solanum lasiophyllum</i>	0.1	1		
<i>Streptoglossa decurrens</i>	0.1	0.3	PWR36.13	
<i>Tephrosia rosea</i> var. <i>Fortescue</i> creeks (M.I.H. Brooker 2186)	0.1	1.3		
<i>Themeda triandra</i>	0.1	0.6		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.3		
<i>Triodia pungens</i>	0.1	0.7		
<i>Vigna</i> sp. Hamersley Clay (A.A. Mitchell PRP 113)	0.1	0.1	PWR36.03	
<i>Waltheria indica</i>	0.1	0.7		

Power 2030 Site PWR-38

Date 1/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 51
 202112 mE; 7410258 mN
 120.0856 E -23.390353 S

Veg Condition Very Good

Soil Sandy Clay Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Sandy/ Stony Plain

Vegetation *Acacia pruinocarpa*, *Acacia aptaneura*, *Acacia catenulata* subsp. *occidentalis* tall shrubland over *Enneapogon polyphyllus*, *Neurachne muelleri* low sparse tussock grassland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	29	2.7	PWR38.01	
<i>Acacia catenulata</i> subsp. <i>occidentalis</i>	3	4.5		
<i>Acacia pruinocarpa</i>	4	4		
<i>Acacia trudgeniana</i>	0.1	0.7		
<i>Aristida contorta</i>	0.1	0.3		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.7		
<i>Arivela viscosa</i>	0.1	0.4		
* <i>Bidens bipinnata</i>	0.1	0.1		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Digitaria brownii</i>	0.1	0.3		
<i>Digitaria ctenantha</i>	0.1	0.3		
<i>Enneapogon polyphyllus</i>	2	0.5		
<i>Eragrostis eriopoda</i>	0.1	0.4	PWR35.05	
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	0.1	1.1		
<i>Eriachne aristidea</i>	0.1	0.5		
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	0.1	0.2		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.3	PWR30.04	
<i>Gomphrena lanata</i>	0.1	0.2	PWR38.02	
<i>Grevillea berryana</i>	0.5	3		
<i>Hibiscus burtonii</i>	0.1	0.3		
<i>Indigofera georgei</i>	0.1	0.1		
<i>Maireana planifolia</i>	0.1	0.2	PWR38.03	
<i>Neurachne muelleri</i>	4	0.3		
<i>Paspalidium clementii</i>	0.1	0.3	PWR27.03	
<i>Perotis rara</i>	0.1	0.2		
<i>Polygala glaucifolia</i>	0.1	0.2	PWR38.04	
<i>Portulaca oleracea</i>	0.1	0.1		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus gaudichaudii</i>	0.1	0.2		
<i>Ptilotus helipteroides</i>	0.1	0.4		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.4		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.5		
<i>Senna glaucifolia</i>	0.1	0.5		
<i>Senna notabilis</i>	0.1	0.2		
<i>Sida ectogama</i>	2	1.5		
<i>Sida fibulifera</i>	0.1	0.3		
<i>Sida platycalyx</i>	0.1	0.1		
<i>Solanum lasiophyllum</i>	0.1	0.6		
<i>Tribulus astrocarpus</i>	0.1	0		
<i>Tribulus suberosus</i>	0.1	0.8		
<i>Triodia basedowii</i>	0.1	0.4	PWR35.03	

Power 2030 Site.PWR-39

Date 4/05/2024
Described by CvdB, EL
Type Quadrat 50m x 50m
Location MGA Zone 51
 197557 mE; 7412451 mN
 120.0415 E -23.369727 S

Veg Condition Very Good

Soil Sandy Clay Loam

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Sand Plain

Vegetation *Acacia aptaneura*, *Acacia paraneura*, *Eremophila fraseri* subsp. *fraseri* tall sparse shrubland over *Triodia schinzii* low sparse hummock grassland over *Aristida contorta*, *Enneapogon polyphyllus*, *Eriachne aristidea* low sparse tussock grassland with *Arivela viscosa* low isolated herbs.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	0.2	3	PWRR31.03	
<i>Acacia paraneura</i>	0.5	3	PWRR31.01	
<i>Acacia tetragonophylla</i>	0.2	2.8		
<i>Aristida contorta</i>	1	0.2		
<i>Arivela viscosa</i>	1	0.3		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Dactyloctenium radulans</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	1	0.3		
<i>Eragrostis eriopoda</i>	0.1	0.3		
<i>Eremophila forrestii</i> subsp. <i>forrestii</i>	0.1	1		
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	0.5	2.6	PWR19.12	
<i>Eriachne aristidea</i>	0.2	0.2		
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	0.1	0.1		
<i>Euphorbia</i> aff. <i>ferdinandi</i>	0.1	0.1	PWR41.04	
<i>Euploca inexplicita</i>	0.1	0.1	PWR39.01	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gomphrena kanisii</i>	0.1	0.1		
* <i>Goodenia nuda</i>	0.1	0.2		
<i>Goodenia prostrata</i>	0.1	0.1		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	3.2		
<i>Hibiscus burtonii</i>	0.1	0.8		
<i>Hibiscus</i> sp. indet.	0.1	0.2		
<i>Indigofera colutea</i>	0.1	0.1		
<i>Maireana planifolia</i>	0.1	0.4		
<i>Perotis rara</i>	0.1	0.1		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Salsola australis</i>	0.1	0.2		
<i>Sclerolaena cornishiana</i>	0.1	0.2	PWR18.04	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.6		
<i>Sida platycalyx</i>	0.1	0.1		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	0.1	0.2		
<i>Trianthema triquetrum</i>	0.1	0.1	PWR39.02	
<i>Tribulus astrocarpus</i>	0.1	0.1		
<i>Triodia basedowii</i>	0.1	0.3		
<i>Triodia schinzii</i>	3	0.4		
<i>Triodia vanleeuwenii</i>	0.1	0.2		

Power 2030 Site PWR-40

Date 1/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 51
 197720 mE; 7411725 mN
 120.0430 E -23.376310 S

Veg Condition Very Good

Soil Clayey Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Acacia aptaneura*, *Acacia tetragonophylla*, *Acacia wanyu* tall shrubland over *Triodia pungens* low hummock grassland with *Themeda triandra*, *Eragrostis eriopoda* low tussock grassland with *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia*, *Eucalyptus gamophylla* low open woodland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>	0.1	0.2		
<i>Acacia ancistrocarpa</i>	0.1	0.6		
<i>Acacia aptaneura</i>	45	4	PWR38.01	
<i>Acacia ayersiana</i>	0.1	2.5		
<i>Acacia bivenosa</i>	0.1	2		
<i>Acacia tetragonophylla</i>	1	2.2		
<i>Acacia wanyu</i>	4	1		
<i>Afrohybanthus aurantiacus</i>	0.5	0.5		
<i>Aristida contorta</i>	0.1	0.4		
<i>Aristida holathera</i> var. <i>holathera</i>	0.2	0.3		
<i>Aristida pruinosa</i>	0.5	1.3	PWR35.09	
<i>Arivela viscosa</i>	0.1	0.4		
* <i>Bidens bipinnata</i>	0.5	0.2		
<i>Boerhavia coccinea</i>	0.1	0.1		
<i>Bonamia erecta</i>	0.1	0.2		
* <i>Cenchrus ciliaris</i>	0.5	1		
<i>Corchorus sidoides</i> subsp. <i>sidoides</i>	0.1	0.4	PWR35.07	
<i>Corymbia hamersleyana</i>	6	4		
<i>Cymbopogon ambiguus</i>	0.1	0.7		
<i>Digitaria brownii</i>	0.5	0.5		
<i>Duperreya commixta</i>	0.1	0		
<i>Enchylaena tomentosa</i> var. <i>tomentosa</i>	0.1	0.5		
<i>Enneapogon caerulescens</i>	0.1	0.4	PWR40.03	
<i>Enneapogon polyphyllus</i>	0.1	0.7	PWR40.02	
<i>Eragrostis eriopoda</i>	18	0.6	PWR35.05	
<i>Eremophila cuneifolia</i>	0.1	0.5		
<i>Eremophila latrobei</i> subsp. <i>latrobei</i>	0.1	1.2		
<i>Eriachne aristidea</i>	0.1	0.2		
<i>Eriachne mucronata</i>	0.5	0.6		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Eucalyptus gamophylla</i>	2	4		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	4	4		
<i>Eulalia aurea</i>	0.1	0.7		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	1	0.1		
<i>Gomphrena kanisii</i>	0.1	0.2	PWR30.04	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	0.5		
<i>Hibiscus burtonii</i>	1	0.5		
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	1	0.3		
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.5	0.4		
<i>Indigofera monophylla</i>	2	0.6		
<i>Neurachne muelleri</i>	2	0.5		
<i>Perotis rara</i>	0.1	0.1		
<i>Polygala glaucifolia</i>	0.1	0.1	PWR38.04	
<i>Psydrax suaveolens</i>	0.1	2.7		
<i>Ptilotus exaltatus</i>	0.1	0.5		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.2		
<i>Santalum lanceolatum</i>	0.1	0.2		
<i>Schizachyrium fragile</i>	0.1	0.5		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.4		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.4		
<i>Senna glaucifolia</i>	0.1	1.2		
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	1	1.8	PWR40.01	
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida cardiophylla</i>	0.5	0.7	PWR35.06	
<i>Sida fibulifera</i>	0.1	0.1		
<i>Sida platycalyx</i>	0.1	0.2		
<i>Sida</i> sp. dark green fruits (S. van Leeuwen 2260)	0.1	0.3		
<i>Sida</i> sp. indet. 3	0.1	0.7		
<i>Solanum cleistogamum</i>	0.1	0.2		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Sporobolus australasicus</i>	0.1	0.2		
<i>Themeda triandra</i>	15	0.7		
<i>Tribulus macrocarpus</i>	0.1	0.1	PWR28.02	
<i>Tribulus suberosus</i>	0.1	0.3		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.2		
<i>Triodia pungens</i>	38	0.6		
<i>Triodia vanleeuwenii</i>	1.5	0.3		
<i>Vincetoxicum lineare</i>	0.1	0		

Power 2030 Site PWR-41

Date 4/05/2024
Described by CvdB, EL
Type Quadrat 50m x 50m
Location MGA Zone 51
 197605 mE; 7411035 mN
 120.0417 E -23.382516 S

Veg Condition Very Good

Soil Silty Clay Loam

Rock Type Dolerite

Fire Age Old (6+ yr)

Habitat Hardpan Plain

Vegetation *Acacia paraneura*, *Acacia citrinoviridis*, *Acacia pruinocarpa* low open woodland to low isolated patches of trees over *Eremophila fraseri* subsp. *fraseri*, *Acacia tetragonophylla*, *Senna glaucifolia* mid isolated shrubs over dense patches of tussock grasses.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>	0.1	0.2		
<i>Acacia citrinoviridis</i>	5	6.5	PWRR31.02	
<i>Acacia paraneura</i>	3	5.5	PWRR31.01	
<i>Acacia pruinocarpa</i>	2	5		
<i>Acacia tetragonophylla</i>	0.1	1.6		
<i>Alternanthera nodiflora</i>	0.1	2		
<i>Anthobolus leptomerioides</i>	0.1	0.2		
<i>Aristida contorta</i>	0.5	0.1		
<i>Aristida inaequiglumis</i>	0.5	0.4		
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3)	0.1	0.4	PWRR31.05	
<i>Arivela viscosa</i>	0.1	0.1		
* <i>Bidens bipinnata</i>	0.2	0.2		
<i>Boerhavia coccinea</i>	0.1	0.2		
<i>Calandrinia ?eremaea</i>	0.1	0.1		
<i>Calandrinia stagnensis</i>	0.2	0.1	PWR41.03	
<i>Cheilanthes sieberi</i>	0.1	0.1		
<i>Cucumis variabilis</i>	0.1	0		
<i>Digitaria ammophila</i>	5	0.2		
<i>Digitaria brownii</i>	0.1	0.2	PWR41.02	
<i>Digitaria ctenantha</i>	2	0.3		
<i>Dysphania kalpari</i>	0.1	0.1		
<i>Dysphania melanocarpa</i>	0.1	0.2		
<i>Enneapogon polyphyllus</i>	0.5	0.3		
<i>Eragrostis cumingii</i>	5	0.2	PWRR31.04	
<i>Eragrostis dielsii</i>	0.1	0.1		
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>	0.2	1.5	PWR19.12	
<i>Eremophila latrobei</i> subsp. <i>filiformis</i>	0.1	1.1		
<i>Eriachne aristidea</i>	0.1	0.2		
<i>Euphorbia</i> aff. <i>ferdinandi</i>	0.1	0.1	PWR41.04	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Euphorbia</i> sp. indet. (bi/tri)	0.1	0.1		
<i>Euploca tenuifolia</i>	0.1	0.1		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gomphrena affinis</i>	0.1	1		
<i>Gomphrena kanisii</i>	0.1	0		
<i>Goodenia prostrata</i>	0.1	0.1		
<i>Hibiscus burtonii</i>	0.1	0.6		
<i>Ipomoea calobra</i>	0.1	0	PWRR31.06	
<i>Iseilema membranaceum</i>	0.1	0.1	PWRR31.08	
<i>Isotropis iophyta</i>	0.1	0.3		
<i>Maireana planifolia</i>	0.1	0.3		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Paspalidium basicladum</i>	0.1	0.2		
<i>Perotis rara</i>	1	0.1		
<i>Portulaca cyclophylla</i>	0.1	0.1		
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Psydrax latifolia</i>	0.1	1.5		
<i>Psydrax suaveolens</i>	0.1	0.8		
<i>Ptilotus calostachyus</i>	0.1	0.2		
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus helipteroides</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.6		
<i>Ptilotus roei</i>	0.1	0.1		
<i>Ptilotus schwartzii</i> var. <i>schwartzii</i>	0.1	0.3		
<i>Salsola australis</i>	0.1	0.1		
<i>Schizachyrium fragile</i>	2	0.2		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.7		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.3		
<i>Senna glaucifolia</i>	0.1	1.8		
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida ectogama</i>	0.1	0.3		
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.2		
<i>Solanum lasiophyllum</i>	0.1	0.2		
<i>Trianthema glossostigmum</i>	0.1	0.1	PWR41.01	
<i>Tribulus astrocarpus</i>	0.1	0.1		
<i>Wahlenbergia gracilentia</i>	0.1	0.3		

Power 2030 Site PWR-43

Date 4/05/2024
Described by KJ, AS
Type Quadrat 50m x 50m
Location MGA Zone 51
 195723 mE; 7414298 mN
 120.0240 E -23.352729 S

Veg Condition Excellent

Soil Sandy Clay Loam

Rock Type Shale

Fire Age Old (6+ yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia pungens*, *Triodia vanleeuwenii* low open hummock grassland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	0.1	2.5	PWR43.01	
<i>Acacia bivenosa</i>	0.1	3.7		
<i>Acacia tetragonophylla</i>	0.1	2.5		
<i>Corchorus lasiocarpus</i>	0.1	0.4	PWR43.02	
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)	0.1	0.2	PWR43.07	
<i>Eremophila exilifolia</i>	0.1	0.4		
<i>Eriachne mucronata</i>	0.1	0.4		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	0.5	2.5		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Goodenia muelleriana</i>	0.1	0.2	PWR43.03	
<i>Goodenia stobbsiana</i>	0.1	0.1		
<i>Goodenia triodiophila</i>	0.1	0.3		
<i>Maireana ?georgei</i>	0.1	0.2	PWR43.05	
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Ptilotus calostachyus</i>	0.1	0.4		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.6		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	0.4		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	0.8		
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>	0.1	2		
<i>Senna stricta</i>	0.1	1	PWR43.04	
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.1	PWR19.05	
<i>Solanum centrale</i>	0.1	0.3	PWR43.06	
<i>Solanum lasiophyllum</i>	0.1	0.2		
<i>Tribulus suberosus</i>	0.1	0.3		
<i>Triodia pungens</i>	8	0.4		
<i>Triodia vanleeuwenii</i>	4	0.2		

Power 2030 Site PWR-45

Date 5/05/2024
Described by KJ, AS
Type Quadrat 100m x 25m
Location MGA Zone 51
 195881 mE; 7417151 mN
 120.0261 E -23.327020 S

Veg Condition Excellent

Soil Sandy Clay Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Gully

Vegetation *Triodia pungens* mid sparse hummock grassland with *Cymbopogon ambiguus*,
Eriachne mucronata mid sparse tussock grassland with *Eucalyptus leucophloia*
 subsp. *leucophloia*, *Ficus brachypoda* low isolated trees over *Acacia monticola* tall
 sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Acacia citrinoviridis</i>	0.1	1.5		
<i>Acacia maitlandii</i>	0.1	1.5		
<i>Acacia monticola</i>	3	4.5		
<i>Acacia pruinocarpa</i>	0.1	1.5		
<i>Bulbostylis barbata</i>	0.1	0.1		
<i>Clerodendrum floribundum</i>	0.1	1		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Cymbopogon ambiguus</i>	5	0.5		
<i>Cyperus cunninghamii</i>	0.1	0.3		
<i>Dodonaea coriacea</i>	0.1	2.3	PWR51.02	
<i>Dolichocarpa crouchiana</i>	0.1	0.1		
<i>Eriachne mucronata</i>	3	0.3		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	2	6.5		
<i>Ficus brachypoda</i>	2	5.5		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gomphrena cunninghamii</i>	0.1	0.1		
<i>Goodenia stobbsiana</i>	0.1	0.1		
<i>Gossypium robinsonii</i>	0.1	2.5		
<i>Grevillea wickhamii</i>	2	4.5		
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Maireana</i> ? <i>planifolia</i>	0.1	0.3	PWR45.03	
<i>Nicotiana</i> ? <i>karijini</i>	0.1	0.1	PWR45.02	
<i>Paspalidium clementii</i>	0.1	0.1		
<i>Petalostylis labicheoides</i>	0.1	3.8		
<i>Psyrax latifolia</i>	0.1	1		
<i>Santalum lanceolatum</i>	0.1	1.5	PWR45.01	
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	0.9		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.3	PWR19.05	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.5	0.6		
<i>Solanum cleistogamum</i>	0.1	0.3		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.2		
<i>Triodia pungens</i>	6	0.3		
<i>Triumfetta maconochieana</i>	0.1	0.4	PWR45.04	

Power 2030 Site PWR-46

Date 2/05/2024
Described by CJW, RO
Type Quadrat 100m x 25m
Location MGA Zone 51
 195307 mE; 7417541 mN
 120.0206 E -23.323398 S
Veg Condition Excellent
Soil Sand
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Gully



Vegetation *Triodia pungens* low hummock grassland with *Grevillea wickhamii*, *Petalostylis labicheoides*, *Acacia hamersleyensis* tall open shrubland with *Corymbia ferriticola*, *Eucalyptus leucophloia* subsp. *leucophloia* low open woodland over *Eriachne mucronata*, *Cymbopogon ambiguus* low sparse tussock grassland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.1		
<i>Acacia hamersleyensis</i>	2	1.8	PWR48.02	
<i>Acacia maitlandii</i>	0.1	1.4		
<i>Acacia pruinocarpa</i>	0.1	3.5		
<i>Amaranthus cuspidifolius</i>	0.1	0.2	PWR06.02	
<i>Arivela viscosa</i>	0.1	0.1		
<i>Bulbostylis barbata</i>	0.1	0.1		
<i>Clerodendrum floribundum</i>	0.1	0.3		
<i>Corymbia ferriticola</i>	2	3		
<i>Cymbopogon ambiguus</i>	0.5	0.7		
<i>Dicrastylis cordifolia</i>	0.1	0.5		
<i>Dodonaea coriacea</i>	0.1	0.8		
<i>Dodonaea pachyneura</i>	0.1	0.8		
<i>Dolichocarpa crouchiana</i>	0.1	0.1		
<i>Dysphania</i> sp. indet.	0.1	0.3		
<i>Enneapogon polyphyllus</i>	0.1	0.1		
<i>Eriachne lanata</i>	0.1	0.4		
<i>Eriachne mucronata</i>	3	0.5		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	5	4		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.1		
<i>Euphorbia boophthona</i>	0.1	0.4		
<i>Gompholobium oreophilum</i>	0.1	0.4		
<i>Goodenia stobbsiana</i>	0.1	0.1		
<i>Gossypium robinsonii</i>	0.5	2.1		
<i>Grevillea wickhamii</i>	6	3.5		
<i>Indigofera monophylla</i>	0.1	0.4		
<i>Lysiana</i> sp. indet.	0.1	0		In <i>Grevillea wickhamii</i>
<i>Mirbelia viminalis</i>	0.1	0.4		
<i>Nicotiana benthamiana</i>	0.1	0.2	PWR06.01	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Paspalidium clementii</i>	0.1	0.3	PWR06.03	
<i>Petalostylis labicheoides</i>	2	2.1		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	1.2		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1.8		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.4	PWR48.05	
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.4	PWR48.03	
<i>Solanum cleistogamum</i>	0.1	0.3		
<i>Solanum phlomoides</i>	0.1	0.3		
<i>Triodia pungens</i>	42	0.7		

Power 2030 Site PWR-47

Date 2/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 51
 197724 mE; 7417999 mN
 120.0443 E -23.319711 S

Veg Condition Excellent

Soil Sandy Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia vanleeuwenii*, *Triodia melvillei* low hummock grassland with *Acacia hilliana*, *Calytrix carinata* *Acacia adoxa* var. *adoxo* low sparse shrubland with *Corymbia hamersleyana*, *Eucalyptus kingsmillii*, *Eucalyptus gamophylla* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	1	0.3		
<i>Acacia hamersleyensis</i>	0.1	2.5	PWR48.02	
<i>Acacia hilliana</i>	3	0.3		
<i>Acacia maitlandii</i>	0.1	0.3		
<i>Acacia marramamba</i>	0.1	1.8		
<i>Amphipogon sericeus</i>	0.1	0.3		
<i>Aristida contorta</i>	0.1	0.2		
<i>Calytrix carinata</i>	1.5	0.5		
<i>Corymbia hamersleyana</i>	2	5		
<i>Cymbopogon oblectus</i>	0.1	0.7		
<i>Dicrastylis cordifolia</i>	0.1	0.3		
<i>Eragrostis eriopoda</i>	0.1	0.5	PWR47.02	
<i>Eriachne lanata</i>	0.1	0.4		
<i>Eriachne mucronata</i>	0.1	0.3		
<i>Eucalyptus gamophylla</i>	0.5	3.5		
<i>Eucalyptus kingsmillii</i>	1	3.5		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gompholobium oreophilum</i>	0.1	0.4		
<i>Goodenia stobbsiana</i>	0.5	0.3		
<i>Goodenia triodiophila</i>	0.1	0.3		
<i>Grevillea wickhamii</i>	0.1	1.3		
<i>Hakea chordophylla</i>	0.1	2.5		
<i>Hibiscus sturtii</i>	0.1	0.2		
<i>Lamarchea sulcata</i>	0.5	1.2		
<i>Petalostylis labicheoides</i>	0.1	1.1		
<i>Ptilotus astrolasius</i>	0.1	0.4		
<i>Ptilotus calostachyus</i>	0.1	0.7		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.5	PWR48.05	
<i>Triodia melvillei</i>	4	0.8	PWR47.01	
<i>Triodia vanleeuwenii</i>	38	0.5		

Power 2030 Site PWR-48

Date 2/05/2024
Described by CJW, RO
Type Quadrat 100m x 25m
Location MGA Zone 51
 197571 mE; 7417824 mN
 120.0428 E -23.321264 S
Veg Condition Excellent
Soil Sand
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Gully



Vegetation *Triodia pungens*, *Triodia* sp. Mt Ella (M.E. Trudgen 12739) (P3) low hummock grassland with *Corymbia ferritcola*, *Eucalyptus leucophloia* subsp. *leucophloia* low woodland over *Eriachne mucronata*, *Cymbopogon ambiguus* low sparse tussock grassland with *Acacia hamersleyensis*, *Petalostylis labicheoides*, *Grevillea wickhamii* mid sparse shrubland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.1		
<i>Acacia aneura</i>	0.1	2.2	PWR48.07	
<i>Acacia hamersleyensis</i>	3.5	2	PWR48.02	
<i>Acacia maitlandii</i>	0.1	0.2		
<i>Bulbostylis barbata</i>	0.1	0.1		
<i>Cheilanthes brownii</i>	0.1	0.1	PWR48.08	
<i>Corymbia ferritcola</i>	2.5	3	PWR48.01	
<i>Cucumis variabilis</i>	0.1	0		
<i>Cymbopogon ambiguus</i>	0.5	0.7		
<i>Dodonaea pachyneura</i>	0.1	0.7		
<i>Duperreya commixta</i>	0.1	0		
<i>Enneapogon polyphyllus</i>	0.1	0.3		
<i>Eriachne mucronata</i>	5	0.4		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	4	4		
<i>Euphorbia biconvexa</i>	0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.3		
<i>Gomphrena cunninghamii</i>	0.1	0.1		
<i>Goodenia stobbsiana</i>	0.1	0.2		
<i>Grevillea wickhamii</i>	0.1	2		
<i>Petalostylis labicheoides</i>	0.5	2.5		
<i>Pterocaulon</i> sp. indet.	0.1	0.1		
<i>Ptilotus exaltatus</i>	0.1	0.2		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3	PWR48.04	
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1.1		
<i>Senna venusta</i>	0.1	0.6		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.3	PWR48.05	
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.3	PWR48.03	
<i>Solanum cleistogamum</i>	0.1	0.3		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Solanum phlomoides</i>	0.1	0.4		
<i>Streptoglossa decurrens</i>	0.1	0.2		
<i>Tephrosia oxalidea</i>	0.1	0.4	PWR48.06	
<i>Themeda triandra</i>	0.5	0.7		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.6		
<i>Triodia pungens</i>	34	0.4		
<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3)	11	0.7	CROP.06	

Power 2030 Site PWR-51

Date 5/05/2024
Described by KJ, AS
Type Quadrat 100m x 25m
Location MGA Zone 51
 194437 mE; 7417324 mN
 20.0120 E -23.325192 S
Veg Condition Excellent
Soil Sandy Clay Loam
Rock Type BIF
Fire Age Moderate (3 to 5 yr)
Habitat Gully
Vegetation



Triodia pungens low open hummock grassland with *Acacia aptaneura*, *Acacia pruinocarpa* tall open shrubland over *Eriachne mucronata*, *Cymbopogon ambiguus* low sparse tussock grassland with *Dodonaea coriacea* mid sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Sida sp.* Shovelanna Hill (S. van Leeuwen 3842) low isolated shrubs.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Acacia aptaneura</i>	6	7	PWR51.01	
<i>Acacia bivenosa</i>	0.1	1.8		
<i>Acacia maitlandii</i>	0.1	1.4		
<i>Acacia pruinocarpa</i>	5	3.8		
<i>Amaranthus cuspidifolius</i>	0.1	0.2	PWR51.07	
<i>Amphipogon sericeus</i>	0.1	0.2		
<i>Androcalva luteiflora</i>	0.1	1.2	PWR51.06	
<i>Aristida inaequiglumis</i>	0.1	0.4		
<i>Arivela viscosa</i>	0.1	0.2		
<i>Centipeda minima</i>	0.1	0.1		
<i>Clerodendrum floribundum</i>	0.1	1.3		
<i>Codonocarpus cotinifolius</i>	0.1	1.7		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Cymbopogon ambiguus</i>	0.5	0.4		
<i>Dampiera candicans</i>	0.1	0.4		
<i>Dicrastylis cordifolia</i>	0.1	0.5	PWR51.05	
<i>Dodonaea coriacea</i>	2.5	2.3	PWR51.02	
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eragrostis tenellula</i>	0.1	0.2		
<i>Eriachne mucronata</i>	4	0.3		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	0.5	6		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.2		
<i>Ficus brachypoda</i>	0.1	0.6		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gompholobium oreophilum</i>	0.5	0.1		
<i>Gomphrena cunninghamii</i>	0.1	0.2		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Goodenia stobbsiana</i>	0.1	0.3		
<i>Grevillea wickhamii</i>	0.1	1.8		
<i>Neurachne muelleri</i>	0.5	0.3		
<i>Paspalidium clementii</i>	0.1	0.1		
<i>Petalostylis labicheoides</i>	0.1	2.2		
<i>Psydrax latifolia</i>	0.1	0.5		
<i>Ptilotus astrolasius</i>	0.1	0.4		
<i>Ptilotus calostachyus</i>	0.1	0.4		
<i>Ptilotus exaltatus</i>	0.1	0.4		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Salsola australis</i>	0.1	0.2		
<i>Santalum lanceolatum</i>	0.1	0.5		
<i>Sclerolaena ?cornishiana</i>	0.1	0.4	PWR51.04	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.4		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1.9		
<i>Senna venusta</i>	0.1	0.4		
<i>Seringia nephrosperma</i>	0.1	0.6		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.3	PWR19.05	
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.4		
<i>Solanum cleistogamum</i>	0.5	0.5		
<i>Solanum lasiophyllum</i>	0.1	0.7		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.1		
<i>Triodia pungens</i>	18	0.5		
<i>Triodia vanleeuwenii</i>	0.1	0.3		

Power 2030 Site PWR-52

Date 2/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 51
 196479 mE; 7416969 mN
 120.0319 E -23.328780 S

Veg Condition Excellent

Soil Silty Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Hillslope

Vegetation *Triodia vanleeuwenii*, *Triodia pungens* low sparse hummock grassland with *Acacia hilliana*, *Acacia adoxa* var. *adoxa* low sparse shrubland with *Petalostylis labicheoides*, *Acacia maitlandii* tall sparse shrubland with *Corymbia hamersleyana* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxa</i>	3	0.3		
<i>Acacia hilliana</i>	3	0.3		
<i>Acacia maitlandii</i>	1	2		
<i>Acacia pruinocarpa</i>	0.1	3		
<i>Aristida contorta</i>	0.1	0.1	PWR52.04	
<i>Calytrix carinata</i>	0.1	0.6		
<i>Corchorus crozophorifolius</i>	0.1	0.3	PWR26.15	
<i>Corymbia hamersleyana</i>	1	9		
<i>Dampiera candicans</i>	0.1	0.1		
<i>Dicrastylis cordifolia</i>	0.1	0.5	PWR33.18	
<i>Enneapogon caerulescens</i>	0.1	0.1	PWR52.04	
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)	0.1	0.3	PWR52.05	
<i>Eremophila exilifolia</i>	0.1	1		
<i>Eriachne aristidea</i>	0.1	0.1	PWR26.07	
<i>Eriachne lanata</i>	0.1	0.3	PWRR26.04	
<i>Eriachne pulchella</i> subsp. <i>dominii</i>	0.1	0.1	PWR26.02	
<i>Euphorbia australis</i> var. <i>hispidula</i>	0.1	0.4	PWR22.04	
<i>Euphorbia boophthona</i>	0.1	0.2	PWR22.08	
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Fimbristylis dichotoma</i>	0.5	0.2		
<i>Gomphrena kanisii</i>	0.1	0.1	PWR26.09	
<i>Goodenia triodiophila</i>	0.1	0.3	PWRR26.06	
<i>Grevillea wickhamii</i>	0.1	1.6		
<i>Indigofera monophylla</i>	0.1	0.4		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Paspalidium clementii</i>	0.1	0.1	PWR26.03	
<i>Petalostylis labicheoides</i>	1	2.2		
<i>Portulaca cyclophylla</i>	0.1	0.1	PWRR26.03	
<i>Psyrax latifolia</i>	0.1	0.8		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Ptilotus astrolasius</i>	0.1	0.2		
<i>Ptilotus calostachyus</i>	0.1	0.4		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Schizachyrium fragile</i>	0.1	0.1	PWR33.03	
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	0.8		
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.2	PWR52.01	
<i>Solanum horridum</i>	0.1	0.2	PWR52.02	
<i>Triodia pungens</i>	1	0.5		
<i>Triodia vanleeuwenii</i>	8	0.3		
<i>Waltheria virgata</i>	0.1	0.4	PWRR26.02	

Power 2030 Site PWR-53

Date 2/05/2024
Described by CJW, RO
Type Quadrat 50m x 50m
Location MGA Zone 51
 193857 mE; 7417229 mN
 120.0064 E -23.325946 S

Veg Condition Very Good

Soil Loamy Sand

Rock Type BIF

Fire Age Moderate (3 to 5 yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia vanleeuwenii* low open hummock grassland with *Acacia hilliana*, *Halgania gustafsenii* var. *gustafsenii*, *Waltheria virgata*, *Acacia adoxa* var. *adoxo* low open shrubland with *Petalostylis labicheoides*, *Senna glutinosa* subsp. *glutinosa*, *Grevillea wickhamii* mid sparse shrubland with *Corymbia hamersleyana*, *Hakea chordophylla* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.5	0.3		
<i>Acacia hilliana</i>	4	0.4		
<i>Acacia maitlandii</i>	0.1	0.6		
<i>Afrohybanthus aurantiacus</i>	0.1	0.4		
<i>Aristida contorta</i>	0.1	0.2		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.6		
<i>Aristida inaequiglumis</i>	0.1	0.7	PWRR27.01	
<i>Calytrix carinata</i>	1	0.6		
<i>Corchorus lasiocarpus</i> subsp. <i>parvus</i>	0.1	0.6		
<i>Corymbia hamersleyana</i>	2	4.5		
<i>Cymbopogon ambiguus</i>	0.1	0.6		
<i>Dampiera candicans</i>	0.1	0.6		
<i>Dicrastylis cordifolia</i>	0.1	0.5		
<i>Enneapogon</i> sp. indet.	0.1	0.3		
<i>Eragrostis eriopoda</i>	0.1	0.5	PWR47.02	
<i>Eremophila exilifolia</i>	0.1	0.6		
<i>Eriachne mucronata</i>	0.1	0.5		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.1		
<i>Euphorbia boophthona</i>	0.1	0.3		
<i>Euploca</i> sp. indet.	0.1	0.2		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.3		
<i>Fimbristylis dichotoma</i>	0.1	0.3		
<i>Goodenia triodiophila</i>	0.1	0.4		
<i>Gossypium robinsonii</i>	0.1	0.7		
<i>Grevillea wickhamii</i>	0.1	1.3		
<i>Hakea chordophylla</i>	1	3.5		
<i>Halgania gustafsenii</i> var. <i>gustafsenii</i>	4	0.3		
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.5	0.3		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Indigofera monophylla</i>	0.1	0.4		
<i>Petalostylis labicheoides</i>	2	1.7		
<i>Ptilotus calostachyus</i>	0.1	0.7		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	0.3		
<i>Schizachyrium fragile</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.6		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.5	1.4		
<i>Senna glutinosa</i> subsp. <i>*luerksenii</i>	0.1	1.3		
<i>Seringia nephrosperma</i>	0.1	0.2		
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.4	PWR48.03	
<i>Solanum lasiophyllum</i>	0.1	0.6		
<i>Stackhousia</i> sp. swollen gynophore (W.R. Barker 2041)	0.1	0.2	PWR53.01	
<i>Triodia melvillei</i>	1	1.2	PWR47.01	
<i>Triodia vanleeuwenii</i>	25	0.3		
<i>Waltheria virgata</i>	3	0.4		

Power 2030 Site PWR-60

Date 2/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 51
 195796 mE; 7416953 mN
 120.0252 E -23.328798 S
Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Hillslope
Vegetation



Triodia vanleeuwenii, *Triodia pungens* low to mid open hummock grassland with
Corymbia hamersleyana low open woodland over *Grevillea wickhamii* subsp.
hispidula tall sparse shrubland over *Mirbelia viminalis* mid sparse shrubland over
Acacia adoxa var. *adoxo*, *Acacia hilliana* low sparse shrubland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	1.5	0.5		
<i>Acacia hilliana</i>	0.5	0.3		
<i>Acacia maitlandii</i>	0.1	2		
<i>Acacia pruinocarpa</i>	0.1	0.3		
<i>Afrohybanthus aurantiacus</i>	0.1	0.4		
<i>Aristida contorta</i>	0.1	0.4	PWR52.04	
<i>Calytrix carinata</i>	0.1	0.8		
<i>Codonocarpus cotinifolius</i>	0.1	1.5		
<i>Corymbia hamersleyana</i>	4	7		
<i>Dicrastylis cordifolia</i>	0.1	0.5	PWR33.18	
<i>Dodonaea coriacea</i>	0.1	1		
<i>Eragrostis eriopoda</i>	0.1	0.15	PWR26.18	
<i>Eriachne lanata</i>	0.5	0.3	PWRR26.04	
<i>Eriachne mucronata</i>	0.1	0.3		
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gompholobium oreophilum</i>	0.1	0.4		
<i>Goodenia triodiophila</i>	0.1	0.4	PWRR26.06	
<i>Gossypium robinsonii</i>	0.1	1.6		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	1	2	PWR60.03	
<i>Hakea chordophylla</i>	0.1	2.5		
<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)	0.5	0.4	PWRR26.01	
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.1	0.4	PWR33.24	
<i>Indigofera monophylla</i>	0.1	0.5		
<i>Isotropis parviflora</i> (P3)	0.1	0.1	PWR60.01	
<i>Leiocarpa semicalva</i>	0.1	0.3	PWRR26.07	
<i>Mirbelia viminalis</i>	1	1		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Petalostylis labicheoides</i>	0.1	1.8		
<i>Ptilotus calostachyus</i>	0.1	0.8		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	0.4	PWRR26.05	
<i>Schizachyrium fragile</i>	0.1	0.1	PWR33.03	
<i>Seringia exastia</i>	0.5	0.5	PWR60.02	
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.3	PWR52.01	
<i>Solanum horridum</i>	0.1	0.15	PWR52.02	
<i>Solanum lasiophyllum</i>	0.1	0.1	PWR26.06	
<i>Stackhousia</i> sp. indet.	0.1	0.1	KG.PWR.01	
<i>Triodia melvillei</i>	0.1	0.6	PWR60.04	
<i>Triodia pungens</i>	6	0.6		
<i>Triodia vanleeuwenii</i>	6	0.3		
<i>Waltheria virgata</i>	0.1	0.3	PWRR26.02	

Power 2030 Site PWR-61

Date 5/05/2024
Described by CvdB, EL
Type Quadrat 50m x 50m
Location MGA Zone 51
 195081 mE; 7417047 mN
 120.0183 E -23.327815 S
Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Hillcrest/ Upper Hillslope
Vegetation



Triodia vanleeuwenii, *Triodia pungens* low hummock grassland with *Corymbia hamersleyana* low open woodland over *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*, *Dodonaea coriacea* mid to tall sparse shrubland over *Acacia hilliana*, *Acacia adoxa* var. *adoxo*, *Dampiera candidans*, *Gompholobium oreophilum* low sparse shrubland with *Eriachne lanata*, *Eriachne mucronata* low isolated tussock grasses.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.5	0.3		
<i>Acacia hilliana</i>	1	0.3		
<i>Acacia pruinocarpa</i>	0.1	1		
<i>Afrohybanthus aurantiacus</i>	0.1	0.1		
<i>Aristida contorta</i>	0.1	0.2		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.1		
<i>Aristida inaequiglumis</i>	0.1	0.4	PWR61.06	
<i>Calytrix carinata</i>	0.1	0.5		
<i>Cheilanthes brownii</i>	0.1	0.1		
<i>Corymbia hamersleyana</i>	2	4.5		
<i>Cymbopogon ambiguus</i>	0.1	0.3		
<i>Cymbopogon obtectus</i>	0.1	0.3	PWR61.07	
<i>Dampiera candidans</i>	0.2	0.3		
<i>Dicrastylis cordifolia</i>	0.2	0.4	PWR61.09	
<i>Digitaria brownii</i>	0.1	0.1		
<i>Dodonaea coriacea</i>	0.1	1.3	PWR61.01	
<i>Eragrostis eriopoda</i>	0.1	0.3	PWR61.08	
<i>Eremophila exilifolia</i>	0.1	0.7		
<i>Eriachne lanata</i>	0.5	0.2	PWR61.03	
<i>Eriachne mucronata</i>	0.5	0.3		
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>	0.1	0.1		
<i>Euphorbia tannensis</i> subsp. <i>eremophila</i>	0.1	0.1		
<i>Fimbristylis dichotoma</i>	0.1	0.1		
<i>Gompholobium oreophilum</i>	0.1	0.4		
<i>Gomphrena affinis</i>	0.1	0.1		
<i>Goodenia stobbsiana</i>	0.1	0.3		
<i>Goodenia triodiophila</i>	0.1	0.2		

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Gossypium robinsonii</i>	0.1	2.2		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.5	2.8		
<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)	0.2	0.3	PWR61.02	
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.1	0.3	PWR61.04	
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Mirbelia viminalis</i>	0.1	0.3		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Petalostylis labicheoides</i>	0.1	1		
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus calostachyus</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	0.2		
<i>Schizachyrium fragile</i>	0.1	0.1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	1.2		
<i>Sida cardiophylla</i>	0.1	0.2		
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.2		
<i>Solanum cleistogamum</i>	0.1	0.2		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Triodia pungens</i>	18	0.5		
<i>Triodia vanleeuwenii</i>	25	0.4		
<i>Waltheria virgata</i>	0.1	0.4	PWR61.10	

Power 2030 Site PWR-62

Date 3/05/2024
Described by RB, KG
Type Quadrat 50m x 50m
Location MGA Zone 50
 777390 mE; 7412683 mN
 119.7135 E -23.372076S

Veg Condition Excellent
Soil Silty Loam
Rock Type Dolerite
Fire Age Old (6+ yr)
Habitat Undulating Low Hills

Vegetation *Triodia vanleeuwenii*, *Triodia wiseana* low open hummock grassland with *Acacia synchronicia*, *Acacia tetragonophylla* tall sparse shrubland with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia ancistrocarpa</i>	0.1	3.2		
<i>Acacia aptaneura</i>	0.1	2	PWR62.01	
<i>Acacia bivenosa</i>	0.1	1.8		
<i>Acacia sibirica</i>	0.1	0.3	PWR13.04	
<i>Acacia synchronicia</i>	2	2.4		
<i>Acacia tetragonophylla</i>	1	3		
<i>Arivela viscosa</i>	0.1	0.2		
<i>Cassythia capillaris</i>	0.1	0	PWR62.03	
<i>Chenopodiaceae</i> sp. indet.	0.1	0.5	PWR62.05	
<i>Duperreya commixta</i>	0.1	0		
<i>Enneapogon robustissimus</i>	0.1	0.4	PWR13.07	
<i>Eremophila latrobei</i>	0.1	1.2		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	1	5		
<i>Gomphrena kanisii</i>	0.1	0.1	PWR26.09	
<i>Goodenia</i> sp. indet.	0.1	0.1		
<i>Goodenia stobbsiana</i>	0	0.3		
<i>Hakea chordophylla</i>	0.1	0.3		
<i>Maireana ?melanocoma</i>	0.1	0.4	PWR62.06	
<i>Neurachne muelleri</i>	0.1	0.4		
<i>Psyrax latifolia</i>	0.1	1		
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus calostachyus</i>	0.1	0.5		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	1.4		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i> x <i>luerssenii</i>	0.1	1.7	PWR62.04	
<i>Senna glutinosa</i> subsp. <i>xluerssenii</i>	0.1	1.4		
<i>Senna sericea</i>	0.1	1.6	PWR62.02	
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Tribulus suberosus</i>	0.1	0.6		
<i>Triodia vanleeuwenii</i>	6	0.4		
<i>Triodia wiseana</i>	5	0.5		

Power 2030 Site PWR-63

Date 5/05/2024
Described by KJ, AS
Type Quadrat 100m x 25m
Location MGA Zone 51
 196197 mE; 7417497 mN
 120.0293 E -23.323957 S

Veg Condition Excellent

Soil Loamy Sand

Rock Type CID

Fire Age Old (6+ yr)

Habitat Minor Drainage Line

Vegetation *Triodia pungens* mid hummock grassland with *Acacia monticola*, *Grevillea wickhamii*, *Gossypium robinsonii* tall open shrubland with *Corymbia hamersleyana* low isolated trees.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.7		
<i>Acacia hilliana</i>	0.1	0.2		
<i>Acacia maitlandii</i>	0.1	2		
<i>Acacia monticola</i>	15	2.6		
<i>Clerodendrum floribundum</i>	1	0.6		
<i>Corymbia hamersleyana</i>	1.5	5		
<i>Cymbopogon ambiguus</i>	1	0.5		
<i>Dicrastylis cordifolia</i>	0.1	0.5	PWR51.05	
<i>Eragrostis olida</i>	0.1	0.3	PWR63.01	
<i>Eriachne mucronata</i>	0.1	0.3		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	1	4.5		
<i>Euphorbia boophthona</i>	0.1	0.8		
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>	0.1	0.1		
<i>Gompholobium oreophilum</i>	0.1	1.5		
<i>Gomphrena cunninghamii</i>	0.1	0.1		
<i>Gossypium robinsonii</i>	3	4		
<i>Grevillea wickhamii</i>	3	2.5		
<i>Hibiscus</i> sp. indet.	0.1	0.1		
<i>Indigofera monophylla</i>	0.1	0.5		
<i>Neurachne muelleri</i>	0.1	0.4		
<i>Paspalidium clementii</i>	0.1	0.1		
<i>Petalostylis labicheoides</i>	3	2.5		
<i>Salsola australis</i>	0.1	0.4		
<i>Santalum lanceolatum</i>	0.5	2	PWR45.01	
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	1.1		
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>	0.1	1.5		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	0.3		
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.4		
<i>Themeda triandra</i>	0.1	0.4		
<i>Trachymene oleracea</i> subsp. <i>oleracea</i>	0.1	0.1		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.1		
<i>Triodia pungens</i>	35	0.5		

Power 2030 Site PWR-64

Date 5/05/2024
Described by CvdB, EL
Type Quadrat 100m x 25m
Location MGA Zone 51
 193773 mE; 7417520 mN
 120.0056 E -23.323298 S

Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Minor Drainage Line

Vegetation *Triodia pungens* low hummock grassland with *Acacia pruinocarpa*, *Dodonaea coriacea* mid to tall isolated shrubs with *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Eriachne mucronata*, *Cymbopogon ambiguus* low isolated tussock grasses.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.6		
<i>Acacia citrinoviridis</i>	0.1	4.5	PWRR31.02	
<i>Acacia hamersleyensis</i>	0.1	2		
<i>Acacia maitlandii</i>	0.1	2.2		
<i>Acacia pruinocarpa</i>	1	4		
<i>Cymbopogon ambiguus</i>	0.1	0.4		
<i>Digitaria brownii</i>	0.1	0.4		
<i>Dodonaea coriacea</i>	0.5	1.8	PWR64.01	
<i>Eriachne lanata</i>	0.1	0.4	PWR61.03	
<i>Eriachne mucronata</i>	0.1	0.4		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	1	6.5		
<i>Eulalia aurea</i>	0.1	0.6		
<i>Fimbristylis dichotoma</i>	0.1	0.1		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	2.1		
<i>Indigofera monophylla</i>	0.1	0.2		
<i>Neurachne muelleri</i>	0.1	0.3		
<i>Paspalidium clementii</i>	0.1	0.1		
<i>Petalostylis labicheoides</i>	0.1	0.3		
<i>Psydrax latifolia</i>	0.1	1.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Senna ferraria</i>	0.1	1		
<i>Sida cardiophylla</i>	0.1	0.1		
<i>Triodia pungens</i>	45	0.5		

Power 2030 Site PWRMN-13

Date 3/05/2024
Described by KJ, AS
Type Vegetation Mapping Note
Location MGA Zone 50
 777444 mE; 7416351 mN
 119.7133 E -23.338972 S

Veg Condition Degraded

Soil

Rock Type

Fire Age

Habitat Drainage Area/ Floodplain

Vegetation **Cenchrus ciliaris*, *Themeda triandra* mid tussock grassland with *Corymbia candida* subsp. *candida*, *Corymbia deserticola* mid open woodland over *Acacia pruinocarpa*, *Acacia bivenosa* tall sparse shrubland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia bivenosa</i>	0.5	2.2		
<i>Acacia pruinocarpa</i>	0.5	2		
<i>Arivela viscosa</i>	0.1	0.4		
* <i>Cenchrus ciliaris</i>	58	0.6		
* <i>Cenchrus setiger</i>	0.1	0.5		
<i>Chrysopogon fallax</i>	0.1	0.4		
<i>Corymbia candida</i> subsp. <i>candida</i>	4	14		
<i>Corymbia deserticola</i>	1	12		
<i>Corymbia hamersleyana</i>	0.1	8		
<i>Cucumis variabilis</i>	0.1	0.1		
<i>Dipteracanthus australasicus</i> subsp. <i>australasicus</i>	0.1	0.2		
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	3.3		
<i>Pterocaulon sphacelatum</i>	0.1	0.3		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.3		
<i>Seringia nephrosperma</i>	0.1	0.4		
<i>Sida</i> sp. L (A.M. Ashby 4202)	0.1	0.2		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Tephrosia</i> sp. Newman (A.A. Mitchell PRP 29)	0.1	0.1		
<i>Themeda triandra</i>	2	0.5		
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>	0.1	0.3		

Power 2030 Site PWRR-12

Date 3/05/2024
Described by CvdB, EL
Type Relevé
Location MGA Zone 50
 776951 mE; 7416347 mN
 119.7085 E -23.339096 S

Veg Condition Good

Soil Clay Loam

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Stony Plain

Vegetation *Acacia aptaneura*, *Acacia pruinocarpa* tall sparse shrubland over *Enneapogon polyphyllus*, **Cenchrus ciliaris*, *Digitaria brownii*, *Aristida contorta* low isolated patches of tussock grasses with *Senna glutinosa* subsp. **luerssenii*, *Senna artemisioides* subsp. *oligophylla*, *Senna artemisioides* subsp. *helmsii* low to mid isolated shrubs over *Arivela viscosa*, *Ptilotus helipteroides* low isolated herbs.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>				
<i>Acacia aptaneura</i>	3			
<i>Acacia pruinocarpa</i>	0.5			
<i>Acacia tetragonophylla</i>				
<i>Aristida contorta</i>	0.2			
<i>Arivela viscosa</i>				
<i>*Cenchrus ciliaris</i>	0.2			
<i>Chrysopogon fallax</i>				
<i>Digitaria brownii</i>	0.2			
<i>Enneapogon polyphyllus</i>	0.5			
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				
<i>Gomphrena kanisii</i>				
<i>Goodenia prostrata</i>				
<i>Hakea lorea</i> subsp. <i>lorea</i>				
<i>Hibiscus burtonii</i>				
<i>Hibiscus sturtii</i>				
<i>Maireana villosa</i>			PWRR12.01	
<i>Portulaca oleracea</i>				
<i>Ptilotus auriculifolius</i>				
<i>Ptilotus clementii</i>				
<i>Ptilotus helipteroides</i>				
<i>Ptilotus obovatus</i> var. <i>obovatus</i>				
<i>Rhagodia eremaea</i>				
<i>Senna artemisioides</i> subsp. <i>helmsii</i>				
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>				
<i>Senna glutinosa</i> subsp. <i>*luerssenii</i>				
<i>Sporobolus caroli</i>				
<i>Tribulus astrocarpus</i>				

Power 2030 Site PWRR-13

Date 3/05/2024
Described by KJ, AS
Type Relevé
Location MGA Zone 50
 777425 mE; 7416297 mN
 119.7132 E -23.339467 S
Veg Condition Very Good
Soil Sandy Clay Loam
Rock Type CID
Fire Age Moderate (3 to 5 yr)
Habitat Stony Plain
Vegetation *Acacia synchronicia* tall sparse shrubland
Notes



Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	0.1	4	PWRR13.04	
<i>Acacia synchronicia</i>	1	2.5		
<i>Amyema fitzgeraldii</i>	0.1	0.1	PWR18.03	
<i>Aristida contorta</i>	0.1	0.1		
<i>Aristida inaequiglumis</i>	0.1	0.2		
<i>Arivela viscosa</i>	0.1	0.3		
<i>Boerhavia coccinea</i>	0.1	0.1		
* <i>Cenchrus ciliaris</i>	0.4	0.1		
* <i>Cenchrus setiger</i>	0.1	0.3		
<i>Duperreya commixta</i>	0.1	0.1		
<i>Enneapogon caerulescens</i>	0.1	0.1		
<i>Enneapogon polyphyllus</i>	0.1	0.1		
<i>Eremophila lanceolata</i>	0.1	0.4		
<i>Euphorbia australis</i> var. <i>subtomentosa</i>	0.1	0.1		
<i>Euphorbia biconvexa</i>	0.1	0.1		
<i>Euploca heterantha</i>	0.1	0.1	PWRR13.03	
<i>Gomphrena kanisii</i>	0.1	0.2	KJAS001.13	
<i>Hakea lorea</i> subsp. <i>lorea</i>	0.1	0.5		
<i>Hibiscus sturtii</i> var. <i>platychlamys</i>	0.1	0.2	PWRR13.02	
<i>Portulaca oleracea</i>	0.1	0.1		
<i>Ptilotus aervoides</i>	0.1	0.2	PWRR13.01	
<i>Ptilotus helipteroides</i>	0.1	0.2		
<i>Rhagodia eremaea</i>	0.1	1.6		
<i>Rhynchosia minima</i>	0.1	0.1		
<i>Salsola australis</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	0.4		
<i>Senna hamersleyensis</i>	0.1	0.3	PWRR13.05	
<i>Senna notabilis</i>	0.1	0.1		
<i>Sporobolus australasicus</i>	0.1	0.1		

Power 2030 Site PWRR-14
Date 3/05/2024

Described by CvdB, EL

Type Relevé

Location MGA Zone 50

778400 mE; 7416289 mN

119.7227 E -23.339374 S

Veg Condition Poor

Soil Sandy Clay Loam

Rock Type CID

Fire Age Old (6+ yr)

Habitat Medium Drainage Line

Vegetation **Cenchrus ciliaris* mid tussock grassland with *Eucalyptus camaldulensis* subsp. *refulgens* mid woodland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Alternanthera nodiflora</i>	0.1	0.1		
<i>Ammannia multiflora</i>	0.1	0.2		
* <i>Cenchrus ciliaris</i>	35	0.7		
<i>Centipeda minima</i>	0.1	0.1		
* <i>Cynodon dactylon</i>	0.1	0.2	PWRR14.02	
<i>Cyperus iria</i>	0.1	0.3	PWRR14.03	
* <i>Dichanthium annulatum</i>	0.1	0.4	PWRR14.01	Introduced
* <i>Echinochloa colona</i>	0.2	0.2		
<i>Enteropogon ramosus</i>	0.1	0.4		
<i>Eragrostis tenellula</i>	0.1	0.2		
<i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>	25	15		
<i>Pterocaulon</i> sp. indet.	0.1	0.1		

Power 2030 Site PWRR-16

Date 30/04/2024
Described by RB, KG
Type Relevé
Location MGA Zone 50
 781331 mE; 7417300 mN
 119.7511 E -23.329748 S



Veg Condition Very Good
Soil Silty Clay Loam
Rock Type None Discernible
Fire Age Old (6+ yr)
Habitat Undulating Low Hills
Vegetation *Triodia pungens* mid open hummock grassland with *Acacia pruinocarpa*, *Corymbia hamersleyana* low open woodland over *Neurachne muelleri* low sparse tussock grassland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia bivenosa</i>				
<i>Acacia pruinocarpa</i>				
<i>Acacia tetragonophylla</i>				
* <i>Cenchrus ciliaris</i>				
<i>Corchorus lasiocarpus</i>			PWRR16.02	
<i>Corymbia hamersleyana</i>				
<i>Duperreya commixta</i>				
<i>Enneapogon caeruleus</i>			PWRR16.01	
<i>Euphorbia australis</i> var. <i>hispidula</i>			PWR22.04	
<i>Euphorbia boophthona</i>			PWR22.08	
<i>Neurachne muelleri</i>				
<i>Ptilotus obovatus</i> var. <i>obovatus</i>				
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>				
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>				
<i>Senna glutinosa</i> subsp. * <i>luerssenii</i>				
<i>Sida fibulifera</i>			PWR22.09	
<i>Solanum cleistogamum</i>				
<i>Solanum lasiophyllum</i>			PWR26.06	
<i>Triodia angusta</i>				
<i>Triodia pungens</i>				

Power 2030 Site PWRR-26

Date 2/05/2024
Described by RB, KG
Type Relevé
Location MGA Zone 51
 196272 mE; 7416688 mN
 120.0298 E -23.331273 S

Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia vanleeuwenii*, *Triodia pungens* low open hummock grassland with *Corymbia hamersleyana* low open woodland over *Acacia maitlandii* tall sparse shrubland over *Lamarchea sulcata*, *Calytrix carinata*, *Acacia hilliana* mid to low sparse shrubland over *Eriachne lanata* low sparse tussock grassland over *Fimbristylis dichotoma* low sparse sedgeland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>				
<i>Acacia atkinsiana</i>				
<i>Acacia hilliana</i>				
<i>Acacia maitlandii</i>				
<i>Calytrix carinata</i>				
<i>Corymbia hamersleyana</i>				
<i>Dampiera candidans</i>				
<i>Dicrastylis cordifolia</i>			PWR33.18	
<i>Eriachne lanata</i>			PWRR26.04	
<i>Eriachne mucronata</i>				
<i>Eriachne pulchella</i> subsp. <i>pulchella</i>				
<i>Fimbristylis dichotoma</i>				
<i>Goodenia stobbsiana</i>				
<i>Goodenia triodiophila</i>			PWRR26.06	
<i>Grevillea wickhamii</i>				
<i>Hakea chordophylla</i>				
<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)			PWRR26.01	
<i>Hibiscus sturtii</i> var. <i>truncatus</i>			PWR33.24	
<i>Lamarchea sulcata</i>				
<i>Leiocarpa semicalva</i>			PWRR26.07	
<i>Portulaca cyclophylla</i>			PWRR26.03	
<i>Ptilotus exaltatus</i>				
<i>Ptilotus helipteroides</i>				
<i>Scaevola browniana</i> subsp. <i>browniana</i>			PWRR26.05	
<i>Schizachyrium fragile</i>			PWR33.03	
<i>Senna artemisioides</i> subsp. <i>helmsii</i>				
<i>Senna glutinosa</i> subsp. <i>glutinosa</i>				

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Solanum lasiophyllum</i>			PWR26.06	
<i>Triodia pungens</i>				
<i>Triodia vanleeuwenii</i>				
<i>Waltheria virgata</i>			PWRR26.02	

Power 2030 Site PWRR-27

Date 2/05/2024
Described by CJW, RO
Type Relevé
Location MGA Zone 51
 197758 mE; 7417430 mN
 120.0445 E -23.324851 S

Veg Condition Very Good

Soil Loamy Sand

Rock Type BIF

Fire Age Old (6+ yr)

Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia vanleeuwenii* low hummock grassland with *Acacia hilliana*, *Halgania gustafsenii* var. *gustafsenii*, *Calytrix carinata*, *Acacia adoxa* var. *adoxo* low sparse shrubland with *Corymbia hamersleyana*, *Hakea chordophylla*, *Eucalyptus leucophloia* subsp. *leucophloia* low isolated trees over *Petalostylis labicheoides*, *Grevillea wickhamii* mid isolated


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>				
<i>Acacia hamersleyensis</i>				
<i>Acacia hilliana</i>				
<i>Aristida inaequiglumis</i>	0.1	1.2	PWRR27.01	
<i>Calytrix carinata</i>				
<i>Corymbia hamersleyana</i>				
<i>Dampiera candicans</i>				
<i>Dicrastylis cordifolia</i>				
<i>Dodonaea coriacea</i>	0.1	0.4		
<i>Eriachne mucronata</i>				
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>				
<i>Gompholobium oreophilum</i>				
<i>Goodenia stobbsiana</i>				
<i>Grevillea wickhamii</i>				
<i>Hakea chordophylla</i>				
<i>Halgania gustafsenii</i> var. <i>gustafsenii</i>				
<i>Petalostylis labicheoides</i>				
<i>Triodia vanleeuwenii</i>				
<i>Waltheria virgata</i>				

Power 2030 Site PWRR-31

Date 4/05/2024
Described by CvdB, EL
Type Relevé
Location MGA Zone 51
 199487 mE; 7410405 mN
 120.0600 E -23.388540 S



Veg Condition Good
Soil Light Clay
Rock Type None Discernible
Fire Age Old (6+ yr)
Habitat Hardpan Plain
Vegetation *Acacia paraneura*, *Acacia citrinoviridis*, *Acacia aptaneura* low open woodland to isolated clumps of trees over *Acacia tetragonophylla*, *Senna artemisioides* subsp. *oligophylla* mid to tall isolated shrubs over *Eragrostis cumingii*, *Enneapogon polyphyllus*, *Aristida jerichoensis* var. *subspinulifera* (P3) low isolated clumps of tussock grasses.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>	1	6	PWRR31.03	
<i>Acacia citrinoviridis</i>	2	6.5	PWRR31.02	
<i>Acacia paraneura</i>	2	5.5	PWRR31.01	
<i>Alternanthera nodiflora</i>				
<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3)			PWRR31.05	
* <i>Bidens bipinnata</i>				
<i>Calandrinia ?eremaea</i>				
* <i>Cenchrus ciliaris</i>				
<i>Chloris pumilio</i>			PWRR31.07	
<i>Chrysopogon fallax</i>				
<i>Digitaria ammophila</i>				
<i>Eragrostis cumingii</i>			PWRR31.04	
<i>Eragrostis dielsii</i>				
<i>Eremophila fraseri</i> subsp. <i>fraseri</i>			PWR19.12	
<i>Eulalia aurea</i>				
<i>Euphorbia biconvexa</i>				
<i>Evolvulus alsinoides</i> var. <i>villosicalyx</i>				
<i>Goodenia prostrata</i>				
<i>Ipomoea calobra</i>			PWRR31.06	
<i>Iseilema membranaceum</i>			PWRR31.08	
<i>Isotropis iophyta</i>				
<i>Perotis rara</i>				
<i>Portulaca oleracea</i>				
<i>Psyrax latifolia</i>				
<i>Ptilotus obovatus</i> var. <i>obovatus</i>				
<i>Senna artemisioides</i> subsp. <i>helmsii</i>				
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>				
<i>Sida fibulifera</i>				
<i>Themeda triandra</i>				

Power 2030 Site PWRR-33

Date 4/05/2024
Described by KJ, AS
Type Relevé
Location MGA Zone 51
 206631 mE; 7409669 mN
 120.1297 E -23.396487 S

Veg Condition Excellent

Soil Sandy Clay Loam

Rock Type CID

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation *Triodia pungens*, *Triodia longiceps* mid hummock grassland with *Acacia ancistrocarpa*, *Acacia dictyophleba*, *Acacia wanyu* tall sparse shrubland over *Neurachne muelleri* low sparse tussock grassland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.2		
<i>Acacia ancistrocarpa</i>	3	2.3		
<i>Acacia bivenosa</i>	0.1	1.3		
<i>Acacia coleii</i>	0.1	1.3		
<i>Acacia dictyophleba</i>	1.5	2.1		
<i>Acacia maitlandii</i>	0.5	2.5		
<i>Acacia wanyu</i>	1	3		
<i>Afrohybanthus aurantiacus</i>	0.1	0.3		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.3		
<i>Aristida inaequiglumis</i>	0.1	0.5		
<i>Bonamia erecta</i>	0.1	0.4		
<i>Enneapogon polyphyllus</i>	0.1	0.2		
<i>Eriachne aristidea</i>	0.1	0.3		
<i>Gomphrena kanisii</i>	0.1	0.1	KJAS001.13	
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	1.8		
<i>Indigofera georgei</i>	0.1	0.9	PWRR33.01	
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Neurachne muelleri</i>	5	0.5		
<i>Pterocaulon sphacelatum</i>	0.1	0.3		
<i>Ptilotus astrolasius</i>	0.1	0.3		
<i>Ptilotus calostachyus</i>	0.1	0.5		
<i>Ptilotus exaltatus</i>	0.1	0.4		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.4		
<i>Senna artemisioides</i> subsp. <i>helmsii</i>	0.1	0.5		
<i>Senna artemisioides</i> subsp. <i>oligophylla</i>	0.1	1.2		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	1.2		
<i>Sida</i> sp. <i>Excedentifolia</i> (J.L. Egan 1925)	0.1	0.4	PWR19.05	
<i>Tephrosia rosea</i> var. <i>Fortescue</i> creeks (M.I.H. Brooker 2186)	0.1	0.3		
<i>Triodia longiceps</i>	10	0.4		
<i>Triodia pungens</i>	25	0.5		

Power 2030 Site PWRR-35

Date 3/05/2024
Described by RB, KG
Type Relevé
Location MGA Zone 50
 777019 mE; 7413439 mN
 119.7097 E -23.365321 S
Veg Condition Good
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Stony Plain



Vegetation *Triodia pungens*, *Triodia wiseana*, *Triodia vanleeuwenii* mid open hummock grassland with *Acacia pruinocarpa*, *Eucalyptus gamophylla* mid to low open woodland.

Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia aptaneura</i>			PWRR35.05	
<i>Acacia bivenosa</i>				
<i>Acacia pruinocarpa</i>				
<i>Acacia tetragonophylla</i>				
<i>Amyema fitzgeraldii</i>			PWR34.28	
<i>Anthobolus leptomerioides</i>			PWRR35.04	
<i>Aristida contorta</i>				
<i>Aristida inaequiglumis</i>			PWR26.12	
<i>Arivela viscosa</i>				
<i>Bonamia erecta</i>			PWR33.20	
<i>Corchorus crozophorifolius</i>			PWR26.15	
<i>Cymbopogon ambiguus</i>				
<i>Dendrophyllanthus erwinii</i>				
<i>Duperreya commixta</i>				
<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)			PWR52.05	
<i>Eremophila latrobei</i>				
<i>Eucalyptus gamophylla</i>				
<i>Euphorbia australis</i> var. <i>hispidula</i>			PWR22.04	
<i>Gomphrena kanisii</i>			PWR26.09	
<i>Goodenia muelleriana</i>			PWRR35.06	
<i>Goodenia stobbsiana</i>				
<i>Hibiscus sturtii</i> var. <i>platyklamys</i>			PWRR35.03	
<i>Leichhardtia australis</i>			PWRR35.01	
<i>Maireana planifolia</i>				
<i>Neurachne muelleri</i>				
<i>Ptilotus astrolasius</i>				
<i>Ptilotus exaltatus</i>				
<i>Ptilotus helipteroides</i>				
<i>Senna notabilis</i>				
<i>Solanum cleistogamum</i>				

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Solanum lasiophyllum</i>				
<i>Themeda triandra</i>				
<i>Tribulus astrocarpus</i>				
<i>Trichodesma zeylanicum</i> var. <i>zeylanicum</i>				
<i>Triodia pungens</i>				
<i>Triodia vanleeuwenii</i>				
<i>Triodia wiseana</i>				
<i>Vincetoxicum lineare</i>			PWRR35.02	

Power 2030 Site PWRR-40

Date 30/04/2024
Described by CJW, RO
Type Relevé
Location MGA Zone 50
 779737 mE; 7416314 mN
 119.7357 E -23.338919 S

Veg Condition Good

Soil Clayey Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Drainage Area/ Floodplain

Vegetation **Cenchrus setiger*, **Cenchrus ciliaris*, *Themeda triandra* closed tussock grassland with
Corymbia candida subsp. *candida*, *Eucalyptus victrix*, *Corymbia hamersleyana* low
 open woodland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon otocarpum</i>				
<i>Acacia citrinoviridis</i>				
<i>Acacia dictyophleba</i>				
<i>Acacia pyrifolia</i>				
<i>Arivela viscosa</i>				
* <i>Cenchrus ciliaris</i>				
* <i>Cenchrus setiger</i>				
<i>Chrysopogon fallax</i>				
<i>Corymbia candida</i> subsp. <i>candida</i>				
<i>Corymbia hamersleyana</i>				
<i>Eucalyptus victrix</i>				
<i>Eulalia aurea</i>				
<i>Hakea lorea</i> subsp. <i>lorea</i>				
* <i>Malvastrum americanum</i>				
<i>Neurachne muelleri</i>				
<i>Pterocaulon sphacelatum</i>				
<i>Ptilotus xerophilus</i>				
<i>Scaevola amblyanthera</i>				
<i>Solanum lasiophyllum</i>				
<i>Themeda triandra</i>				
<i>Triodia angusta</i>			PWRR04.01	
* <i>Vachellia farnesiana</i> var. <i>farnesiana</i>				

Power 2030 Site PWRR-41

Date 1/05/2024
Described by CJW, RO
Type Relevé
Location MGA Zone 51
 209102 mE; 7410203 mN
 120.1539 E -23.392106 S

Veg Condition Good

Soil Sand

Rock Type None Discernible

Fire Age Old (6+ yr)

Habitat Major Drainage Line

Vegetation *Eucalyptus camaldulensis* subsp. *refulgens* mid woodland over *Acacia coriacea* subsp. *pendens* tall open shrubland over *Cyperus difformis* low isolated sedges.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia coriacea</i> subsp. <i>pendens</i>				
<i>Alternanthera nana</i>				
<i>Cyperus difformis</i>	0.1	0.3	PWRR41.01	
<i>Eragrostis cumingii</i>				
<i>Eucalyptus camaldulensis</i> subsp. <i>refulgens</i>				
<i>Sporobolus australasicus</i>				

Power 2030 Site PWRR-44

Date 4/05/2024
Described by KJ, AS
Type Relevé
Location MGA Zone 51
 194805 mE; 7414746 mN
 120.0151 E -23.348518 S

Veg Condition Very Good

Soil Sandy Clay Loam

Rock Type CID

Fire Age Old (6+ yr)

Habitat Footslope

Vegetation *Acacia bivenosa* tall open shrubland over *Triodia pungens*, *Triodia longiceps* mid open hummock grassland over **Cenchrus ciliaris*, *Aristida contorta* low sparse tussock grassland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Abutilon lepidum</i>	0.1	0.1		
<i>Acacia bivenosa</i>	11	5		
<i>Aristida contorta</i>	1	0.2		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.2		
* <i>Cenchrus ciliaris</i>	1	0.4		
<i>Cymbopogon ambiguus</i>	0.1	0.7		
<i>Enneapogon caerulescens</i>	0.1	0.1		
<i>Enneapogon lindleyanus</i>	0.1	0.3		
<i>Enneapogon polyphyllus</i>	0.1	0.1		
<i>Eriachne benthamii</i>	0.1	0.3		
<i>Gomphrena kanisii</i>	0.1	0.2	KJAS001.13	
<i>Hibiscus brachychlaenus</i>	0.1	0.9		
<i>Indigofera monophylla</i>	0.1	0.3		
<i>Neurachne muelleri</i>	0.1	0.4		
<i>Paspalidium clementii</i>	0.1	0.1		
<i>Ptilotus astrolasius</i>	0.1	0.2		
<i>Ptilotus exaltatus</i>	0.1	0.1		
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	0.1	0.3		
<i>Salsola australis</i>	0.1	0.2		
<i>Senna artemisioides</i> subsp. * <i>artemisioides</i>	0.1	0.5		
<i>Senna glutinosa</i> subsp. <i>pruinosa</i>	0.1	0.5		
<i>Senna notabilis</i>	0.1	0.1		
<i>Sida echinocarpa</i>	0.1	0.9		
<i>Solanum lasiophyllum</i>	0.1	0.4		
<i>Triodia longiceps</i>	5	0.8		
<i>Triodia pungens</i>	6	0.5		

Power 2030 Site PWRR-50

Date 2/05/2024
Described by RB, KG
Type Relevé
Location MGA Zone 51
 194544 mE; 7416907 mN
 120.0130 E -23.328974 S

Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Hillcrest/ Upper Hillslope

Vegetation *Triodia pungens*, *Triodia vanleeuwenii* mid open hummock grassland with *Acacia hamersleyensis* tall open shrubland with *Corymbia hamersleyana*, *Eucalyptus kingsmillii* low open woodland over *Eriachne mucronata* low sparse tussock grassland.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia adoxa</i> var. <i>adoxo</i>	0.1	0.4		
<i>Acacia hamersleyensis</i>	12	3.5	PWRR50.03	
<i>Acacia maitlandii</i>	0.1	1.5		
<i>Acacia pruinocarpa</i>	0.1	0.4		
<i>Aristida contorta</i>	0.1	0.1		
<i>Aristida holathera</i> var. <i>holathera</i>	0.1	0.3		
<i>Aristida inaequiglumis</i>	0.1	0.3	PWR26.12	
<i>Cheilanthes brownii</i>	0.1	0.1		
<i>Corchorus crozophorifolius</i>	0.1	0.1	PWR26.15	
<i>Corymbia hamersleyana</i>	5	4		
<i>Cryptandra monticola</i>	3	1.2	PWRR50.02	
<i>Cymbopogon ambiguus</i>	0.1	0.3		
<i>Dampiera candicans</i>	0.1	0.3		
<i>Dicrastylis cordifolia</i>	0.1	0.3	PWR33.18	
<i>Eriachne lanata</i>	0.1	0.3	PWRR26.04	
<i>Eriachne mucronata</i>	2	0.4		
<i>Eucalyptus kingsmillii</i>	1	4		
<i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>	0.1	4.5		
<i>Euphorbia boophthona</i>	0.1	0.5	PWR22.08	
<i>Fimbristylis dichotoma</i>	0.1	0.2		
<i>Gompholobium oreophilum</i>	0.1	0.5		
<i>Goodenia triodiophila</i>	0.1	0.3		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	0.1	1.8	PWR60.03	
<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)	0.1	0.3	PWRR26.01	
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	0.1	0.3	PWR33.24	
<i>Indigofera monophylla</i>	0.1	0.2		
<i>Mirbelia viminalis</i>	0.1	0.4		
<i>Petalostylis labicheoides</i>	0.1	1		
<i>Scaevola browniana</i> subsp. <i>browniana</i>	0.1	0.4	PWRR26.05	
<i>Schizachyrium fragile</i>	0.1	0.1	PWR33.03	

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Sida</i> sp. Excedentifolia (J.L. Egan 1925)	0.1	0.3	PWRR50.01	
<i>Sida</i> sp. Shovelanna Hill (S. van Leeuwen 3842)	0.1	0.2	PWR52.01	
<i>Solanum horridum</i>	0.1	0.2	PWR52.02	
<i>Themeda triandra</i>	0.1	0.3		
<i>Triodia pungens</i>	12	0.5		
<i>Triodia vanleeuwenii</i>	3	0.3		
<i>Waltheria virgata</i>	0.1	0.6	PWRR26.02	

Power 2030 Site PWRR-62

Date 5/05/2024
Described by CvdB, EL
Type Relevé
Location MGA Zone 51
 195029 mE; 7417311 mN
 120.0178 E -23.325424 S
Veg Condition Excellent
Soil Silty Loam
Rock Type BIF
Fire Age Old (6+ yr)
Habitat Hillslope
Vegetation *Triodia pungens*, *Triodia vanleeuwenii* low hummock grassland with *Grevillea wickhamii* subsp. *hispidula*, *Petalostylis labicheoides*, *Acacia maitlandii* tall sparse shrubland over *Acacia hilliana* low isolated shrubs over *Eriachne lanata* low isolated tussock grasses.


Notes

Site Taxa	Cover (%)	Height (m)	Specimen #	Notes
<i>Acacia hilliana</i>	0.5	0.3		
<i>Acacia maitlandii</i>	0.2	2.1		
<i>Acacia pruinocarpa</i>		0.6		
<i>Acacia rhodophloia</i>	0.1	3.5		
<i>Calytrix carinata</i>				
<i>Cassytha capillaris</i>			PWR62.01	
<i>Cheilanthes brownii</i>				
<i>Corymbia hamersleyana</i>	0.1	3		
<i>Dicrastylis cordifolia</i>			PWR61.09	
<i>Dodonaea viscosa</i> subsp. <i>mucronata</i>		0.3		
<i>Eremophila exilifolia</i>				
<i>Eriachne lanata</i>	0.2	0.3	PWR61.03	
<i>Eriachne mucronata</i>				
<i>Euphorbia boophthona</i>				
<i>Fimbristylis dichotoma</i>				
<i>Goodenia stobbsiana</i>		0.2		
<i>Grevillea wickhamii</i> subsp. <i>hispidula</i>	2	2.6		
<i>Mirbelia viminalis</i>	0.1	0.6		
<i>Petalostylis labicheoides</i>	0.5	2.2		
<i>Portulaca cyclophylla</i>			PWRR62.02	
<i>Solanum lasiophyllum</i>		0.3		
<i>Triodia pungens</i>	25	0.4		
<i>Triodia vanleeuwenii</i>	10	0.3		

Appendix G: Site by species matrix

[illegible]

[illegible]

Appendix H: WAH formal identification

WAH Accession no.	Coll #	Consultant Name	WA Herbarium ID
10937	PWRR31.05	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i>	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i> (P3)
	PWRR14.01	<i>Dichanthium</i> ?sericeum subsp. <i>humilis</i>	* <i>Dichanthium annulatum</i>
	PWR41.02	<i>Digitaria</i> ?brownii	<i>Digitaria brownii</i>
	PWR52.05	<i>Eragrostis</i> ?eriopoda	<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)
	PWR43.07	<i>Eragrostis</i> ?eriopoda	<i>Eragrostis</i> sp. Mt Robinson (S. van Leeuwen 4109) (P3)
	PWR34.02	<i>Eragrostis</i> ?falcata	<i>Eragrostis dielsii</i> s. lat
	CROP.08	<i>Eremophila naaykensis</i>	<i>Eremophila naaykensis</i> (P3)
	PWR41.04	<i>Euphorbia</i> aff. <i>ferdinandi</i>	<i>Euphorbia</i> aff. <i>ferdinandi</i>
	PWRR26.01	<i>Halgania solanacea</i>	<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)
	PWR61.02	<i>Halgania solanacea</i>	<i>Halgania solanacea</i> var. Mt Doreen (G.M. Chippendale 4206)
	PWR32.01	<i>Ipomoea racemigera</i>	<i>Ipomoea racemigera</i> (P3)
	PWR60.01	<i>Isotropis parviflora</i>	<i>Isotropis parviflora</i> (P3)
	PWR26.08	<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	<i>Sida</i> sp. ("more likely to be <i>S. sp.</i> <i>Pilbara</i> than <i>sp. Barlee Range</i> ") (M. Hislop)
	CROP.06	<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739)	<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) (P3)

Appendix I: Vegetation structural classification

NVIS Vegetation Structural Classifications

Cover Characteristics							
Foliage cover *	70-100	30-70	10-30	<10	≈0	0-5	unknown
Crown cover **	>80	50-80	20-50	0.25-20	<0.25	0-5	unknown
% Crown cover ***	>80	50-80	20-50	0.25-20	<0.25	0-5	unknown
Cover code	d	c	i	r	bi	bc	unknown

Growth Form	Height Ranges (m)	Structural Formation Classes					
tree, palm	>30 Tall	closed forest	open forest	woodland	open woodland	isolated trees	isolated clumps of trees
	10-30 Mid						
	<10 Low						
tree mallee	10-30 Tall	closed mallee forest	open mallee forest	mallee woodland	open mallee woodland	isolated mallee trees	isolated clumps of mallee trees
	<10 Mid						
	<3 Low						
shrub, cycad, grasstree, fern	>2 Tall	closed shrubland	shrubland	open shrubland	sparse shrubland	isolated shrubs	isolated clumps of shrubs
	1-2 Mid						
	<1 Low						
mallee shrub	10-30 Tall	closed mallee shrubland	mallee shrubland	open mallee shrubland	sparse mallee shrubland	isolated mallee shrubs	isolated clumps of mallee shrubs
	<10 Mid						
	<3 Low						
heath shrub	>2 Tall	closed heathland	heathland	open heathland	sparse heathland	isolated heath shrubs	isolated clumps of heath shrubs
	1-2 Mid						
	<1 Low						

Growth Form	Height Ranges (m)	Structural Formation Classes					
chenopod shrub	>2 Tall	closed chenopod shrubland	chenopod shrubland	open chenopod shrubland	sparse chenopod shrubland	isolated chenopod shrubs	isolated clumps of chenopod shrubs
	1-2 Mid						
	<1 Low						
samphire shrub	>0.5 Low	closed samphire shrubland	samphire shrubland	open samphire shrubland	sparse samphire shrubland	isolated samphire shrubs	isolated clumps of samphire shrubs
	<0.5 Mid						
hummock grass	>2 Tall	closed hummock grassland	hummock grassland	open hummock grassland	sparse hummock grassland	isolated hummock grasses	isolated clumps of hummock grasses
	<2 Mid						
tussock grass	>0.5 Mid	closed tussock grassland	tussock grassland	open tussock grassland	sparse tussock grassland	isolated tussock grasses	isolated clumps of tussock grasses
	<0.5 Low						
other grass	>0.5 Mid	closed grassland	grassland	open grassland	sparse grassland	isolated grasses	isolated clumps of grasses
	<0.5 Low						
sedge	>0.5 Mid	closed sedgeland	sedgeland	open sedgeland	sparse sedgeland	isolated sedges	isolated clumps of sedges
	<0.5 Low						
rush	>0.5 Mid	closed rushland	rushland	open rushland	sparse rushland	isolated rushes	isolated clumps of rushes
	<0.5 Low						
forb	>0.5 Mid	closed forbland	forbland	open forbland	sparse forbland	isolated forbs	isolated clumps of forbs
	<0.5 Low						
fern	>2 Tall	closed fernland	fernland	open fernland	sparse fernland	isolated ferns	isolated clumps of ferns
	1-2 Mid						
	<1 Low						
bryophyte	<0.5	closed bryophyte land	bryophyte land	open bryophyte land	sparse bryophyte land	isolated bryophytes	isolated clumps of bryophytes
lichen	<0.5	closed lichenland	lichenland	open lichenland	sparse lichenland	isolated lichens	isolated clumps of lichens

Growth Form	Height Ranges (m)	Structural Formation Classes					
vine	<0.5	closed vineland	vineland	open vineland	sparse vineland	isolated vines	isolated clumps of vines
	>30 Tall						
	10-30 Med						
aquatic	<10 Low	closed aquatic bed	aquatic bed	open aquatic bed	sparse aquatics	isolated aquatics	isolated clumps of aquatics
	<1 Tall						
seagrass	0-0.5 Low	closed seagrass bed	seagrass bed	open seagrass bed	sparse seagrass bed	isolated seagrasses	isolated clumps of seagrasses
	<1 Tall						

From: NVIS Structural Formation Terminology (Australian Vegetation Attribute Manual Version 7.0 November 2017 <https://www.environment.gov.au/land/publications/australian-vegetation-attribute-manual-version-7>)

* Foliage Cover is defined for each stratum as 'the proportion of the ground, which would be shaded if sunshine came from directly overhead'. It includes branches and leaves and is obtained by multiplying Crown Cover with Crown type (Hnatiuk *et al.*, 2009). It is applied to a stratum in a plot, rather than an individual crown, with the NVIS measure for a vegetation type ideally being a summary of several plots. Foliage Projective Cover, which considers only the vertical projection of photosynthetic components (generally leaves), can be measured by line interception methods for tree, shrub and ground layer vegetation (Specht & Specht, 1999).

** Crown Cover (canopy cover) as per Hnatiuk *et al.* (2009). Although relationships between this attribute and Foliage Cover are dependent on season, species, species age etc., the crown cover category classes have been adopted as the defining measure.

*** The percentage cover is defined as the percentage of a strictly defined plot area, covered by vegetation. This can be an estimate and is a less precise measure than using, for example, a point intercept transect method on ground layer, or overstorey vegetative cover. That is, for precisely measured values (e.g., crown densitometer or point intercept transects) the value measured would be 'foliage' cover. Where less precise or qualitative measures are used these will most probably be recorded as 'percentage' cover.

Appendix J: Vegetation condition rating scale

Keighery (1994) Vegetation Condition Rating Scale

Vegetation Condition	Eremaean & Northern Botanical Province
Pristine	N/A
Excellent	Pristine or nearly so, no obvious signs of disturbance or 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.

Appendix K: Species list

Acanthaceae

Dipteracanthus australasicus subsp. *australasicus*

Aizoaceae

Trianthema glossostigmum

Trianthema pilosum

Trianthema triquetrum

Amaranthaceae

**Aerva javanica*

Alternanthera angustifolia

Alternanthera nana

Alternanthera nodiflora

Amaranthus cuspidifolius

Gomphrena affinis

Gomphrena cunninghamii

Gomphrena kanisii

Gomphrena lanata

Ptilotus aervoides

Ptilotus astrolasius

Ptilotus auriculifolius

Ptilotus calostachyus

Ptilotus ?calostachyus

Ptilotus clementii

Ptilotus ?clementii

Ptilotus exaltatus

Ptilotus fusiformis

Ptilotus gaudichaudii

Ptilotus helipteroides

Ptilotus obovatus var. *obovatus*

Ptilotus polystachyus

Ptilotus roei

Ptilotus rotundifolius

Ptilotus schwartzii var. *schwartzii*

Ptilotus sp. *indet.*

Ptilotus xerophilus

Apocynaceae

Leichhardtia australis

Vincetoxicum lineare

Araliaceae

Trachymene oleracea subsp. *oleracea*

Asteraceae

**Bidens bipinnata*

Centipeda minima

Chrysocephalum gilesii

**Flaveria trinervia*

Leiocarpa semicalva
Pterocaulon sp. indet.
Pterocaulon sphacelatum
Rutidosia helichrysoides subsp. *helichrysoides*
Streptoglossa bubakii
Streptoglossa decurrens
Streptoglossa sp. indet.

Boraginaceae

Euploca heterantha
Euploca inexplicita
Euploca sp. indet.
Euploca tenuifolia
Halgania gustafsenii var. *gustafsenii*
Halgania solanacea
Halgania solanacea var. Mt Doreen (G.M. Chippendale 4206)
Trichodesma zeylanicum var. *zeylanicum*

Campanulaceae

Wahlenbergia gracilenta

Capparaceae

Capparis lasiantha

Caryophyllaceae

Polycarpaea corymbosa var. *corymbosa*

Celastraceae

Stackhousia sp. indet.
Stackhousia sp. swollen gynophore (W.R. Barker 2041)

Chenopodiaceae

Chenopodiaceae sp. indet.
Dysphania glomulifera subsp. *eremaea*
Dysphania kalpari
Dysphania melanocarpa
Dysphania rhadinostachya
Dysphania rhadinostachya subsp. *inflata*
Dysphania sp. indet.
Enchylaena tomentosa var. *tomentosa*
Maireana ?*georgei*
Maireana ?*melanocoma*
Maireana planifolia
Maireana ?*planifolia*
dMaireana villosa
Rhagodia eremaea
Salsola australis
Sclerolaena convexula
Sclerolaena cornishiana

Sclerolaena ?cornishiana

Sclerolaena eriacantha

Cleomaceae

Areocleome oxalidea

Arivela viscosa

Convolvulaceae

Bonamia erecta

Bonamia pilbarensis

Convolvulus clementii

Convolvulus sp. indet.

Duperreya commixta

Evolvulus alsinoides

Evolvulus alsinoides var. *decumbens*

Evolvulus alsinoides var. *villosicalyx*

Ipomoea calobra

Ipomoea muelleri

Ipomoea polymorpha

Ipomoea racemigera (P3)

Polymeria ambigua

Polymeria mollis

Cucurbitaceae

**Citrullus amarus*

**Citrullus colocynthis*

Cucumis variabilis

Cyperaceae

Bulbostylis barbata

Cyperus cunninghamii

Cyperus difformis

Cyperus iria

Fimbristylis dichotoma

Fimbristylis simulans

Euphorbiaceae

Euphorbia australis var. *hispidula*

Euphorbia australis var. *subtomentosa*

Euphorbia biconvexa

Euphorbia boophthona

Euphorbia aff. *ferdinandi*

Euphorbia sp. indet. (bi/tri)

Euphorbia tannensis subsp. *eremophila*

Euphorbia trigonosperma

Fabaceae

Acacia adoxa var. *adoxo*

Acacia adsurgens

Acacia ancistrocarpa
Acacia aneura
Acacia aptaneura
Acacia atkinsiana
Acacia ayersiana
Acacia bivenosa
Acacia catenulata subsp. *occidentalis*
Acacia citrinoviridis
Acacia colei
Acacia coriacea subsp. *pendens*
Acacia dictyophleba
Acacia hamersleyensis
Acacia hilliana
Acacia inaequilatera
Acacia macraneura
Acacia maitlandii
Acacia marramamba
Acacia monticola
Acacia pachyacra
Acacia paraneura
Acacia pruinocarpa
Acacia pyrifolia
Acacia rhodophloia
Acacia sclerosperma
Acacia sibirica
Acacia synchronicia
Acacia tenuissima
Acacia tetragonophylla
Acacia trudgeniana
Acacia wanyu
Acacia xiphophylla
Aeschynomene indica
Crotalaria medicaginea var. *neglecta*
Glycine canescens
Gompholobium oreophilum
Indigofera colutea
Indigofera georgei
Indigofera linifolia
Indigofera linnaei
Indigofera monophylla
Isotropis atropurpurea
Isotropis iophyta
Isotropis parviflora (P3)
Kennedia prorepens
Mirbelia viminalis
Petalostylis labicheoides
Rhynchosia minima

Senna artemisioides subsp. *filifolia*
Senna artemisioides subsp. *helmsii*
Senna artemisioides subsp. *helmsii* x *oligophylla*
Senna artemisioides subsp. *oligophylla*
Senna artemisioides subsp. ×*artemisioides*
Senna ferraria
Senna glaucifolia
Senna glutinosa subsp. *glutinosa*
Senna glutinosa subsp. *pruinosa*
Senna glutinosa subsp. *pruinosa* ×*luerssenii*
Senna glutinosa subsp. ×*luerssenii*
Senna hamersleyensis
Senna notabilis
Senna sericea
Senna stricta
Senna venusta
Sesbania cannabina
Swainsona ?*elegantoides*
Tephrosia insolens
Tephrosia oxalidea
Tephrosia rosea var. Fortescue creeks (M.I.H. Brooker 2186)
Tephrosia sp. Newman (A.A. Mitchell PRP 29)
Tephrosia sp. NW Eremaean (S. van Leeuwen et al. PBS 0356)
 **Vachellia farnesiana* var. *farnesiana*
Vigna sp. indet.
Vigna sp. Hamersley Clay (A.A. Mitchell PRP 113)

Goodeniaceae

Dampiera candicans
Goodenia forrestii
Goodenia microptera
Goodenia muelleriana
Goodenia nuda
Goodenia prostrata
Goodenia ramelii
Goodenia sp. indet.
Goodenia stobbsiana
Goodenia triodiophila
Goodenia vilmorinae
Scaevola amblyanthera
Scaevola amblyanthera var. *centralis*
Scaevola browniana subsp. *browniana*
Scaevola parvifolia subsp. *pilbarae*

Cyrtostemonaceae

Codonocarpus cotinifolius

Haloragaceae

Haloragis gossei var. *gossei*

Lamiaceae

Clerodendrum floribundum

Dicrastylis cordifolia

Lauraceae

Cassytha capillaris

Loranthaceae

Amyema fitzgeraldii

Amyema sanguinea var. *sanguinea*

Lysiana sp. *indet.*

Lythraceae

Ammannia multiflora

Malvaceae

Abutilon amplum

Abutilon cryptopetalum

Abutilon fraseri

Abutilon lepidum

Abutilon macrum

Abutilon otocarpum

Abutilon sp. Pilbara (W.R. Barker 2025)

Androcalva luteiflora

Corchorus crozophorifolius

Corchorus lasiocarpus

Corchorus lasiocarpus subsp. *parvus*

Corchorus sidoides subsp. *sidoides*

Corchorus tridens

Gossypium robinsonii

Hibiscus brachychlaenus

Hibiscus burtonii

Hibiscus aff. *campanulatus*

Hibiscus coatesii

Hibiscus ?*coatesii*

Hibiscus sp. *indet.*

Hibiscus sturtii

Hibiscus sturtii var. *campylochlamys*

Hibiscus sturtii var. *platychlamys*

Hibiscus sturtii var. *truncatus*

**Malvastrum americanum*

Melhania oblongifolia

Seringia exastia

Seringia nephrosperma

Sida arenicola

Sida cardiophylla

Sida echinocarpa
Sida ectogama
Sida fibulifera
Sida platycalyx
Sida rohlenae
Sida sp. dark green fruits (S. van Leeuwen 2260)
Sida sp. Excedentifolia (J.L. Egan 1925)
Sida sp. Golden calyces glabrous (H.N. Foote 32)
Sida sp. indet. 1
Sida sp. indet. 2
Sida sp. indet. 3
Sida sp. L (A.M. Ashby 4202)
Sida sp. Shovelanna Hill (S. van Leeuwen 3842)
Sida sp. spiciform panicles (E. Leyland s.n. 14/8/90)
Triumfetta maconochieana
Waltheria indica
Waltheria virgata

Marsileaceae

Marsilea exarata

Molluginaceae

Trigastrotheca molluginea

Montiaceae

Calandrinia ?eremaea
Calandrinia ptychosperma
Calandrinia stagnensis

Moraceae

Ficus brachypoda

Myrtaceae

Calytrix carinata
Corymbia candida subsp. *candida*
Corymbia deserticola
Corymbia ferriticola
Corymbia hamersleyana
Eucalyptus camaldulensis subsp. *refulgens*
Eucalyptus gamophylla
Eucalyptus kingsmillii
Eucalyptus leucophloia subsp. *leucophloia*
Eucalyptus repullulans
Eucalyptus socialis
Eucalyptus victrix
Eucalyptus xerothermica
Lamarchea sulcata

Nyctaginaceae

Boerhavia coccinea

Boerhavia repleta

Oleaceae

Jasminum didymum subsp. *lineare*

Phyllanthaceae

Dendrophyllanthus erwinii

Notoleptopus decaisnei

Poaceae

Amphipogon sericeus

Aristida contorta

Aristida holathera var. *holathera*

Aristida hygrometrica

Aristida inaequiglumis

Aristida jerichoensis var. *subspinulifera* (P3)

Aristida lazaridis (P3)

Aristida pruinosa

**Cenchrus ciliaris*

**Cenchrus setiger*

Chloris pumilio

**Chloris virgata*

Chrysopogon fallax

Cymbopogon ambiguus

Cymbopogon obtectus

**Cynodon dactylon*

Dactyloctenium radulans

**Dichanthium annulatum*

Dichanthium sericeum subsp. *humilius*

Digitaria ammophila

Digitaria brownii

Digitaria ctenantha

**Echinochloa colona*

Enneapogon caeruleus

Enneapogon lindleyanus

Enneapogon polyphyllus

Enneapogon robustissimus

Enneapogon sp. indet.

Enteropogon ramosus

Eragrostis cumingii

Eragrostis dielsii

Eragrostis eriopoda

Eragrostis leptocarpa

Eragrostis olida

Eragrostis sp. Mt Robinson (S. van Leeuwen 4109) (P3)

Eragrostis tenellula

Eragrostis xerophila
Eriachne aristidea
Eriachne benthamii
Eriachne lanata
Eriachne mucronata
Eriachne pulchella subsp. *dominii*
Eriachne pulchella subsp. *pulchella*
Eriachne tenuiculmis
Eulalia aurea
Eulalia simonii
Iseilema dolichotrichum
Iseilema membranaceum
Neurachne muelleri
Panicum australiense var. *australiense*
Panicum effusum
Paspalidium basicladum
Paspalidium clementii
Paspalidium rarum
Perotis rara
Schizachyrium fragile
Setaria dielsii
Sporobolus australasicus
Themeda avenacea
Themeda triandra
Triodia angusta
Triodia basedowii
Triodia longiceps
Triodia melvillei
Triodia pungens
Triodia schinzii
Triodia sp. Mt Ella (M.E. Trudgen 12739) (P3)
Triodia vanleeuwenii
Triodia wiseana

Polygalaceae

Polygala glaucifolia
Polygala isingii

Portulacaceae

Portulaca cyclophylla
**Portulaca oleracea*

Proteaceae

Grevillea berryana
Grevillea striata
Grevillea wickhamii
Grevillea wickhamii subsp. *hispidula*
Hakea chordophylla

Hakea lorea subsp. *lorea*

Pteridaceae

Cheilanthes brownii

Cheilanthes sieberi

Rhamnaceae

Cryptandra monticola

Rubiaceae

Dolichocarpa crouchiana

Psydrax latifolia

Psydrax suaveolens

Spermacoce brachystema

Synaptantha tillaeacea

Santalaceae

Anthobolus leptomerioides

Santalum lanceolatum

Sapindaceae

Dodonaea coriacea

Dodonaea pachyneura

Dodonaea viscosa subsp. *mucronata*

Scrophulariaceae

Eremophila canaliculata

Eremophila cuneifolia

Eremophila exilifolia

Eremophila forrestii subsp. *forrestii*

Eremophila fraseri subsp. *fraseri*

Eremophila lanceolata

Eremophila latrobei

Eremophila latrobei subsp. *filiformis*

Eremophila latrobei subsp. *latrobei*

Eremophila longifolia

Eremophila margarethae

Eremophila naaykensis (P3)

Solanaceae

Nicotiana benthamiana

Nicotiana ?karijini

Solanum centrale

Solanum cleistogamum

Solanum horridum

Solanum lasiophyllum

Solanum phlomoides

Surianaceae

Stylobasium spathulatum

Typhaceae

Typha domingensis

Violaceae

Afrohybanthus aurantiacus

Zygophyllaceae

Tribulopsis angustifolia

Tribulus astrocarpus

Tribulus hirsutus

Tribulus macrocarpus

Tribulus occidentalis

Tribulus suberosus

**Tribulus terrestris*