

EDJUDINA GOLD PROJECT FLORA, VEGETATION AND FAUNA HABITAT RECONNAISSANCE SURVEY December 2024

Revision A



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1.0 INTRODUCTION

1.1 Location

Gibb River Diamonds Ltd requested a reconnaissance survey of portion of the company’s Edjudina Project. The survey area is located on MLA31/495 and M31/481. Figure 1.1 shows the regional location of the Edjudina Project

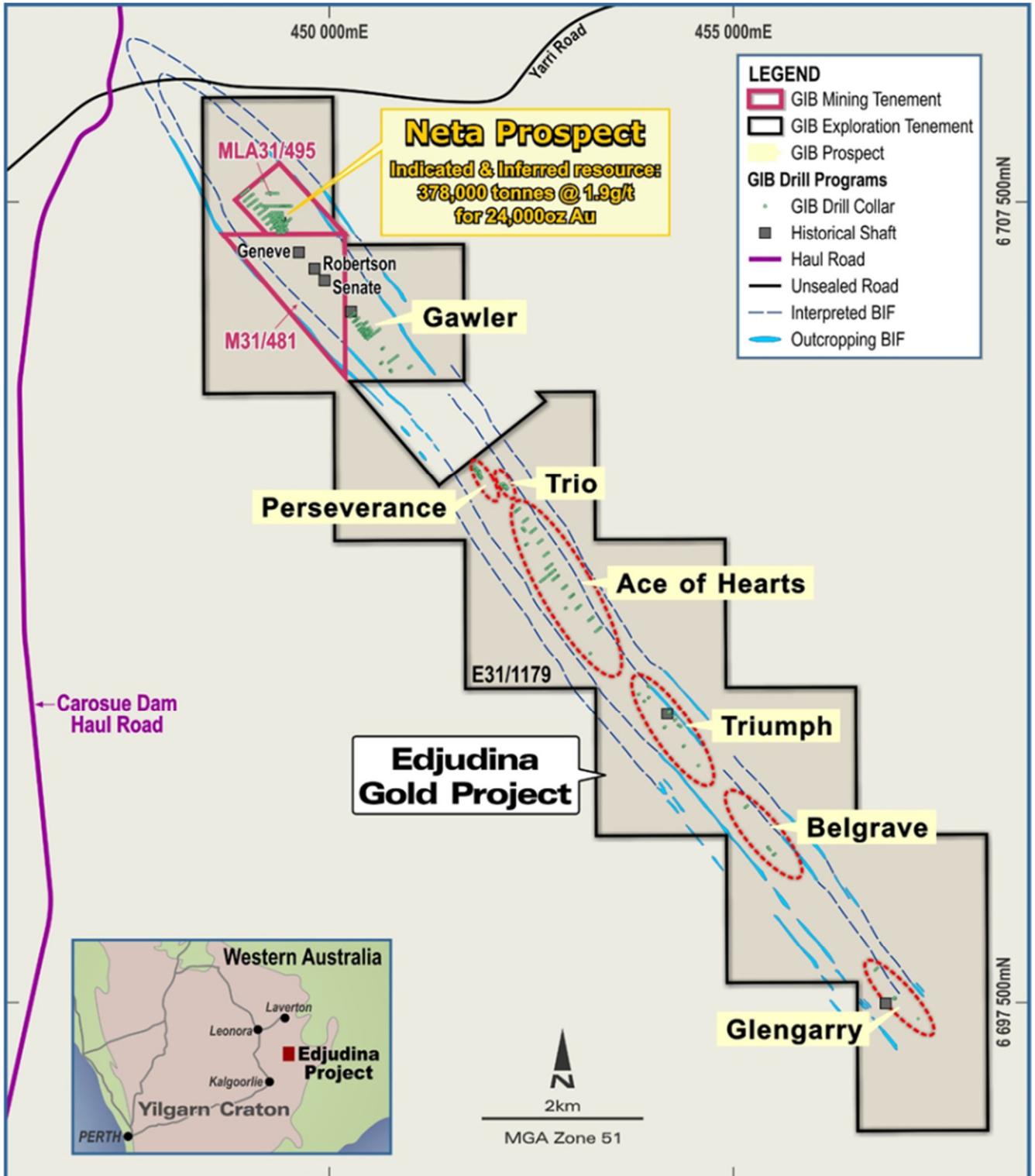


Figure 1.1: Location of the Edjudina Project.

1.2 Scope

The survey was undertaken at a reconnaissance level, which is a preliminary site visit conducted to gather broad information about an area's flora, vegetation and fauna habitat, typically used when potential impacts are considered low or the vegetation is well-known. The intent is to verify desktop study findings and determine if a more detailed survey is necessary. A reconnaissance survey involves low-intensity sampling and general characterisation of the vegetation and habitat present, rather than in-depth analysis.

The survey area was provided by Gibb River Diamonds and focusses on an historically very disturbed area, which is the current area of focus for a potential future mining operation.

2.0 EXISTING ENVIRONMENT

2.1 Climate

The Goldfields region is arid to semi-arid with average annual rainfall decreasing from about 250mm in the south-west to 200mm in the north-east. The area experiences hot summers and mild winters with cold nights. Rainfall varies widely between years and droughts are common. Remnants of tropical cyclones occasionally bring heavy summer rain and can cause flooding to the area.

The nearest Bureau of Meteorology (BoM) weather station is located at Menzies, approximately 140 km west of Edjudina. Data available from this station is now limited to rainfall, although records are incomplete for 2024. Long term data collection from the Menzies station shows January has the highest mean daily maximum temperature of 35.1 C, while July has the lowest at 17 C. The mean rainfall for the Menzies area is 249 mm per annum. Figure 2.1 shows the long term mean temperature and rainfall for Menzies (BoM 2025).

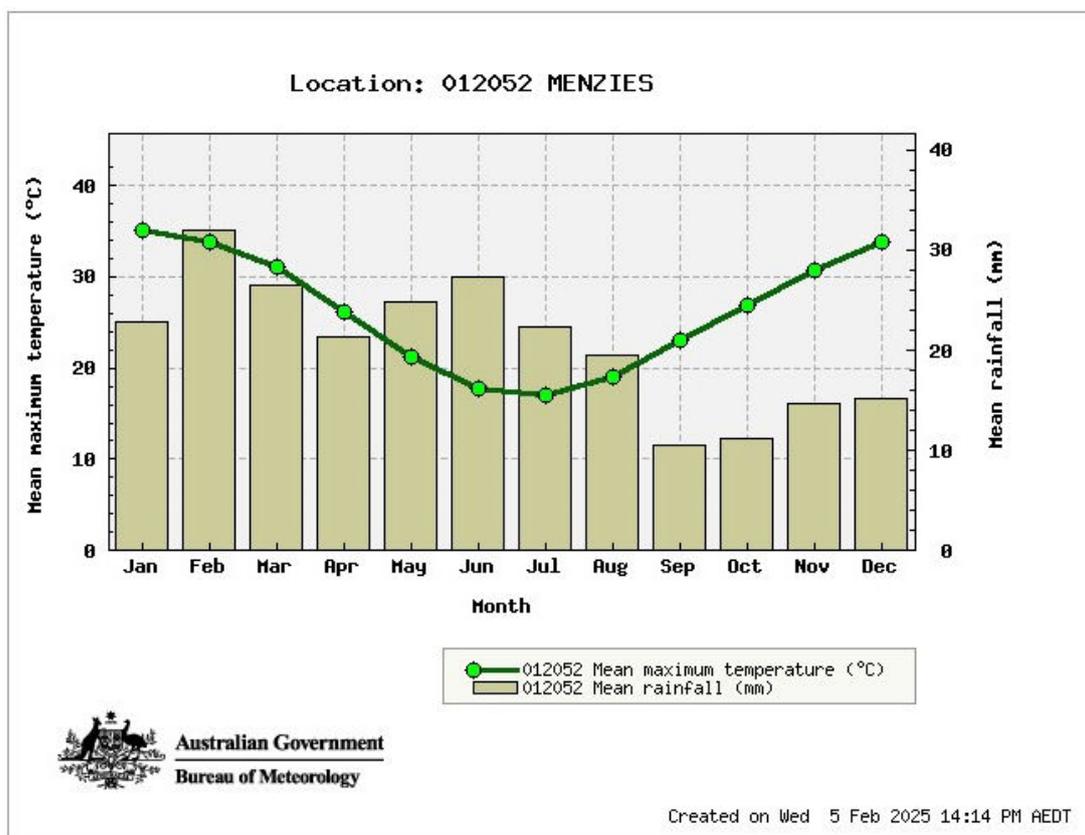


Figure 2.1: Long-term mean temperature and rainfall for Menzies.

In 2023 Menzies recorded just 112.5 mm of rainfall for the year (BoM 2025). 252.6 mm was recorded in 2024 (WillyWeather 2025), breaking a several year period of drought. Vegetation in the area at the time of the survey was responding to the increased rainfall.

2.2 Land Systems and Geology

The Edjudina Gold Project is located in an area of the Gundockerta Land system, described as “Extensive, gently undulating calcareous stony plains supporting bluebush shrublands. Moderately susceptible to soil erosion” (Pringle et. al. 1994).

The geomorphology of the region is described as “Extensive, gently undulating plains generally with abundant stony mantles, and less extensive, lower alluvial plains with narrow central zones receiving more concentrated run-on, relief usually less than 15m”.

The project lies in the Kurnalpi Terrane in the eastern part of the Norseman-Wiluna greenstone belt in the Eastern Goldfield Superterrane of the Achaean Yilgarn Craton. The Kurnalpi Terrane contains a number of Domains. The project lies within the Murrin Domain which represents an assemblage developed during rifting of the Kurnalpi Terrane (or similar) arc (Cassidy et al., 2006).

The Murrin Domain is composed of three Formations: the Welcome Well Formation consists of volcanic and volcanoclastic rocks that are predominantly andesitic in composition. These are overlain by the Minerie Formation where tholeiitic to komatiitic basalts with large scale-gabbroic intervals are interlayered with epiclastic sedimentary units. The upper most Murrin Formation consists of komatiitic basalts associated with layered mafic –ultramafic cumulates and felsic volcanoclastic rocks (Groenewald et al., 2006).

2.3 IBRA Biogeographical Sub-region

The Porphyry Project is located in the Eastern Murchison (MUR 1) bio-geographic subregion and adjacent to the Great Victoria Desert bio-geographic region (Desmond et al., 2002). This region consists of predominantly mulga woodland on plains and reduces to scrub on the hills (Beard, 1990; Cowan, 2001).

2.4 History

Edjudina Station was established in 1892 as one of the first pastoral leases in the Goldfields. The Bluebush pastures that originally dominated vegetation were regarded as high value grazing country. At its peak in the mid-1930's the station was stocked with 25,000 sheep but stocking rates were gradually reduced and eventually changed to cattle. The station is currently destocked to allow vegetation to recover following a number of years of drought throughout the region.

Mining commenced in the Edjudina area in the late 1800's and several mines continue to operate in the vicinity of the project to this day. The survey area is heavily disturbed by mining and exploration activity, including numerous shafts, foundations of a processing facility and a series of tailings dams. Very little original vegetation remains.

3.0 METHODOLOGY

3.1 Desktop surveys

Database searches were undertaken by the Department of Biodiversity, Conservation and Attractions (DBCA) of:

- the Threatened and Priority Flora database (TPFL)
- the WA Herbarium database (WAHERB)
- the Threatened and Priority Fauna database
- the Ecological Communities database.

The EPBC Act Protected Matters Search Tool was also used to generate a list of species and features considered to be Matters of National Environmental Significance.

In addition, flora and fauna survey reports from nearby mining operations including Porphyry, Sunrise Dam, Carosue Dam and the Bellevue Gold Project were reviewed to confirm consistency with the data returned from the database searches.

3.2 Field survey

A reconnaissance level field survey was undertaken on 2 and 3 December 2024. The aim of the survey was to provide a record of flora, vegetation and fauna habitat in the survey area defined for the Gibb River Diamonds Edjudina Gold Project, with particular focus on the presence, or likelihood of presence of conservation significant flora and fauna species.

The flora and vegetation component of the survey was undertaken by Jenny Borger, a botanist with more than 25 years' experience in Western Australia, with 12 years predominately within the Murchison IBRA Region.

The fauna habitat component of the survey was undertaken by Jeremy Shepherdson, a biologist and environmental consultant with over 25 years' experience throughout Western Australia, including extensively in the Goldfields region.

Potential survey sites were chosen from vegetation/ land surface patterns on aerial imagery prior to the survey to be confirmed in the field and other areas included as deemed necessary.

The flora and vegetation sites were described from opportunistic observations and relevés which included collection of the following information:

- Located in representative vegetation
- Location recorded by GPS
- A representative photo was taken at each of the sites
- Description of landform and land surface
- Dominant growth form/s, height, cover and species for each stratum as required for description at a minimum NVIS V.
- A list of all taxa present within the area
- Assess the condition of the vegetation against EPA ratings (Table 3.1), disturbances and potential threats

While the timing of the survey is typically not conducive for flora surveys, recent rains and above average rainfall for the year had resulted in many species still being in flower. Additionally, the degraded nature of most of the survey area substantially lowers the likelihood of flora species of conservation significance being present. Timing was not considered to be an issue for the fauna habitat survey. Table 3.2 describes the survey limitations.

Table 3.1: Description of condition ratings (EPA 2016).

Vegetation condition	Eremaean Botanical Provinces
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Table 3.2: Survey limitations and extent.

Potential Limitation	Extent
Contextual information at a regional and local scale	Partly limiting Several surveys have been undertaken in the broader region; however surveys within 40 km of the site are not readily available or have not been done. The landforms and vegetation are well represented over the broader area so enough information is available to compare vegetation and flora information to determine representation in the region.
Competency/ experience	Not limiting Botanist (Jenny Borger) has more than 25 years' experience in Western Australia with 12 years within the Murchison IBRA region. Biologist (Jeremy Shepherdson) has more than 25 years' experience in Western Australia with extensive experience in the Goldfields Region.
Proportion of flora recorded and/ or collected, any identification issues	Partly limiting The area has been partially destocked and also received some rainfall prior to the survey so plants were healthy and ground cover was showing signs of recovery with good grass cover and some forbs germinating; however not all grasses were in flower or seed so some identifications were tentative. A few shrub species were in flower. The mulga species had a lot of insect damage (especially to growth tips) and pods were not present on most plants; however identification of the mulga group is fairly confident.
Was the appropriate area fully surveyed	Not limiting The site is small with moderate to high levels of historic disturbances – there is not a lot of variation within the vegetation floristically.
Access restrictions within the survey area	Not limiting There is good 4WD access and most areas are within easy walking distance. The only restrictions are the presence of mine shafts and other mining disturbances (excavations, earth structures) which may pose a safety risk.
Survey timing, rainfall, season	May be partly limiting The recommended survey times for the Eremaean region are post wet-season (March to June) or after winter rainfall if applicable. The site lies within an area which has slightly bimodal rainfall which can be irregular. Good falls were recorded in November, a few weeks prior to the survey following a dry spring, but above average rainfall was recorded for the year (Edjudina BoM Station 12027).
Disturbance that may have affected the results such as fire, flood or clearing	Partly limiting The site is located within a pastoral lease which has been subjected to mining disturbances dating back to 1898 which has involved timber cutting, clearing of other vegetation, access tracks, land disturbances; erection of buildings. Apart from mining impacts there is a long history of pastoral impacts. The current managers have reduced the amount of stock in the area which is noticeable in the cover and diversity of grasses present. Weeds are present in some areas – although most are sparse – this could be due to the timing – as many of the annuals would most likely be present in winter/ spring. Some perennial weeds are present at the site of old buildings. There are no signs of fire.

4.0 DESKTOP RESULTS

4.1 Conservation significant flora

Conservation significant flora (CSF) recorded in the broader Edjudina region from searches of databases (24_1124FL (DBCA 2024)) and other vegetation surveys (Mattiske 2010, AHA 2012, Mattiske 2022, AHA 2023) are presented in Table 4.1, with a brief description of recorded habitat and likelihood of occurring (LOC) within the Edjudina survey area.

Conservation codes are defined in Appendix 1.

A vegetation and targeted rare flora survey undertaken by Armstrong (2016) for Saracen Mines (adjacent to AHA Survey 2012) recorded no CSF within the project area; but did record *Hysterobaeckea ochropetala* subsp. *cometes* (P3) 30 km SW of that survey area (> 70 km from Edjudina). Locations of CSF from the database search are presented in Figure 4.1.

Table 4.1: Threatened and priority flora recorded in the Edjudina region.

Scientific Name	Status	Habitat	Record	LOC
<i>Eucalyptus articulata</i>	T	Low, straggly mallee, near Mulga Rock; red sand dunes with arkose (sandstone) rubble	D, M – 100 km	N
<i>Acacia eremophila</i> var. Numerous-nerved variant	P3	Multi-stemmed shrub; sandy soils, flats, alluvial plain	D < 25km	M
<i>Calandrinia quartzitica</i>	P1	Semi-erect to erect perennial forb; It occurs on the samphire dominated lake edges and lake channels, and at the base and runoff flats of closely adjacent quartzitic ridges and breakaways or quartzitic hummocky ground	D, SD	N
<i>Calandrinia</i> sp. Menzies	P3	Semi erect to erect annual herb; 5 petals, bright pink; open shrubland <i>Acacia tetragonophylla</i> , <i>A. quadrimarginea</i> , <i>A. aneura</i> ; plains; tall open mulga shrubland on stony hardpan plain with saline inclusions	D	N – L
<i>Conospermum toddii</i>	P4	Spreading shrub to 2 m; yellow sand dunes	M	N
<i>Dicrastylis cundeelensis</i>	P4	Woolly shrub to 0.5 m; yellow, red or reddish yellow sand; sandplains	D, M	N
<i>Eremophila arachnoides</i> subsp. <i>tenera</i>	P3	Erect multi-stemmed shrub; AHA (2012) Land unit 5 ¹	D, H ~ 40 km	L
<i>Eremophila eversa</i>	P1	Low shrub, hairy purple to lilac flowers; known from one location where it was protected from grazing but has subsequently died. No notes on habitat.	D	N
<i>Eremophila mirabilis</i>	P2	Shrub to 2 m; warty stems; sandy soils associated with granite	D	N
<i>Eremophila</i> sp. Lake Carey	P1	Near Lake Carey; plain, <i>Hakea preissii</i> open shrubland/ low chenopod shrubland; <i>Acacia aneura</i> , <i>Eremophila</i> mid storey, <i>Chenopod</i> understorey.	D, SD	L
<i>Eucalyptus jutsonii</i> subsp. <i>jutsonii</i>	P4	Red to pale orange deep sands. Undulating areas and on dunes.	D	N
<i>Eucalyptus pimpiniana</i>	P3	Red sand. Sand dunes & plains.	D, M	N

<i>Hemigenia exilis</i>	P4	Erect multi-stemmed shrub to 2 m; laterite, breakaways and slopes	D	N
<i>Hybanthus floribundus</i> subsp. <i>chloroxanthus</i> / <i>Pigea</i> sp. <i>chloroxantha</i>	P3	Recently renamed: <i>Pigea</i> sp. <i>chloroxantha</i> ; multi-stemmed shrub to 0.7 m; flowers blue and white; dark red-brown soil, never sandy, lateritic caprock on ultramafic bedrock; rocky areas, creek banks	D	N
<i>Hysterobaeckea ochropetala</i> subsp. <i>cometes</i>	P3	Shrub 0.3 – 2 m high; leaves with a long line-like abaxial groove but with no apical point (or mucro ^ 0.1 mm); subsp. <i>cometes</i> has larger flowers with white petals and prominently horned sepals. Sandy soils, mallee over <i>Acacia</i> spp., and <i>spinifex</i> .	D	N
<i>Melaleuca apostiba</i>	P3	Spreading shrub, to 2 m high, with grey fissured bark and dull green leaves. Sand dunes adjacent to salt lakes	D, SD	N
<i>Micromyrtus serrulata</i>	P3	Erect to spreading shrub, 0.4-1.5 m high. Fl. White; brown sandy and clayey soils over granite	D, M	N
<i>Placynthium nigrum</i>	P3	Lichen; in or at edge of rock pool	D	N
<i>Stackhousia</i> sp. Lake Mackay	P1	Leafless low shrub to 0.7 m; in narrow creek coming out of breakaways into purple Badlands (? – assume this is a siltstone or similar).	D	N
<i>Tecticornia mellarium</i>	P2	Succulent chenopod shrub; edges of salt lakes	D, SD	N
<i>Tecticornia</i> sp. Lake Way	P1	Succulent chenopod shrub; edges of salt lakes	D, SD < 25km	N
<i>Thryptomene eremaea</i>	P2	Erect open shrub to 1.5 m. Flowers pink/ white. Red or yellow sand, sandplains	D, M < 25 km	N

(D – DBCA – 100 km buffer; M – Mattiske 2010 (46km +, south); H – AHA (40 km SW); SD (Sunrise Dam, 70 km north; Mattiske 2022).

Likelihood of occurrence (LOC) – N – nil, or very unlikely; L – unlikely; M – moderate – habitat is possibly present, or habitat not described well; H – high – habitat present and/or records nearby.

1. AHA – Land unit 5: Very sparse to sparse (PFC 10 – 30%) mixed height chenopod shrublands (<4 m) dominated by *Maireana sedifolia*, *M. georgei*, *M. pyramidata*, *Atriplex vesicaria*, *Ptilotus obovatus* and others or in poor condition dominated by *Senna artemisioides* subsp. *filifolia*, *Eremophila scoparia*, *Dodonaea lobulata* and *Acacia burkittii* overtopped with isolated and clumped (PFC <1 – 40% in clumps) tree layer (6 -15m) of *Casuarina obesa* (more likely to be *C. pauper*), *Eucalyptus brachycorys* (now known as *E. cometae-vallis*) and *E. lesouefii*.

4.2 Previous vegetation and flora surveys

As part of the desktop assessment previous vegetation and flora surveys in the wider Edjudina area were evaluated for vegetation associations and conservation significant flora records. The most relevant are summarised in Table 4.2.

Table 4.2: Vegetation descriptions from previous surveys in the area.

<p>Northern Star Resources Ltd; Enterprise Project Native Vegetation Clearing Permit Application supporting documents (2024). 16 km WSW of Edjudina. Only the AHA descriptions will be used. Information from Botanica Consulting report is not in a readily useable form.</p> <p>1. Botanica Consulting (2010) Saracen Vegetation and Flora Survey; 586 ha; no CSF; 5 vegetation groups; 23 families; 35 genera and 51 species</p> <p>2. AHA (2023) Environmental Assessment: Enterprise. Northern Star Resources Ltd.; 367 ha; no CSF; 83 native taxa from 22 families; Chenopodiaceae 20 (7 G, Maireana 6, Sclerolaena 6); Fabaceae 16 (2 G, Acacia 11); Scrophulariaceae 9 (1 G, Eremophila 9); Poaceae 6 (6 G); Asteraceae 4 (4 G)</p>	
AHA 2b Gently inclined rises	Sparse degraded chenopod shrubland dominated by <i>Maireana sedifolia</i> with isolated taller shrubs <i>Acacia burkittii</i> and <i>Senna artemisioides</i> subsp. <i>filifolia</i> .
AHA 4c Plains	Very sparse to sparse, degraded chenopod shrublands dominated by <i>Maireana sedifolia</i> and <i>M. pyramidata</i> shrubland with very sparse overstorey of <i>Acacia incurvaneura</i> , <i>A. aptaneura</i> and <i>Casuarina pauper</i> with isolated <i>Pittosporum angustifolium</i> .
AHA 6a Drainage tracts 25 to 120m wide with channels up to 3m wide by 1m deep	Sparse to mid-dense <i>Acacia</i> shrubland along drainage banks dominated by <i>Acacia burkittii</i> and <i>A. tetragonophylla</i> with taller <i>A. incurvaneura</i> and <i>Pittosporum angustifolium</i> . Sparse to mid-dense chenopod shrublands occur on islands and floodways dominated by <i>Maireana pyramidata</i> with <i>Atriplex bunburyana</i> and <i>Ptilotus obovatus</i> .
<p>Paul Armstrong and Associates (2016) Vegetation survey and rare flora search of the Carosue Dam Airstrip Project - ~ 45 km SW – adjacent to area surveyed by AHA (2012). 7 Eucalypt woodlands, 5 tall shrublands and 2 low shrublands (including 1 rehabilitation type). 315 ha</p> <p>110 native taxa; 24 families; Myrtaceae 17 (7G; Eucalyptus 10); Chenopodiaceae 16 (6 G); Scrophulariaceae 14 (1G, Eremophila); Fabaceae 13 (4 G; Acacia 9); Poaceae 4 (4 G)</p>	
5.2.1 DLT Drainage lines Red sandy clay loam with lateritic and quartz stones	<p>Tall shrubland – Drainage line thicket</p> <p>The upper and dominant stratum was Thicket to Scrub dominated by <i>Casuarina pauper</i> growing 4 to 8m tall (+<i>Eucalyptus yilgarnensis</i>); over Low Scrub dominated by <i>Dodonaea lobulata</i> and <i>Scaevola spinescens</i>; over Open Dwarf Scrub with no species dominating.</p> <p>Tall Shrubs (3 to 8m tall): <i>Acacia acuminatum</i>, <i>Acacia aneura</i>, <i>Acacia ramulosa</i>, <i>Acacia tetragonophylla</i> and <i>Casuarina pauper</i>.</p>
5.2.3 MH Red sandy clay with calcrete and ironstone gravel.	<p>Tall Shrubland – Mixed Heath</p> <p>The upper and dominant stratum was Scrub dominated by <i>Casuarina pauper</i> growing to 8m tall; over Open Scrub dominated by <i>Acacia aneura</i> growing 3 to 5m tall; over Open Low Scrub dominated by <i>Senna artemisioides</i> subsp. <i>filifolia</i>; over Open Dwarf Scrub dominated by <i>Olearia muelleri</i>.</p> <p>Tall Shrubs: <i>Acacia acuminatum</i>, <i>Acacia aneura</i>, <i>Acacia ramulosa</i>, <i>Casuarina pauper</i> and <i>Eremophila oppositifolia</i>.</p> <p>Medium Shrubs (1 to 2m tall): <i>Acacia colletioides</i>, <i>Dodonaea lobulata</i> and <i>Senna artemisioides</i> subsp. <i>filifolia</i>.</p> <p>Low Shrubs (<1m tall): <i>Olearia muelleri</i> and <i>Scaevola spinescens</i>.</p>
<p>AHA (2012) Environmental Assessment: Tailings Storage Facility Expansion Saracen Gold Mine – 680 ha survey area associated with expansion of a TSF in the Carosue Dam area; 40 – 41 km SW; – six land units of which two may be similar to Edjudina. <i>Casuarina obesa</i> is more likely to be <i>C. pauper</i>.</p> <p>136 taxa from 25 families; Chenopodiaceae 23 (8 G; Maireana 10); Fabaceae 19 (4 G; Acacia 14); Myrtaceae 19 (7 G; Eucalyptus 12); Scrophulariaceae 15 (Eremophila 15); Poaceae 9</p>	

4a Plains Deep calcareous earthy soils	Eucalypt or Acacia shrublands – Very sparse tall Acacia shrubland dominated by <i>A. incurvaneura</i> , <i>A. aptaneura</i> or sparse tall Acacia shrublands dominated by <i>Acacia burkittii</i> with overstoreys of isolated <i>Casuarina obesa</i> (<i>C. pauper</i>) or <i>Eucalyptus oleosa</i> and lower shrubs including <i>Dodonaea lobulata</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> and <i>Ptilotus obovatus</i> .
5 Alluvial plains Calcareous loamy red earths	Chenopod shrubland – Very sparse to sparse mixed height chenopod shrubland dominated by <i>Maireana sedifolia</i> , <i>M. georgei</i> , <i>M. pyramidata</i> , <i>Atriplex vesicaria</i> , <i>Ptilotus obovatus</i> and others or in poor condition dominated by <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Eremophila scoparia</i> , <i>Dodonaea lobulata</i> and <i>Acacia burkittii</i> overtopped with isolated and clumped tree layer of <i>Casuarina obesa</i> (<i>C. pauper</i>), <i>Eucalyptus brachycorys</i> (<i>E. cometae-vallis</i>) and <i>E. lesouefii</i> .
<p>Mattiske (2010) Spring survey – Pinjin Infrastructure corridor and opportunistic threatened flora collections for Tropicana Gold Project AngloGold Ashanti; western start point ~ 40 km south, Kurnalpi – Pinjin Road; heading east. The survey area was 220 km long. Records of CSF closer to Edjudina were included in the potential list (Table 1.xx). Six vegetation communities may be similar to Edjudina; species counts includes results from 2007 – 2008 surveys as well.</p> <p>325 taxa from 53 families and 150 genera; Fabaceae 47 (12 G; Acacia 24); Myrtaceae 38 (13 G; Eucalyptus 21) ; Chenopodiaceae 29 (8 G; Maireana 11) ; Asteraceae 23 (14 G); Goodeniaceae 20 (6 G); Scrophulariaceae 18 (1 G; Eremophila); Poaceae 17 (9 G)</p>	
A4 Sandy loams on flats	Acacia Woodlands Low open woodland to tall open shrubland of <i>Acacia aneura</i> over <i>Maireana sedifolia</i> with <i>Ptilotus obovatus</i> and <i>Enneapogon caerulescens</i> .
C1 sandy loams with quartz rock cover	Casuarina Woodlands Low open woodland of <i>Casuarina pauper</i> over <i>Eremophila</i> spp., <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Dodonaea lobulata</i> and <i>Acacia</i> spp. over <i>Scaevola spinescens</i> , <i>Ptilotus obovatus</i> and <i>Olearia muelleri</i> .
C2 Sandy loams on low rocky rises	Casuarina Woodlands Low open woodland of <i>Casuarina pauper</i> with <i>Acacia aneura</i> over <i>Dodonaea lobulata</i> , <i>Acacia burkittii</i> , <i>Scaevola spinescens</i> , <i>Maireana sedifolia</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> and <i>Ptilotus obovatus</i> .
C3 Sandy loams on flats	Casuarina Woodlands Low open woodland of <i>Casuarina pauper</i> with <i>Acacia aneura</i> and <i>A. aptaneura</i> over <i>Acacia burkittii</i> , <i>Dodonaea lobulata</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> and <i>Scaevola spinescens</i> mixed shrubs.
S3 Clay loams minor drainage lines & seasonally wet areas	Shrubland Tall shrubland of <i>Acacia burkittii</i> and <i>A. tetragonophylla</i> with emergent <i>Casuarina pauper</i> .
S10 Sandy loams with some quartz rock cover on flats.	Shrubland Low open shrubland of <i>Maireana pyramidata</i> and <i>Cratystylis subspinescens</i> with mixed low shrubs and occasional emergent <i>Hakea preissii</i> , <i>Eremophila scoparia</i> and <i>Dodonaea lobulata</i> .

4.3 Conservation significant fauna

The DBCA database search for fauna of conservation significance returned four vertebrate species (one of which is extinct) and one invertebrate species within a 70 km radius of the Edjudina Gold Project survey area. No conservation significant species have previously been recorded within the survey area.

The Protected Matters Search Tool (PMST) was also interrogated and returned 19 species that are possible inhabitants of the area.

Table 4.3 provides the species returned from the database searches.

Table 4.3: Threatened fauna database search results.

Scientific Name	Common Name	WA Status	EPBC Status	Likelihood of presence
DBCA Threatened Fauna Database results				
<i>Antechinomys longicaudata</i>	Long-tailed dunnart	Priority 4	-	Unlikely. No suitable habitat.
<i>Aspidites ramsayi</i>	Woma	Priority 1	-	Unlikely. No suitable habitat.
<i>Branchinella simplex</i>	A fairy shrimp	Priority 1	-	Unlikely. No suitable habitat.
<i>Bettongia lesueur graii</i>	Burrowing bettong (inland)	Extinct	Extinct	Extinct.
<i>Leipoa ocellata</i>	Malleefowl	Vulnerable	Vulnerable	Unlikely. No suitable habitat.
PMST results				
<i>Actitis hypoleucos</i>	Common sandpiper	Migratory	Migratory, Marine	Possible fly over
<i>Aphelocephala leucopsis</i>	Southern whiteface	-	Vulnerable	Possible fly over
<i>Apus pacificus</i>	Fork-tailed swift	Migratory	Migratory, Marine	Possible fly over
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Migratory	Vulnerable, Migratory, Marine	Possible fly over
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered	Critically Endangered, Migratory, Marine	Possible fly over
<i>Calidris melanotos</i>	Pectoral sandpiper	Migratory	Migratory, Marine	Possible fly over
<i>Chalcites osculans</i>	Black-eared cuckoo	-	Marine	Possible fly over
<i>Charadrius cucullatus</i>	Hooded plover	Priority 4	Marine	Possible fly over
<i>Charadrius veredus</i>	Oriental plover	Migratory	Migratory, Marine	Possible fly over
<i>Falco hypoleucos</i>	Grey Falcon	Vulnerable	Vulnerable	Possible
<i>Leipoa ocellata</i>	Malleefowl	Vulnerable	Vulnerable	Unlikely. No suitable habitat.
<i>Merops ornatus</i>	Rainbow bee-eater	-	Migratory	Possible
<i>Motacilla cinerea</i>	Grey wagtail	Migratory	Migratory, Marine	Possible fly over
<i>Motacilla flava</i>	Yellow wagtail	Migratory	Migratory, Marine	Possible fly over
<i>Pezoporus occidentalis</i>	Night parrot	Critically Endangered	Endangered	Unlikely. No suitable habitat.
<i>Polytelis alexandrae</i>	Princess parrot	Priority 4	Vulnerable	Unlikely. No suitable habitat.

<i>Tringa nebularia</i>	Common greenshank	Migratory	Endangered, Migratory, Marine	Possible fly over
<i>Sminthopsis psammophila</i>	Sandhill dunnart	Endangered	Endangered	Unlikely. No suitable habitat.
<i>Liopholis kintorei</i>	Great desert skink	Vulnerable	Vulnerable	Unlikely. No suitable habitat.

The DBCA database results include more than 900 records of malleefowl (*Leipoa ocellata*, Vulnerable), the majority being well to the east of the project area. Figure 4.2 shows the location of conservation significant species in relation to the project area.

The search area is within the potential range of the arid bronze azure butterflies host ant and within the high priority and priority survey area for night parrots. This requires that an assessment for the potential of these species to be present is undertaken during the field survey.

4.4 Threatened and Priority Ecological Communities

A search of the DBCA ecological communities database was undertaken for Threatened Ecological Communities (TEC) and Priority Ecological Communities (PEC). Five such communities were located within a 100 km search radius, all well distant to the project area.

The closest PECs are:

- Emu Land System Priority 3 – Fresh or brackish ephemeral lakes and swamps with Canegrass (*Sporobolus ramigerus*), Lignum (*Duma florulenta*) and Paperbark (*Melaleuca* spp.) shrublands (DAFWA 1994).
- Yellow sandplain vegetation of the Great Victoria Desert with diverse vertebrate fauna Priority 3 – Undulating yellow sandplain with an open upper stratum of *Eucalyptus gongylocarpa*, with or without a diverse mallee stratum of *E. youngiana*, *E. mannensis*, *E. platycorys*, over a sparse, though diverse shrubs over hummock grasses, *Triodia desertorum* or *T. scariosa*. Very high vertebrate diversity and unusual combinations of species (mixture of south-western and arid inter zones).

Figure 4.3 shows the location of the ecological communities in relation to the project area.

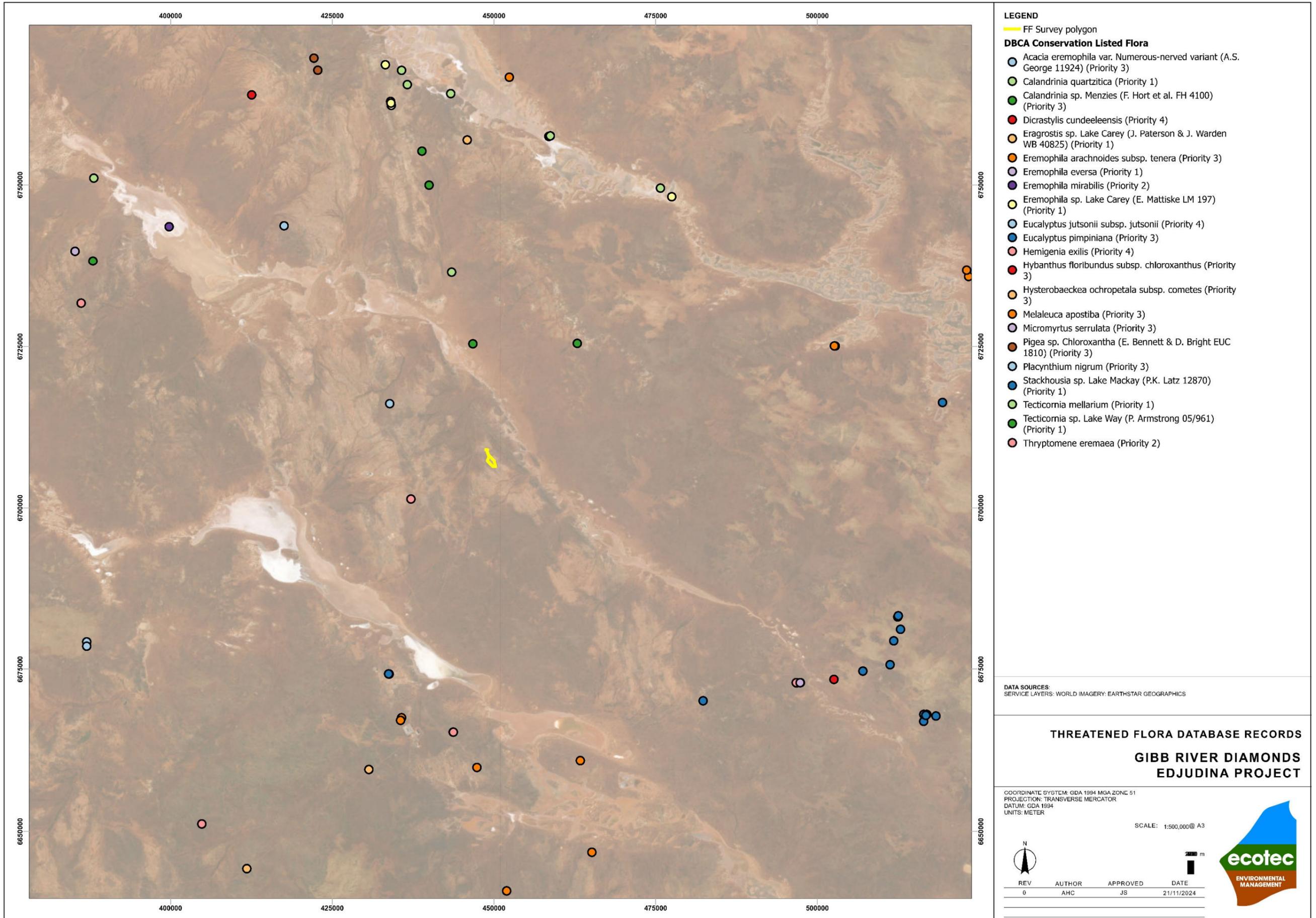


Figure 4.1: Threatened flora database records.

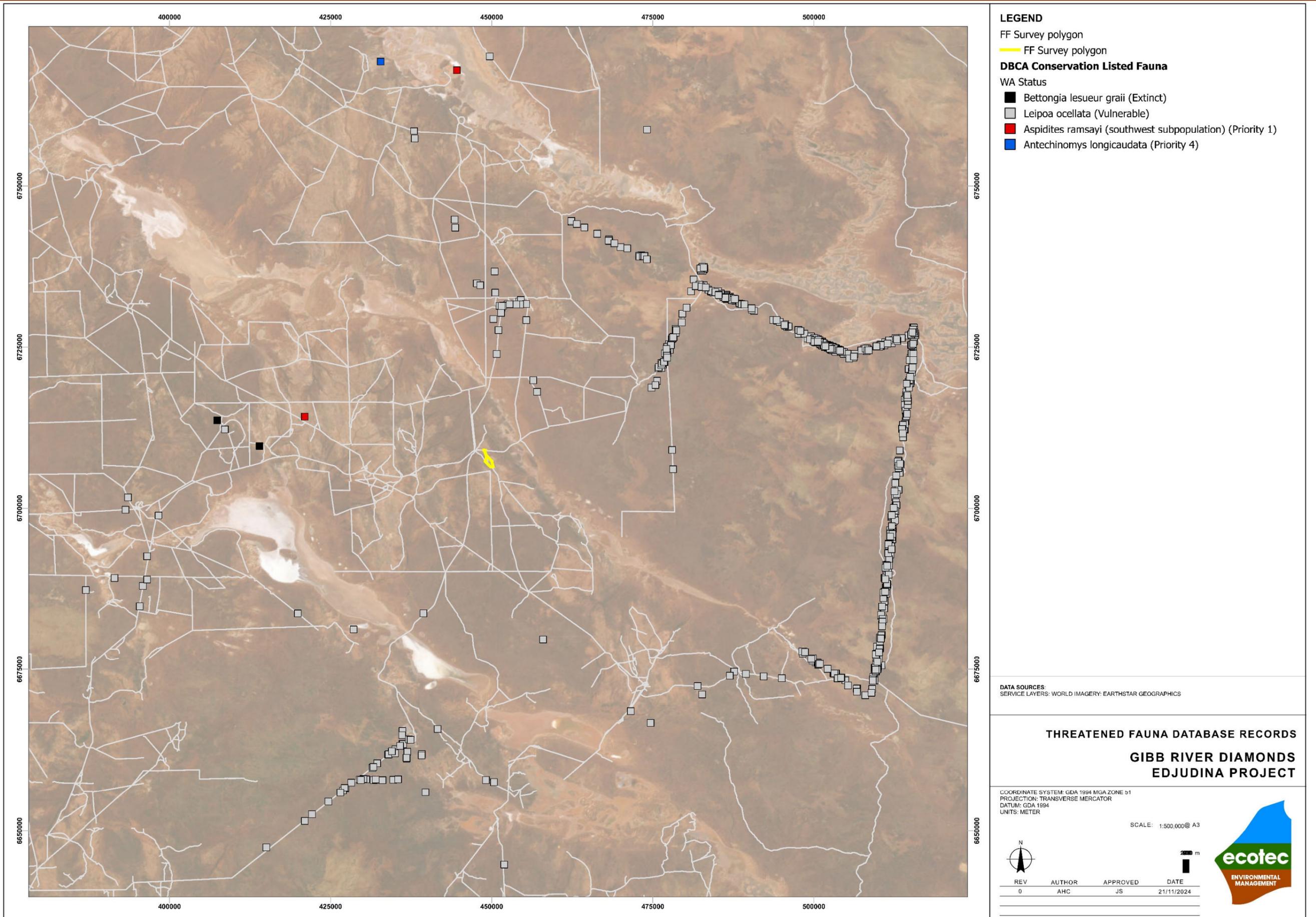


Figure 4.2: Threatened fauna database records.

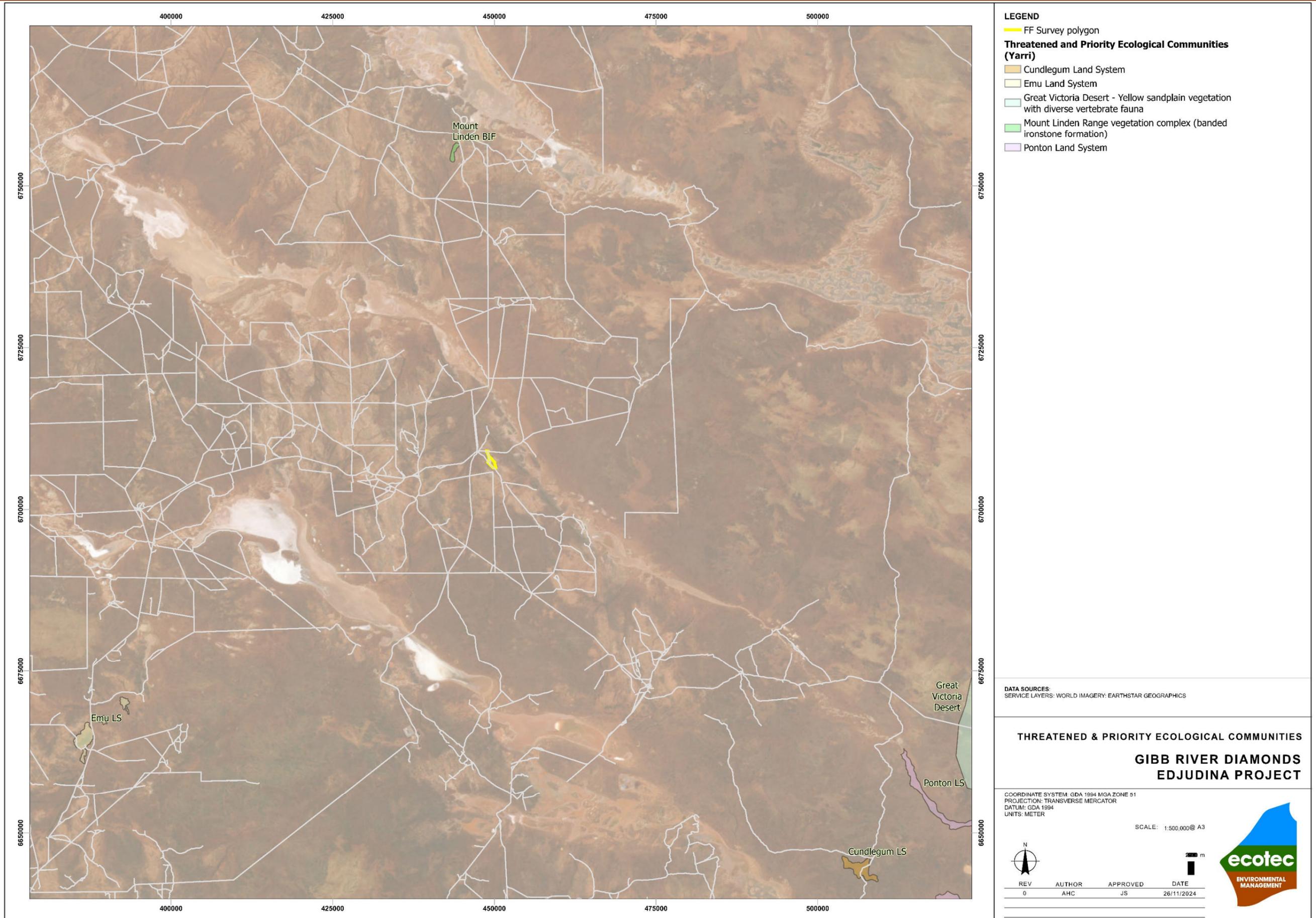


Figure 4.3: Threatened and Priority Ecological Communities

5.0 RESULTS

5.1 Overview

The survey was conducted on 2 and 3 December 2024.

Vegetation and flora was recorded from 16 sites (Figure 5.1), which included one site (6b) located outside the survey area on a BIF/chert ridge to the west. This area was examined to check for the presence of any conservation significant flora species.

Fauna habitat was recorded from 10 sites across the survey area.

Figure 5.1 shows the survey area, survey points and track log.

5.2 Vegetation

Six vegetation types were described from the field results. The extent of disturbance in the area has had moderate to high impact on the vegetation floristics and structure. The vegetation had various amounts of regrowth and recruitment occurring. Table 5.1 provides the vegetation descriptions. Figure 5.2 shows the mapped vegetation.

5.2.1 Vegetation condition

Vegetation condition across the survey area ranged from completely degraded (central part of the surveyed area) to very good (Acacia woodland on the western side of the survey area).

Edjudina is a pastoral lease which has been subject to mining impacts since 1898. The area has been partially destocked in recent years and the result of this can be seen with the diversity and abundance of grasses in some of the areas. Signs of cattle were present, but not recent.

5.3 Flora

A total of 79 native taxa were recorded within the survey area from 21 families and 43 genera. The best represented families were Fabaceae (15 taxa), Chenopodiaceae (15 taxa), Scrophulariaceae (9 taxa) and Poaceae (9 taxa). Five introduced weed species were also recorded.

Another two species were recorded outside the survey area on the BIF/ chert ridge – *Acacia minyura* and *Philothea brucei* subsp. *brucei*. These have not been counted in the total species list for the survey area.

No threatened or priority species were recorded.

Appendix 2 provides the site descriptions for each of the flora and vegetation survey points Appendix 3 provides the flora species list.

5.3.1 Introduced flora

Five introduced “weed” species were recorded during the survey. None are listed as Declared Pest species in Western Australia, nor Weeds of National Significance.

The peppercorn tree (*Schinus molle*) is common throughout the Goldfields of Western Australia where it was introduced as a source of the spice pepper during the original gold rush years. It is considered an environmental weed in Victoria, New South Wales, South Australia and the Northern Territory, however is not considered to be a major threat in WA as it is not invasive and tends to remain quite localised.

Maltese cockspur (*Centaurea melitensis*) can dominate localised, generally low-lying, areas and prevent native species becoming established. This weed can therefore impact the success of rehabilitation work and should be controlled. At the time of the survey it was confined to a few patches along the road verges and in the historic disturbed area.

Pie melon (*Citrullus amarus*), wild sage (*Salvia verbenaca*) and blackberry nightshade (*Solanum nigrum*) are common and widespread weeds. None are invasive and tend not to compete with native flora so present little risk to future rehabilitation works.

Table 5.1: Vegetation recorded in the survey area.

Vegetation type (VT)	Description	Image
<p>1 - Stony plain</p> <p>Sites EDJ1, 3b, south of 7</p>	<p>Isolated low trees of <i>Acacia aneura</i> or <i>Casuarina pauper</i> over <i>Maireana sedifolia</i> and <i>Atriplex</i> spp. on stony plains.</p> <p>Undulating stony plain; Yellowish red (5YR5/8) clay loam to fine sandy clay loam surface rock (quartz, other) 40 – 60 %.</p> <p><i>Acacia aneura</i> or <i>Casuarina pauper</i> low isolated trees over <i>Maireana sedifolia</i>, <i>Atriplex vesicaria</i>, <i>A. nummularia</i>, <i>Acacia tetragonophylla</i>, <i>Senna artemisioides</i> subsp. <i>filifolia</i> open chenopod shrubland over <i>Eriachne pulchella</i> subsp. <i>pulchella</i>, <i>Austrostipa scabra</i>, <i>A. elegantissima</i>, <i>Sclerolaena</i> spp. low sparse to open tussock grassland.</p>	
<p>2 - Drainage line; unincised</p> <p>Sites EDJ3a, 4 & 7b</p>	<p>Mixed low open woodland patches within mixed shrublands in broad drainage lines.</p> <p>Undulating plain, low valley; drainage line, unincised with land surface disturbance (dam). The drainage line area may have become inundated with sediment washed down from the surrounding plains, with channel flow greatly reduced because of the dam and other historic mining structures.</p> <p><i>Acacia aneura</i>, <i>Casuarina pauper</i>, <i>Alectryon oleifolius</i> subsp. <i>canescens</i>, <i>Acacia aptaneura</i>, <i>A. ramulosa</i> low open woodland patches within open shrubland of <i>Acacia tetragonophylla</i>, <i>Dodonaea lobulata</i>, <i>Eremophila</i> spp., <i>Teucrium disjunctum</i>, <i>Maireana sedifolia</i>, <i>M. triptera</i>, <i>Atriplex vesicaria</i>, <i>A. nummularia</i>, <i>Ptilotus obovatus</i> subsp. <i>obovatus</i>, grasses and forbs.</p>	

<p>3 - Incised drainage line; lower slope of outwash slope</p> <p>Site EDJ10</p>	<p><i>Casuarina pauper</i> open woodland over <i>Acacia</i>, <i>Casuarina</i> tall open shrubland over <i>Eremophila</i>, <i>Acacia</i>, <i>Senna</i>, <i>Cratystylis</i> open shrubland.</p> <p>Yellowish red (5YR5/8) clay loam to fine sandy clay loam; sandy banks with patches of rocks between channels on west side; east side deeply incised channel. Occurs slightly higher in the landscape to VT 2.</p> <p><i>Casuarina pauper</i> open woodland over <i>Acacia aneura</i>, <i>Casuarina pauper</i>, <i>Acacia tetragonophylla</i> tall open shrubland over <i>Eremophila granitica</i>, <i>E. alternifolia</i> var. <i>alternifolia</i>, <i>Acacia tetragonophylla</i> open shrubland over <i>Cratystylis subspinescens</i>, <i>Maireana sedifolia</i>, <i>Senna cardiosperma</i> low open shrubland.</p>	
<p>4 - Undulating plain/low rises</p> <p>Sites EDJ 2, 7c, 8</p>	<p><i>Acacia aneura</i> low isolated trees or low open woodland over <i>Atriplex</i>, <i>Sida</i>, <i>Scaevola</i>, <i>Maireana</i> understory.</p> <p>Highly disturbed areas with historic mining impacts and pastoral impacts – vegetation variable with small pockets in good to very good condition.</p> <p><i>Acacia aneura</i> low isolated trees or small patches of trees over <i>Acacia tetragonophylla</i>, <i>Acacia aneura</i> isolated shrubs over <i>Atriplex nummularia</i>, <i>A. vesicaria</i>, <i>Roepora aurantiaca</i> subsp. <i>aurantiaca</i>, <i>Ptilotus obovatus</i> var. <i>obovatus</i>, <i>Pittosporum angustifolium</i>, <i>Sida calyxhymenia</i>, grasses, <i>Sclerolaena obliquicuspis</i>, <i>Calandrinia eremaea</i> low open chenopod shrubland.</p> <p>(8) <i>Acacia aneura</i>, <i>Casuarina pauper</i>, <i>Brachychiton gregorii</i> low open forest over <i>Sida ectogama</i>, <i>Scaevola spinescens</i>, <i>Sida calyxhymenia</i> low shrubland over <i>Maireana triptera</i>, <i>Solanum lasiophyllum</i>, <i>Sida ectogama</i> low chenopod shrubland.</p>	

<p>5 - Outwash slope; lower slope</p> <p>Sites EDJ 5, 5b, 6</p>	<p><i>Acacia aneura</i>, <i>A. caesaneura</i> low open woodland over <i>Acacia tetragonophylla</i>. <i>A. caesaneura</i>, <i>Eremophila forrestii</i> subsp. <i>forrestii</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>Acacia aptaneura</i> sparse shrubland.</p> <p>Low hills; lower slopes; aspect east; Reddish yellow (5YR6/8) fine sandy clay loam; surface rock 50 – 60 %.</p> <p>Condition: mostly good to very good with more regrowth and recruitment occurring than areas closer to the historic mining area (Site 2, VT 4).</p> <p><i>Acacia aneura</i>, <i>A. caesaneura</i> low open woodland over <i>Acacia tetragonophylla</i>. <i>A. caesaneura</i>, <i>Eremophila forrestii</i> subsp. <i>forrestii</i>, <i>E. latrobei</i> subsp. <i>latrobei</i>, <i>Acacia aptaneura</i> sparse shrubland over <i>Acacia aneura</i>, <i>A. caesaneura</i>, <i>Sida ectogama</i> low open shrubland over <i>Maireana triptera</i>, <i>Acacia caesaneura</i>, <i>Cratystylis subspinescens</i> low chenopod shrubland.</p>	
<p>6 - Low rocky ridge within stony undulating plain</p> <p>Site EDJ 9</p>	<p><i>Acacia oswaldii</i>, <i>Casuarina pauper</i> tall sparse shrubland over <i>Dodonaea lobulata</i>, <i>Acacia tetragonophylla</i> open shrubland.</p> <p>Shallow pockets of yellowish red (5YR5/6) silty clay loam; surface rock (outcrop, quartz, metamorphic rocks; chert) > 90 %.</p> <p><i>Acacia oswaldii</i>, <i>Casuarina pauper</i> tall sparse shrubland over <i>Dodonaea lobulata</i>, <i>Acacia tetragonophylla</i>, <i>Atriplex nummularia</i> open shrubland over <i>Maireana sedifolia</i>, <i>Ptilotus exaltatus</i>, <i>P. obovatus</i> var. <i>obovatus</i> low open chenopod shrubland.</p>	

C – Cleared land.

Cleared or highly disturbed; changes to land form; some native species present; vegetation structure highly modified

The main area is mapped in Figure 5.2; however there are numerous minor areas throughout the central survey area.



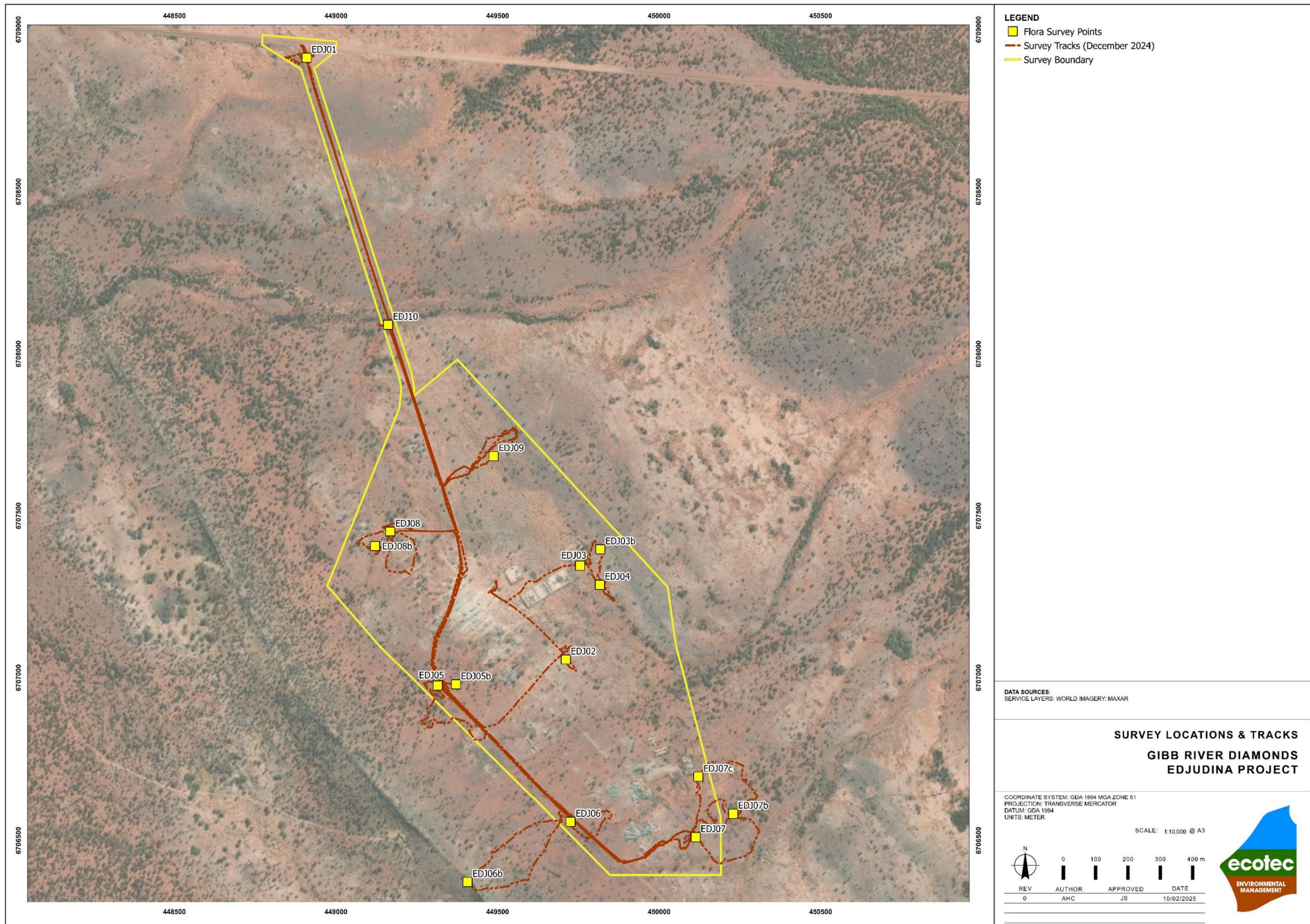


Figure 5.1: Survey points and track log.

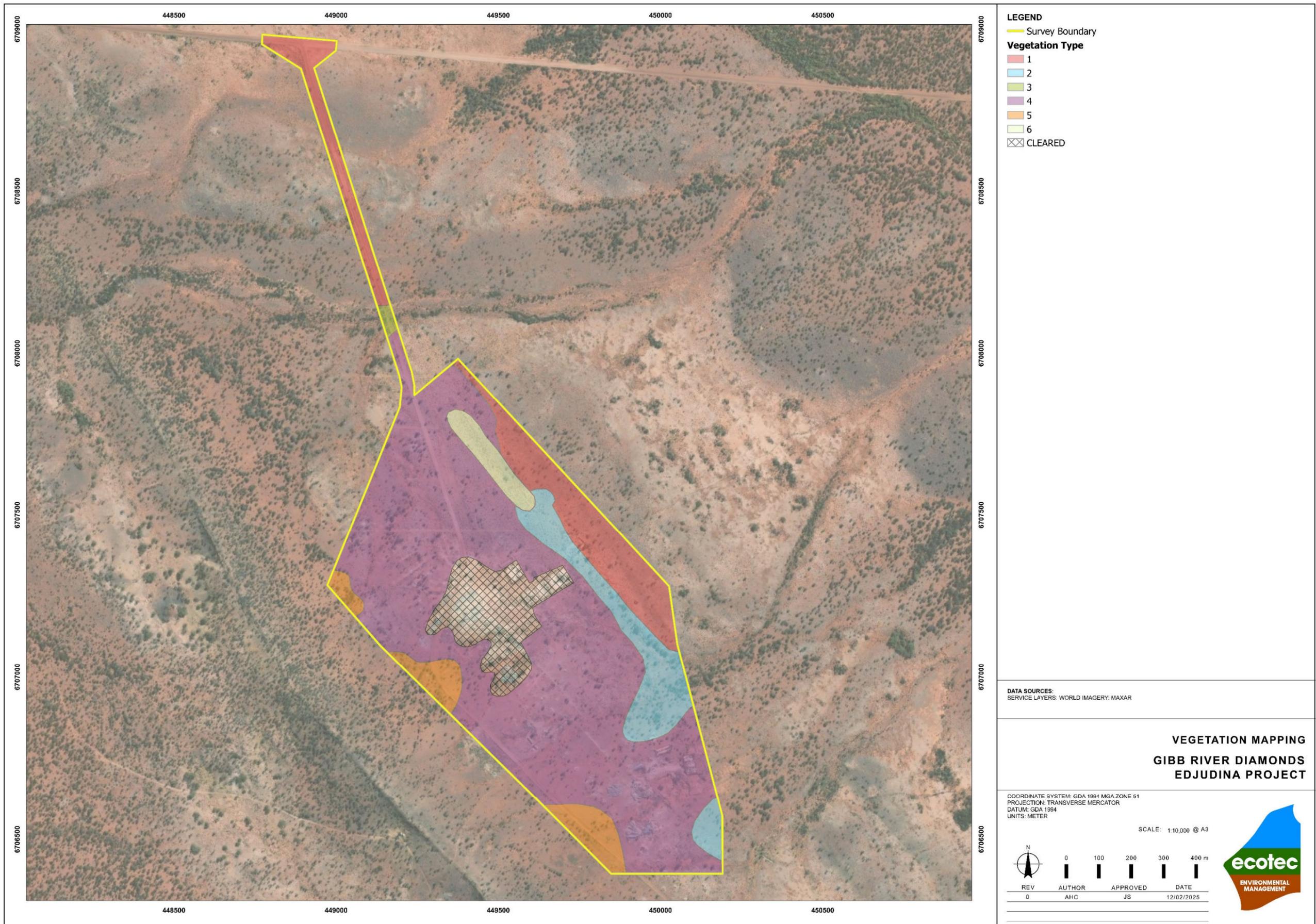


Figure 5.2: Vegetation of the survey area.

5.4 Fauna Habitat

The survey area is heavily disturbed by historic pastoral and mining activity. Subsequently there is little natural fauna habitat remaining within the central parts of the survey area. Vegetation is recovering since the station has been destocked with grasses and herbs emerging, which would have previously been grazed by cattle. The Acacia shrubland habitat to the west of the survey area is in good to very good condition. To the north of the main survey area, the habitat perhaps more resembles the Chenopod shrubland that would have originally been common in this area.

Three main fauna habitats are present in the surveyed area:

- Stony plain
- Drainage line
- Acacia shrubland

5.4.1 Stony plain

Stony plain habitat consists of scattered *Casuarina pauper* and *Acacia aneura* trees over an open understory of Acacia and chenopod shrubs (Photograph 5.1). This habitat occupies most of the survey area and is predominately historically heavily disturbed. Most of the central part of the survey area was probably almost entirely cleared of vegetation at some time in the past, with much of the vegetation present likely to be regrowth. At the northern end of the survey area, this habitat, although showing evidence of being heavily grazed, better resembles the original vegetation (Photograph 5.2). Grasses are re-emerging after above average rains and a period of time without being grazed. The trees in this habitat offer vantage points for birds of prey and the grasses will attract native grazing animals such as kangaroos, although there was little evidence of their presence at the time of the survey.

Broken concrete and other debris from the former processing facility and other historic infrastructure is scattered through the main disturbed areas (Photograph 5.3) and may provide created habitat for various reptiles and small mammals.

The central area is strewn with historic mine shafts (Photograph 5.4). Abandoned mine shafts in the Goldfields region may provide habitat for three species of bat: Chocolate wattled bat (*Chalinolobus morio*); Hill's sheath-tail bat (*Taphozous hilli*) and Finlayson's cave bat (*Vespadelus finlaysoni*). Each species is known to inhabit caves in locations where there are abandoned mine shafts however it is not known for certain that they occupy abandoned mine shafts (DBCA 2018). None are listed as priority or threatened species. Mine shafts are known to present a risk of entrapment to numerous animals ranging from small mammals to reptiles and larger mammals such as kangaroos and livestock. Animals are more likely to fall into shafts without a surrounding bund, which tend to be a deterrent (DBCA 2018).

Several historic tailings dams and/or heap leaches are located within the central part of the survey area. These are partially vegetated, predominately with salt tolerant chenopod species such as *Atriplex* and *Maireana* (Photograph 5.5). The sandy substrates of historic tailings dams and heap leaches can provide burrowing habitat for a variety of fauna species, depending on the contaminants present in the soil. There was no evidence of animal activity on the areas inspected during the survey.

Denser vegetation can be found along the western side of Pinjin Road where surface water accumulates in the verge drain (Photograph 5.6).

A small rocky outcrop is present toward the northern end of the main survey area (Photograph 5.7). It does not have any crevices or voids to offer burrowing or denning opportunities, and is deemed too small to be considered a separate habitat. It has therefore been included in the stony plain habitat.



Photograph 5.1: Stoney Plain habitat in the central part of the survey area.



Photograph 5.2: Stony plain habitat at the northern end of the survey area.



Photograph 5.3: Broken concrete and other debris from the former mining operation may provide habitat for some fauna.



Photograph 5.4: Abandoned mine shifts are found throughout the surveyed area.



Photograph 5.5: Historic tailings dams and/or heap leaches in the survey area are partially vegetated with chenopods.



Photograph 5.6: Denser vegetation along the road verge to the north of the main project area.



Photograph 5.7: A small rocky outcrop in the stony plain habitat.

5.5 Drainage line

An ephemeral, generally poorly defined, drainage line runs along the eastern boundary of the survey area. It is a minor drainage line characterised by denser vegetation dominated by *Acacia* and *Casuarina* trees over a variety of *Acacia* and *Dodonaea* shrubs (Photograph 5.8). The understory is typically more substantial than in the surrounding plains habitat.



Photograph 5.8: Drainage line vegetation on the eastern side of the survey area.

At the northern (upper) end of the drainage line is a constructed dam, likely designed to provide water for the original gold processing operation (Photograph 5.9). The dam holds water for an extended period of time following rainfall events and is now partly surrounded by large mature *Casuarina obesa* trees. It has become a well used water source for fauna in the area. During the survey there were a variety of birds present around the water body with zebra finches nesting in the *Acacia tetragonophylla* shrubs. Tracks of kangaroos, emu and cattle were present around the water, however at the time of the survey none of these were fresh.



Photograph 5.9: An historic constructed dam at the northern end of the drainage line.

A small section of drainage line vegetation also exists on Pinjin Road prior to entering the main project area. Surface water drainage from the area runs to the east toward Ponton Creek and ultimately into Lake Raeside, approximately 50 km to the north-west of the site.

5.6 Acacia shrubland

Acacia shrubland habitat is found in patches on the western side of the survey area, becoming more consistent away to the west (Photograph 5.10). The vegetation is dominated by *Acacia aneura* trees and shrubs, with a dense understory comprising a variety of *Acacia*, *Eremophila* and *Dodonaea* shrubs. The groundcover consists of predominately chenopods including *Atriplex* and *Maireana* species.



Photograph 5.10: Acacia shrubland habitat on the western side of the survey area.

This denser vegetation provides feeding, nesting and shelter habitat for a variety of native animals. Zebra finches were observed nesting in trees in this habitat at the time of the survey (Photograph 5.11). Old cattle tracks and droppings were present throughout the area however vegetation was recovering as a result of recent rainfall and the absence of grazing. This vegetation type is dominant to the east and west of the survey area and, when distant from human and grazing disturbance, is potential malleefowl habitat. Given the extent of disturbance and proximity to human activity, it is very unlikely that malleefowl would be present in the vicinity of the Edjudina Project.



Photograph 5.11: Finches nesting in Acacia shrubland habitat.

Figure 5.3 shows the broad fauna habitat of the Edjudina Project survey area.

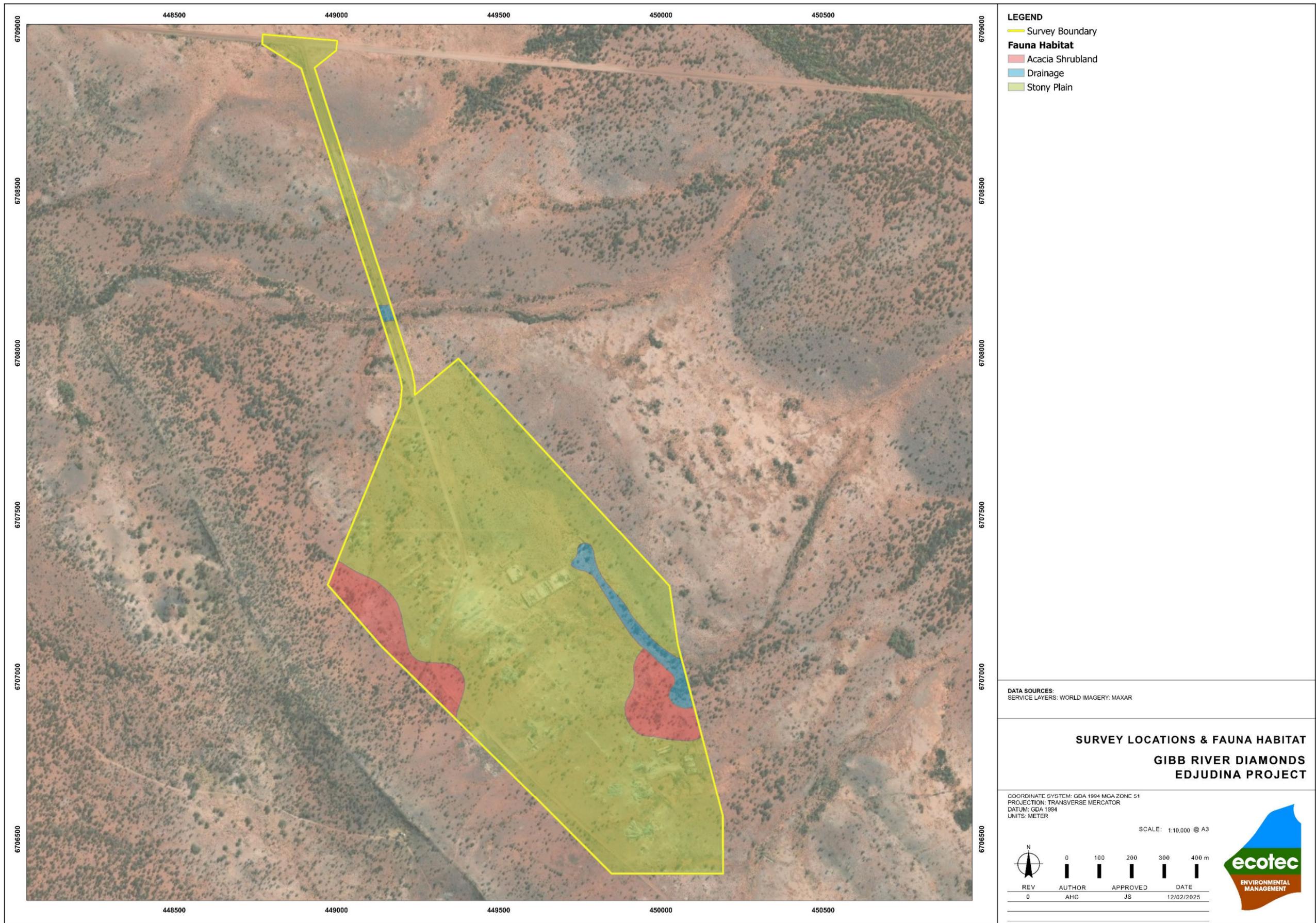


Figure 5.3: Fauna habitat mapping.

5.7 Fauna

There was little evidence of large fauna in the area at the time of the survey. Kangaroo scats and tracks observed were quite old but with grasses re-emerging after recent rainfall it is expected they will become more abundant. The station is reportedly currently destocked and there was no recent evidence of cattle activity in the surveyed area at the time.

Fauna was not abundant around the Edjudina area at the time of the survey. Opportunistic observations only were recorded. No systematic searching was undertaken. Birds were the most abundant fauna present, mostly observed near the pooled water in the historic dam. Table 5.2 provides the list of fauna observed during the survey in December 2024.

Table 5.2: Opportunistic fauna sightings, December 2024.

Scientific name	Common name
<i>Bos taurus</i>	Cattle (tracks & scats)
<i>Corvus bennetti</i>	Little crow
<i>Cracticus nigrogularis</i>	Pied butcher bird
<i>Falco berigora</i>	Brown falcon
<i>Hirundo neoxena</i>	Welcome swallow
<i>Macropus rufus</i>	Red kangaroo (tracks & scats)
<i>Malurus leucopterus</i>	White-winged fairy wren
<i>Melopsittacus undulatus</i>	Budgeriegar
<i>Nymphicus hollandicus</i>	Cockatiel / Weiro
<i>Ocyphaps lophotes</i>	Crested pigeon
<i>Phaps chalcoptera</i>	Bronzewing pigeon
<i>Taeniopygia guttata</i>	Zebra finch
<i>Todiramphus pyrrohopygius</i>	Red-backed kingfisher
Unknown species	Tadpoles

5.8 Conservation significant fauna

The Edjudina Gold Project area is highly disturbed as a result of historic mining activity. Long term pastoral activity, including very intensive grazing by sheep, over the last 100+ years has resulted in degradation of the vegetation and subsequent loss of habitat for many native species. The likelihood of any species of conservation significance being present in the project area is considered to be very low. Further discussion of the conservation significant species that have been recorded in the vicinity, or considered to possibly be present, follows.

5.8.1 Malleefowl

Typical malleefowl habitat in the Goldfields includes *Acacia* and *Casuarina* shrubland, and *Eucalypt* mallee woodlands, neither of which are present in the surveyed area or immediate surrounds. Hundreds of database records exist from suitable habitat to the east, south-east and south-west of the project area resulting from surveys for the Carosue Dam and Sunrise Dam projects. With no suitable habitat present and the high level of disturbance in the surveyed area, it is extremely unlikely that malleefowl will be present in the vicinity of the project.

5.8.2 Rainbow bee-eater

The rainbow bee-eater is no longer considered to be of conservation significance under the Western Australian Biodiversity Conservation Act 2016, however is considered a Migratory/Marine species at a national level as some northern populations are known to migrate seasonally between Australia and Indonesia and Papua New Guinea. On the mainland they generally move seasonally from the north to south to nest in Spring. The species is relatively

common in Western Australia and found in a wide range of habitats. It is quite possible rainbow bee-eaters will be in the vicinity of the project.

5.8.3 Migratory and marine bird species

Twelve Migratory and Marine bird species were returned from the PMST search. The majority of these birds are coastal species and many will utilise salt lakes in central parts of Australia during their migration. As such, it is possible that some of these species will be periodically present in the surrounding salt lake systems and may overfly the project area on occasion. It is considered highly unlikely that any of these species would be observed within the surveyed area.

5.8.4 Arid bronze azure butterfly

The arid bronze azure butterfly (*Ogyris subterrestris petrina*) is a threatened species that is listed as critically endangered under the national Environment Protection and Biodiversity Conservation Act 1999 and the Western Australian Biodiversity Conservation Act 2016. The arid bronze azure butterfly is listed due to its low abundance and severely fragmented distribution, with only two extant subpopulations being recorded in Western Australia. The butterfly has an obligate association with an ant and the butterfly larvae lives entirely within the ant's nest during their development. The known populations of the butterfly exist in habitat comprising mature mixed gimlet (*Eucalyptus salubris*) / salmon gum (*E. salmonophloia*) woodlands on red-brown loam soils, with an open understorey (DBCA 2020).

The project area is within the potential range of the azure bronze butterfly and its host ant, however there is no suitable habitat within the surveyed area or immediate surrounds.

5.8.5 Night parrot

The night parrot (*Pezoporus occidentalis*) is an elusive parrot endemic to Australia. Night parrots are highly cryptic in nature, being nocturnal, primarily ground-feeding parrots, that inhabit remote arid and semi-arid areas of Australia. The night parrot is listed as a threatened species, at the rank of Critically Endangered under Biodiversity Conservation Act 2016 (BC Act) and Endangered under Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Commonwealth). Research from Queensland (QLD), coupled with recent observations from WA, provide insight into night parrot ecology and habitat requirements. At the landscape scale, night parrots require two distinct habitats:

1. patches of low, dense vegetation in which they roost during the day; and
2. nearby floodplains or other low-lying areas supporting diverse assemblages of native grasses and herbs in which to feed at night.

All contemporary roosting/breeding observations have been from *Triodia* dominated habitats, but historically night parrots have also been reported roosting at sites dominated by chenopods, such as samphire and *Sclerolaena*, and in some cases lignum (*Duma florulenta*) (DBCA 2024).

The project area is located in the priority survey area for the night parrot, and it is possible that the species was an inhabitant of the area prior to European occupation.

While some of the flora species required for suitable habitat are present, more than 100 years of intensive pastoral and mining activity, with the associated degradation of the natural vegetation structure (loss of grasses in particular) has resulted in the area now being considered highly unlikely to support the night parrot.

5.8.6 Grey falcon

The species is infrequently recorded over much of arid and semi-arid Australia and occurs at low densities (BirdLife International 2018). The distribution of the Grey Falcon is centered on inland drainage systems and nests are usually in the tallest trees along watercourses (Garnett and Crowley 2000). Records tend to occur further to the north of the project area, extending into the Murchison and Pilbara regions. It is possible as a vagrant to the vicinity of the project area but there is no nesting habitat present.

5.8.7 Long-tailed dunnart

The long-tailed dunnart appears to be a specialist of rocky habitats and probably has a fragmented distribution from the Pilbara and northern Murchison into the southern Northern Territory and northern South Australia (van Dyck and Strahan 2008). A single record from 2018 exists well to the north of the project. A very small section of rocky outcrop exists within the surveyed area (Photograph 5.7), however is considered too small and isolated to support a population of the species. There is some possibility that the long-tailed dunnart could be present in the rocky hills habitat to the east and west of the project area, but it is extremely unlikely to be present in the surveyed area.

5.8.8 Woma

A single 1992 record of a woma python was returned from the database search. The species is associated with sandplain habitat, usually with spinifex (*Triodia* species) vegetation. No such habitat exists in the survey area or surrounds.

6.0 DISCUSSION

6.1 Vegetation and flora

The species composition and vegetation are representative of the Eastern Murchison area with the presence of mulga or *Casuarina* overstory with an understory dominated by *Chenopod* spp., *Eremophila* and *Acacia* spp.

A comparison of species diversity by family with other surveys in the area is presented in Table 6.1.

AHA (2023) Enterprise is located approximately 16 km west of Edjudina and has a very similar species composition. The remaining three sites are located further south and had a good representation of *Myrtaceae* spp. (mostly *Eucalyptus*), which were absent at Edjudina and Enterprise. A reconnaissance survey was conducted and the flora results are well within the range recorded at Enterprise. From these results it is likely that adequate coverage of the site was undertaken and a high percentage of species present were recorded. The diversity amongst annuals was low which could be expected at that time of year. Annual seedlings were present in some areas, however they were too small for identification at the time of the survey. Grasses were well represented, which is likely a result of reduced pastoral impacts with the de-stocking program and assisted by recent rainfall.

Table 6.1: Comparison of flora survey results.

Site	Area (ha)	Total taxa	Genera	Families	Chenopodiaceae	Fabaceae	Scrophulariaceae	Poaceae	Myrtaceae	Asteraceae
Edjudina 2024 (this survey)	125	79	43	21	15	15	9	9	0	3
Enterprise AHA 2023	367	83	40	22	20	16	9	6	0	4
Carosue Dam Armstrong 2016	315	110	56	24	16	13	14	4	17	6
Carosue Dam AHA 2012	680	136		25	23	19	15	9	19	
Tropicana Gold Project Mattiske 2010	220	325	150	53	29	47	18	17	38	23

The vegetation is well represented in the broader region with survey results at Carosue Dam and Enterprise both recording moderate to high levels of disturbance affecting the structure. The species compositions are similar between vegetation types/communities. A comparison of vegetation types is presented in Table 6.2. *Myrtaceae* species (e.g. *Eucalyptus*, *Melaleuca*, *Thryptomene*) were absent from Edjudina but were more common in surveys further south (Pinjin survey – Mattiske 2010; Carosue Dam – AHA 2012; Armstrong 2016). Isolated *Eucalyptus* were observed north of the Edjudina site.

Table 6.2: Comparison with similar vegetation types described in other surveys.

Edjudina 2024 (this survey)	AHA 2023 Enterprise	Mattiske 2010	Armstrong 2016 or AHA 2012
VT1 Isolated low trees of <i>Acacia aneura</i> or <i>Casuarina pauper</i> over <i>Maireana sedifolia</i> and <i>Atriplex</i> spp. on stony plains	2a Sparse <i>Maireana sedifolia</i> shrubland with isolated taller shrubs <i>Acacia burkittii</i> and <i>Senna artemisioides</i> subsp. <i>filifolia</i> .		
VT2 Mixed low open woodland patches within mixed shrublands in broad drainage lines		S10 <i>Maireana pyramidata</i> , <i>Cratystylis subspinescens</i> low open shrubland with mixed low shrubs and emergent <i>Hakea preissii</i> , <i>Eremophila scoparia</i> and <i>Dodonaea lobulata</i> .	
VT3 <i>Casuarina pauper</i> open woodland over <i>Acacia</i> , <i>Casuarina</i> tall open shrubland over <i>Eremophila</i> , <i>Acacia</i> , <i>Senna</i> , <i>Cratystylis</i> open shrubland; incised DL		S3 Tall shrubland of <i>Acacia burkittii</i> and <i>A. tetragonophylla</i> with emergent <i>Casuarina pauper</i> .	Armstrong 5.2.1 DLT <i>Casuarina pauper</i> (+ <i>Eucalyptus yilgarnensis</i>) thicket over <i>Dodonaea lobulata</i> and <i>Scaevola spinescens</i> Low Scrub over Open Dwarf Scrub. Tall Shrubs (3 to 8m tall): <i>Acacia acuminata</i> , <i>A. aneura</i> , <i>A. ramulosa</i> , <i>A. tetragonophylla</i>
VT4 <i>Acacia aneura</i> or <i>Casuarina pauper</i> low isolated trees or low open woodland over <i>Atriplex</i> , <i>Sida</i> , <i>Scaevola</i> , <i>Maireana</i> understorey; undulating plain	4C Sparse chenopod shrublands dominated by <i>Maireana sedifolia</i> and <i>M. pyramidata</i> shrubland, very sparse overstorey of <i>Acacia incurvaneura</i> , <i>A. aptaneura</i> and <i>Casuarina</i>	S10; and C1 - Low open woodland of <i>Casuarina pauper</i> over <i>Eremophila</i> spp., <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Dodonaea lobulata</i> and <i>Acacia</i> spp. over <i>Scaevola spinescens</i> , <i>Ptilotus obovatus</i> and <i>Olearia muelleri</i>	AHA VT 5 Chenopod shrubland on Alluvial plains
VT5 <i>Acacia aneura</i> , <i>A. caesaneura</i> low open woodland over <i>Acacia tetragonophylla</i> . <i>A. caesaneura</i> , <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>E. latrobei</i> subsp. <i>latrobei</i> sparse shrubland; lower slopes	<i>Acacia caesaneura</i> was recorded in land units 3a - Granitic plains supporting <i>Acacia</i> shrublands, 4c (+ <i>Acacia aneura</i>) - Plains supporting chenopod shrublands and 5c - (not described or referred to in report; might refer to 5a - Flood plains supporting chenopod shrublands)		1. Armstrong 5.2.3 <i>Casuarina pauper</i> scrub to 8m tall; over <i>Acacia aneura</i> Open Scrub; over Open Low Scrub <i>Senna artemisioides</i> subsp. <i>filifolia</i> ; over Open Dwarf Scrub <i>Olearia muelleri</i> . 2. AHA 4a Plains Eucalypt or <i>Acacia</i> shrublands - Very sparse tall <i>Acacia</i> shrubland dominated by <i>A. incurvaneura</i> , <i>A. aptaneura</i>
VT6 <i>Acacia oswaldii</i> , <i>Casuarina pauper</i> tall sparse shrubland over <i>Dodonaea lobulata</i> , <i>Acacia tetragonophylla</i> open shrubland; low rocky ridge		C2 Low open woodland of <i>Casuarina pauper</i> with <i>Acacia aneura</i> over <i>Dodonaea lobulata</i> , <i>Acacia burkittii</i> , <i>Scaevola spinescens</i> , <i>Maireana sedifolia</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> and <i>Ptilotus obovatus</i> .	<i>Acacia oswaldii</i> was recorded at Carosue Dam area (Armstrong)

6.2 Conservation significant flora

No Threatened or Priority taxa were recorded and it is unlikely that they occur in the area. The main habitats supporting CSF in the region are saline lakes, yellow sandplain and granite or BIF landforms, none of which are present. A BIF ridge is located to the west of Edjudina (Site 6b), outside the survey area. There may be potential for CSF to occur in this area; however none were observed. It would be highly unlikely that this area would be impacted by the proposed development, being upslope and more than 250 metres away. The level of historic mining and pastoral impacts would also reduce the likelihood of CSF in the proposal area.

6.3 Threatened and Priority Ecological Communities

The two PECs closest to Edjudina are the Emu Land System (Fresh or brackish ephemeral lakes and swamps) and Yellow sandplain vegetation of the Great Victoria Desert, both 75-100 km away. Neither of these landforms are present in or near Edjudina.

6.4 Fauna and habitat

The Edjudina Gold Project area is historically highly disturbed, both by mining and pastoral activity. Little remnant vegetation remains in the main area of mining interest, which is littered with old mine shafts, tailings dams/heap leaches and debris from past mining activity. Further away from the main mining area, the vegetation is more intact however heavily impacted by decades of grazing. Recent rains and destocking of the station has resulted in re-emergence of grasses and herbs, however several years of at least average rainfall and minimal grazing pressure will be required before recovery of natural habitat will be observed.

No fauna of conservation significance have previously been recorded in the immediate vicinity of the Edjudina Project, and none were recorded during the survey. Additionally, there is no habitat within the project area that is considered to be important habitat for any species of conservation significance. Given the high level of historic impacts to the area, it is considered very unlikely that any fauna of conservation significance will be resident of the project area. Rocky ridges to the east and west of the site, as well as the drainage system to the east or more likely to provide habitat for conservation significant fauna, and are unlikely to be impacted by the small scale mining operation being considered for the Edjudina Project.

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Appendix 1

Conservation codes and definitions for Western Australia

CONSERVATION CATEGORY DEFINITIONS

For Western Australian Fauna and Flora

Threatened, Extinct and Specially Protected fauna or flora¹ are species² which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

Categories of Threatened, Extinct and Specially Protected fauna and flora are:

T Threatened species

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of [Ministerial Guideline Number 1](#) and [Ministerial Guideline Number 2](#) that adopts the use of the International Union for Conservation of Nature (IUCN) [Red List of Threatened Species Categories and Criteria](#)³, and is based on the national distribution of the species.

CR **Critically endangered species**

Threatened species considered to be “*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

Examples of use:

- The western ringtail possum (*Pseudocheirus occidentalis*) is listed as a critically endangered threatened species under the *Biodiversity Conservation Act 2016*.
- Western ringtail possum is listed as critically endangered under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: CR.

EN **Endangered species**

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

Examples of use:

- *Caladenia hopperiana* is listed as an endangered threatened species under the *Biodiversity Conservation Act 2016*.
- *Caladenia hopperiana* is listed as endangered under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: EN.

VU Vulnerable species

Threatened species considered to be “facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Examples of use:

- The forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) is listed as a vulnerable threatened species under the *Biodiversity Conservation Act 2016*.
- Forest red-tailed black cockatoo is listed as vulnerable under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: VU.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

EX Extinct species

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).

Examples of use:

- *Acacia kingiana* is listed as an extinct species under the *Biodiversity Conservation Act 2016*.
- *Acacia kingiana* is listed as extinct under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: EX.

EW Extinct in the wild species

Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no fauna or flora species listed as extinct in the wild.

SP Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered, or vulnerable) or extinct species under the BC Act cannot also be listed as specially protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA)⁴, China (CAMBA)⁵ or The Republic of Korea (ROKAMBA)⁶, and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention)⁷, an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Examples of use:

- The wedge-tailed shearwater (*Ardenna pacifica*) is listed as a specially protected migratory species under the *Biodiversity Conservation Act 2016*.
- Wedge-tailed shearwater is listed as migratory under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: MI.

CD Species of special conservation interest (conservation dependent)

Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Currently only fauna are listed as species of special conservation interest.

Examples of use:

- The wambenger, south-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*) is listed as a specially protected species of special conservation interest under the *Biodiversity Conservation Act 2016*.
- Wambenger, south-western brush-tailed phascogale, is listed as conservation dependent under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: CD.

OS Species otherwise in need of special protection (other specially protected)

Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Currently only fauna are listed as species otherwise in need of special protection.

Examples of use:

- The dugong (*Dugong dugon*) is listed as a specially protected species otherwise in need of special protection under the *Biodiversity Conservation Act 2016*.
- Dugon is listed as other specially protected fauna under the *Biodiversity Conservation Act 2016*.
- Listing reference in a table: column heading: BC Act, row text: OS.

P Priority species

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

1 Priority 1: Poorly-known species - known from few locations, none on conservation lands

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, for example, 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 for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

Examples of use:

- *Borya stenophylla* is listed as a Priority 1 species by the Department of Biodiversity, Conservation and Attractions.
- *Borya stenophylla* is listed as Priority 1 on the DBCA Priority Flora List.
- Listing reference in a table: column heading: DBCA, row text: P1.

2 Priority 2: Poorly-known species - known from few locations, some on conservation lands

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, for example, 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 for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

Examples of use:

- *Caladenia nivalis* is listed as a Priority 2 species by the Department of Biodiversity, Conservation and Attractions.
- *Caladenia nivalis* is listed as Priority 2 on the DBCA Priority Flora List.
- Listing reference in a table: column heading: DBCA, row text: P2.

3 Priority 3: Poorly-known species - known from several locations

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. These species need further survey.

Examples of use:

- *Acacia nitidula* is listed as a Priority 3 species by the Department of Biodiversity, Conservation and Attractions.
- *Acacia nitidula* is listed as Priority 3 on the DBCA Priority Flora List.
- Listing reference in a table: column heading: DBCA, row text: P3.

4 Priority 4: Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

Examples of use:

- *Banksia aculeata* is listed as a Priority 4 species by the Department of Biodiversity, Conservation and Attractions.
- *Banksia aculeata* is listed as Priority 4 on the DBCA Priority Flora List.
- Listing reference in a table: column heading: DBCA, row text: P4.

¹ The definition of flora includes algae, fungi, and lichens.

² Species includes all taxa (plural of taxon - a classificatory group of any taxonomic rank, e.g. a family, genus, species or any infraspecific category i.e. subspecies or variety, or a distinct population).

³ Western Australia has assigned species to threat categories using the *IUCN Red List of Threatened Species Categories and Criteria* since 1996 (referencing all criteria).

⁴ JAMBA - first included in the WA migratory species list in 1980.

⁵ CAMBA - first included in the WA migratory species list in 2010.

⁶ ROKAMBA - first included in the WA migratory species list in 2010.

⁷ Bonn Convention (Birds) - first included in the WA migratory species list in 2015.

Appendix 2

Vegetation site descriptions

NVIS foliage cover codes.

Cover Characteristics					
Foliage cover	70 – 100	30 – 70	10 – 30	< 10	~ 0 (<2)
Crown cover	>80	50 – 80	20 – 50	0.25 – 20	<0.25
% cover	>80	50 – 80	20 – 50	0.25 - <20	<0.25
Cover code	d	c	i	r	bi

Height classes defined for the NVIS.

Height		Growth Form				
Height Class	Height Range (m)	Tree	Shrub, chenopod shrub	Tree mallee, mallee shrub	Tussock grass	Bryophyte, lichen
8	>30	Tall	N/A	N/A	N/A	N/A
7	10 – 30	Mid	N/A	Tall	N/A	N/A
6	< 10	Low	N/A	Mid	N/A	N/A
5	<3	N/A	N/A	Low	N/A	N/A
4	>2	N/A	Tall	N/A	Tall	N/A
3	1 – 2	N/A	Mid	N/A	Tall	N/A
2	0.5 – 1	N/A	Low	N/A	Mid	Tall
1	< 0.5	N/A	Low	N/A	Low	Low

Summary of NVIS strata codes.

NVIS stratum code	NVIS sub-stratum	Description	Growth forms	Height classes
U	U1	Tallest stratum	Tree, tree mallees (mallee shrubs)	8, 7, 6, (5)
	U2	Sub-canopy layer, second tree layer		
	U3	Sub-canopy layer, third tree layer		
M	M1	Tallest shrub layer	Shrubs, low trees, mallee shrubs, low shrubs, vines	(6), 5, 4, 3
	M2	Next shrub layer		
	M3	Third shrub layer		
G	G1	Tallest ground species	Grasses, forbs, sedges, rushes, vines, lichens, low shrubs	(4, 3), 2, 1
	G2	Ground		

Growth Form Codes used in descriptions

T	Tree	U	Samphire shrub	F	Forb
M	Mallee	Z	Heath shrub	E	Fern
S	Shrub	G	Tussock grass	L	Vine
R	Rush	V	Sedge	B	Bryophyte (moss, liverwort)
C	Chenopod shrub	K	Epiphyte	N	Lichen

Site EDJ01 Relevé 2 nd December 2024			
GPS: 448892 E/ 6708914 N Elevation: 378 m		Landform: Quartz plain; gentle slope; drainage to south Located at intersection of Pinjin Station Road and Pinjin Road	
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; surface rock (quartz, mixed) 40 – 50 %			
Condition: Variable; degraded to poor, improving to good further from road; most structure impacted			
Disturbance: road construction and maintenance; pastoral impacts (cattle); weeds			
NVIS 5: U1 [^] <i>Acacia aneura</i> \Acacia\^tree\6\bi; M1 [^] <i>Acacia tetragonophylla</i> , <i>Eremophila alternifolia</i> var. <i>alternifolia</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> \Acacia\^shrub\2\bi; G1+ [^] <i>Atriplex vesicaria</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Cratystylis subspinescens</i> \Atriplex\^chenopod shrub, shrub\1\i			
Vegetation: <i>Acacia aneura</i> low isolated trees over <i>Acacia tetragonophylla</i> , <i>Eremophila alternifolia</i> var. <i>alternifolia</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> isolated low shrubs over <i>Atriplex vesicaria</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Cratystylis subspinescens</i> low open chenopod shrubland			
Height (m)	Crown cover %	Habit	Species – west side of intersection
< 10 m	< 2	T	<i>Acacia aneura</i>
0.3 – 1	< 2	S	<i>Acacia tetragonophylla</i> , <i>Eremophila alternifolia</i> var. <i>alternifolia</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Hakea preissii</i> , <i>Senna charlesiana</i> , <i>Acacia hemiteles</i> , <i>Eremophila pustulata</i>
< 0.3	20 – 30	C, S, G	<i>Atriplex vesicaria</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Cratystylis subspinescens</i> , <i>Chenopodium</i> sp., <i>Eragrostis dielsii</i> , <i>Maireana triptera</i> , <i>M. sedifolia</i> , <i>M. brevifolia</i> , <i>Abutilon cryptopetalum</i>
Other species: <i>Brachyscome ciliaris</i> , <i>Salvia verbenaca</i> *, <i>Centaurea melitensis</i> *, <i>Glycine canescens</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Solanum lasiophyllum</i> , <i>Casuarina pauper</i> , <i>Monachather paradoxus</i> , <i>Eremophila miniata</i> , <i>Austrostipa ?platychaeta</i> , <i>Aristida contorta</i> , <i>Enneapogon caeruleus</i> , <i>Sclerolaena eriacantha</i>			
<i>Abutilon cryptopetalum</i> <i>Acacia aneura</i> <i>Acacia hemiteles</i> <i>Acacia tetragonophylla</i> <i>Aristida contorta</i> <i>Atriplex vesicaria</i> <i>Austrostipa ?platychaeta</i> <i>Brachyscome ciliaris</i> <i>Casuarina pauper</i> <i>Centaurea melitensis</i> * <i>Chenopodium</i> sp. <i>Cratystylis subspinescens</i> <i>Enneapogon caeruleus</i> <i>Eragrostis dielsii</i> <i>Eremophila alternifolia</i> var. <i>alternifolia</i> <i>Eremophila miniata</i> <i>Eremophila pustulata</i> <i>Glycine canescens</i> <i>Hakea preissii</i> <i>Maireana brevifolia</i> <i>Maireana sedifolia</i> <i>Maireana triptera</i> <i>Monachather paradoxus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Salvia verbenaca</i> * <i>Sclerolaena eriacantha</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>Senna charlesiana</i> <i>Sida calyxhymenia</i>			

Sida intricata
Solanum lasiophyllum

GPS: 448922 E/ 6708923 N

East side of intersection

Degraded to poor; road maintenance, clearing; pastoral impacts

Cratystylis subspinescens, *Atriplex vesicaria*, *Solanum lasiophyllum* low open shrubland over *Maireana triptera*, *Sida calyxhymenia*, *Solanum lasiophyllum* low open chenopod shrubland



Site EDJ02 Relevé 2 nd December 2024			
GPS: 449705 E/ 6707080 N Elevation: 380 m		Landform: Lower slope of hill; gentle slope; aspect mostly east; very disturbed area with historic buildings, mine shafts, tracks	
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; surface rock – variable; excavations and other physical disturbances			
Condition: Degraded to poor			
Disturbance: Historic buildings (old mining infrastructure; pastoral); tracks, excavations and shafts; pastoral impacts; weeds			
NVIS 5: U1 [^] <i>Brachychiton gregorii</i> , <i>Pittosporum angustifolium</i> , <i>Acacia burkittii</i> \ <i>Brachychiton</i> \ ^tree, shrub \ 6 \ bi; M1 [^] <i>Scaevola spinescens</i> , <i>Rhagodia eremaea</i> , <i>Pittosporum angustifolium</i> \ <i>Scaevola</i> \ ^shrub \ 3 \ r; G1+ [^] <i>Maireana triptera</i> , <i>Sida calyxhymenia</i> , <i>S. intricata</i> \ <i>Maireana</i> \ ^chenopod shrub, shrub \ 2 \ i			
Vegetation: <i>Brachychiton gregorii</i> , <i>Pittosporum angustifolium</i> , <i>Acacia burkittii</i> low isolated trees over <i>Scaevola spinescens</i> , <i>Rhagodia eremaea</i> , <i>Pittosporum angustifolium</i> sparse shrubland over <i>Maireana triptera</i> , <i>Sida calyxhymenia</i> , <i>S. intricata</i> low open chenopod shrubland			
Height (m)	Crown cover %	Habit	Species
> 2	< 2	T, S	<i>Brachychiton gregorii</i> , <i>Pittosporum angustifolium</i> , <i>Acacia burkittii</i> , <i>Casuarina pauper</i> , <i>Acacia oswaldii</i>
1 – 2	2 – 10 (20)	S, C	<i>Scaevola spinescens</i> , <i>Rhagodia eremaea</i> , <i>Pittosporum angustifolium</i>
< 1	10 – 30	C, S, F, G	<i>Maireana triptera</i> , <i>Sida calyxhymenia</i> , <i>S. intricata</i> , <i>Solanum lasiophyllum</i> , <i>Sclerolaena eriacantha</i> , <i>Solanum cleistogamum</i> , <i>Atriplex vesicaria</i> , <i>Maireana trichoptera</i> , <i>M. sedifolia</i> , <i>Scaevola spinescens</i> , <i>Aristida contorta</i> , <i>Eragrostis dielsii</i> , <i>Austrostipa sp.</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Sclerolaena obliquicuspis</i>
Epiphytes	< 1		<i>Amyema benthamii</i> (on <i>Brachychiton gregorii</i>); <i>Lysiana casuarinae</i> (on <i>Casuarina pauper</i>)
Weeds	2 – 10	F	<i>Salvia verbenaca</i> *
			
<i>Acacia burkittii</i> <i>Acacia oswaldii</i> <i>Amyema benthamii</i> <i>Aristida contorta</i> <i>Atriplex vesicaria</i> <i>Austrostipa sp.</i> <i>Brachychiton gregorii</i> <i>Casuarina pauper</i> <i>Eragrostis dielsii</i> <i>Lysiana casuarinae</i> (Host <i>Casuarina pauper</i>) <i>Maireana sedifolia</i> <i>Maireana trichoptera</i> <i>Maireana triptera</i>		<i>Pittosporum angustifolium</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Rhagodia eremaea</i> <i>Salvia verbenaca</i> * <i>Scaevola spinescens</i> <i>Sclerolaena eriacantha</i> <i>Sclerolaena obliquicuspis</i> <i>Sida calyxhymenia</i> <i>Sida intricata</i> <i>Solanum cleistogamum</i> <i>Solanum lasiophyllum</i>	

Site EDJ03 Relevé 2 nd December 2024	
GPS: 449751 E/ 6707357 N Elevation: 372 m	Landform: Plain; drainage line, incised; excavated dam
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam, with clay in dam	
Condition: Part disturbed, cleared; part good; Zebra finches using <i>Acacia tetragonophylla</i>	
Disturbance: Old dam, changes to drainage line; pastoral impacts (signs of cattle, but not very recent), weeds (low)	
Edge of dam 3a GPS: 449751 E/ 6707357 N <i>Casuarina pauper</i> , <i>Acacia jennerae</i> low woodland strip over <i>Acacia tetragonophylla</i> , <i>Atriplex nummularia</i> , <i>Maireana sedifolia</i> , <i>Eremophila pantonii</i> , <i>Cratystylis subspinescens</i> , <i>Maireana pyramidata</i> open shrubland over <i>Maireana brevifolia</i> , <i>M. sedifolia</i> , <i>Sclerolaena diacantha</i> , <i>S. obliquicuspis</i> , <i>Austrostipa elegantissima</i> , <i>Solanum lasiophyllum</i> low open chenopod shrubland	
Other species: <i>Salsola australis</i> , <i>Scaevola spinescens</i> , <i>Tribulus astrocarpus</i> , <i>Salvia verbenaca*</i> , <i>Austrostipa scabra</i> , <i>A. ?platychaeta</i> , <i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Hakea preissii</i> , <i>Ptilotus polystachyus</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Abutilon cryptopetalum</i> , <i>Atriplex vesicaria</i>	
Plain, south of dam 3a Condition: good; pastoral impacts Erosion – extensive pedestalling (^ 25 cm) <i>Maireana sedifolia</i> open chenopod shrubland	
EDJ 3b Stony plain, low rise; east of dam GPS: 449819 E/ 6707397 N 374 m Yellowish red fine sandy clay loam; surface rock (2 – 10 cm, mean 4 – 5 cm) 40 – 60 %; litter 10 – 30 % Condition: good, disturbance – tracks, grazing, old timber cutting <i>Casuarina pauper</i> low isolated trees to low open woodland over <i>Maireana sedifolia</i> , <i>Atriplex vesicaria</i> , <i>A. nummularia</i> , <i>Maireana brevifolia</i> chenopod shrubland over <i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Austrostipa scabra</i> , <i>A. elegantissima</i> , <i>Atriplex nummularia</i> , <i>Sclerolaena</i> spp. low sparse to open tussock grassland	

Site EDJ4 Relevé 2nd December 2024

GPS: 449845 E/ 6707259 N

Elevation: 373 m

Landform: Plain, drainage line, unincised; south of dam

Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam;

Condition: Good; many old snail shells present in area

Disturbance: Pastoral impacts, historic mining impacts (timber cutting, clearing)

Acacia aneura, *Casuarina pauper*, *Alectryon oleifolius* subsp. *canescens* low open woodland over *Acacia tetragonophylla*, *Dodonaea lobulata*, *Maireana sedifolia*, *M. triptera*, *Atriplex vesicaria*, *A. nummularia*, grasses and forbs



GPS: 449862 E/ 6707240 N 372 m

Alectryon oleifolius subsp. *canescens* pockets of tall shrubs or low trees over *Eremophila pustulata*, *Teucrium disjunctum*, *Maireana georgei*, *Acacia tetragonophylla*, *Pittosporum angustifolium*, *Roepera aurantiaca* subsp. *aurantiaca*, *Convolvulus remotus* shrubs and vine thickets



Site EDJ5 Relevé 3 rd December 2024			
GPS: 449316 E/ 6706972 N Elevation: 381 m		Landform: Low hill, lower slope; aspect east	
Land surface: Reddish yellow (5YR6/8) fine sandy clay loam; surface rock 50 – 60 %; litter 10 – 20 % to 40 – 50 %; fallen timber < 1 % (few mulgas fallen over)			
Condition: Very good; lot of regrowth/ recruitment; all strata present; budgerigars present; snail shells; mouse seen; lot of insect activity in <i>Eremophila</i> spp.			
Disturbance: Old timber cutting; animal tracks, erosion – few minor rills, deposition; sheet erosion; no pedestalling			
NVIS 5: U1+ [^] <i>Acacia aneura</i> , <i>A. caesaneura</i> \Acacia\^tree, shrub\6\i; M1 [^] <i>Acacia tetragonophylla</i> . <i>A. caesaneura</i> \Acacia\^shrub\3\i; M2 [^] <i>Acacia aneura</i> , <i>A. caesaneura</i> , <i>Sida ectogama</i> \Acacia\ ^shrub\2\i; G1 [^] <i>Maireana triptera</i> , <i>Acacia caesaneura</i> , <i>Cratystylis subspinescens</i> \Maireana\ ^chenopod shrub, shrub\1\c			
Vegetation: <i>Acacia aneura</i> , <i>A. caesaneura</i> low open woodland over <i>Acacia tetragonophylla</i> . <i>A. caesaneura</i> sparse shrubland over <i>Acacia aneura</i> , <i>A. caesaneura</i> , <i>Sida ectogama</i> low open shrubland over <i>Maireana triptera</i> , <i>Acacia caesaneura</i> , <i>Cratystylis subspinescens</i> low chenopod shrubland			
Height (m)	Crown cover %	Habit	Species
4 – 8	10 – 30	T, S	<i>Acacia aneura</i> , <i>A. caesaneura</i>
1 – 2.5	2 – 10	S	<i>Acacia tetragonophylla</i> , <i>A. caesaneura</i>
0.3 – 1	10 – 30	S, C, G	<i>Acacia aneura</i> , <i>A. caesaneura</i> , <i>Sida ectogama</i> , <i>Atriplex vesicaria</i> , <i>Dodonaea lobulata</i> , <i>Cratystylis subspinescens</i> , <i>Austrostipa ?platychaeta</i> , <i>Scaevola spinescens</i>
< 0.3	40 – 50	C, S, F, G	<i>Maireana triptera</i> , <i>Acacia caesaneura</i> , <i>Cratystylis subspinescens</i> , <i>Solanum lasiophyllum</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Aristida contorta</i> , <i>Monachather paradoxus</i> , <i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Sclerolaena diacantha</i> , <i>Solanum cleistogamum</i> , <i>Eriochiton sclerolaenoides</i> , <i>Eragrostis dielsii</i>
Other species: <i>Acacia aptaneura</i> , <i>Convolvulus remotus</i> , <i>Eremophila forrestii</i> subsp. <i>forrestii</i> , <i>E. latrobei</i> subsp. <i>latrobei</i> , <i>Acacia ramulosa</i> var. <i>ramulosa</i> , <i>Sida ectogama</i> , <i>Senna glaucifolia</i>			
<i>Acacia aneura</i> <i>Acacia aptaneura</i> <i>Acacia caesaneura</i> <i>Acacia ramulosa</i> var. <i>ramulosa</i> <i>Acacia tetragonophylla</i> <i>Aristida contorta</i> <i>Atriplex vesicaria</i> <i>Austrostipa ?platychaeta</i> <i>Convolvulus remotus</i> <i>Cratystylis subspinescens</i> <i>Dodonaea lobulata</i> <i>Eragrostis dielsii</i> <i>Eremophila forrestii</i> subsp. <i>forrestii</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Eriachne pulchella</i> subsp. <i>pulchella</i> <i>Eriochiton sclerolaenoides</i> <i>Maireana triptera</i> <i>Monachather paradoxus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Sclerolaena diacantha</i> <i>Senna glaucifolia</i> <i>Sida calyxhymenia</i> <i>Solanum cleistogamum</i> <i>Solanum lasiophyllum</i>			

EDJ5b

GPS: 449372 E/ 6706981 N Elevation: 377 m

East side of road

Condition: Degraded to poor

Disturbances: higher pastoral impacts; historic mining impacts; tracks, clearing

Acacia aneura low isolated trees over *Cratystylis subspinescens*, *Maireana triptera*, *Sida calyxhymenia*, *Maireana sedifolia*, *Solanum lasiophyllum*, *Atriplex vesicaria*, *Eriochiton sclerolaenoides* low sparse shrubland over *Monachather paradoxus*, *Eriachne pulchella* subsp. *pulchella*, *Sclerolaena eriacantha*, *Salvia verbenaca**, *Codonocarpus cotinifolius* (juvenile) low open tussock grassland



Weeds EDJ5c

GPS: 449436 E/ 6706867 N

Location of remnants of old buildings; west side of Pinjin Road

Pademelon – *Citrullus amarus**

Blackberry nightshade – *Solanum nigrum**

Peppercorn tree – *Schinus molle**



Site EDJ06 Relevé 2 nd December 2024			
GPS: 449688 E/ 6706584 N Elevation: 380 m		Landform: Hill; lower slope; west side of road	
Land surface: Reddish yellow (5YR6/8) fine sandy clay loam;			
Condition: Poor to good; some regrowth occurring			
Disturbance: Active erosion in drainage line; partly incised; sheet erosion on adjacent slopes; rubbish; monitor lizard holes			
NVIS 5: U1 [^] <i>Acacia aneura</i> \Acacia\ ^tree, shrub\6\; M1+ [^] <i>Acacia aneura</i> , <i>A. tetragonophylla</i> , <i>A. ramulosa</i> var. <i>ramulosa</i> \Acacia\ ^shrub\3\; G1 [^] <i>Sclerolaena eriacantha</i> , <i>Maireana triptera</i> , <i>Monachather paradoxus</i> \Sclerolaena\ ^forb, chenopod shrub, tussock grass\1\i			
Vegetation: <i>Acacia aneura</i> low open woodland over <i>Acacia aneura</i> , <i>A. tetragonophylla</i> , <i>A. ramulosa</i> var. <i>ramulosa</i> sparse shrubland over <i>Sclerolaena eriacantha</i> , <i>Maireana triptera</i> , <i>Monachather paradoxus</i> low open forbland			
Height (m)	Crown cover %	Habit	Species
2 – 6	5 – 10	T, S	<i>Acacia aneura</i>
1 – 2	5 – 10	S	<i>Acacia aneura</i> , <i>A. tetragonophylla</i> , <i>A. ramulosa</i> var. <i>ramulosa</i> , <i>A. aptaneura</i> , <i>Sida calyxhymenia</i>
< 0.5	20 – 30	F, C, G	<i>Sclerolaena eriacantha</i> , <i>Maireana triptera</i> , <i>Monachather paradoxus</i> , <i>Solanum lasiophyllum</i> , <i>Tribulus astrocarpus</i> , <i>Goodenia</i> sp. (dried off)
Other species: <i>Eremophila latrobei</i> subsp. <i>latrobei</i> , <i>Senna glaucifolia</i> (tentative), <i>Dodonaea lobulata</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>P. exaltatus</i> – more upslope; becoming more common upslope			
<i>Acacia aneura</i> <i>Acacia aptaneura</i> <i>Acacia ramulosa</i> var. <i>ramulosa</i> <i>Acacia tetragonophylla</i> <i>Dodonaea lobulata</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Goodenia</i> sp. (? <i>G. rosea</i> ; dried off) <i>Maireana triptera</i> <i>Monachather paradoxus</i> <i>Ptilotus exaltatus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Sclerolaena eriacantha</i> <i>Senna glaucifolia</i> (tentative) <i>Sida calyxhymenia</i> <i>Solanum lasiophyllum</i> <i>Tribulus astrocarpus</i> (range extension south)			
EDJ06b (outside; west) 3 rd December 2024 GPS: 449408 E/ 6706376 N Elevation: 396 m Landform: Hill; crest; chert & siltstone outcrops; moderate slope Skeletal soils; surface rock > 95 % Condition: Very good; some pastoral impacts in the saddle area between two peaks <i>Acacia minyura</i> , <i>Casuarina pauper</i> , <i>Acacia aptaneura</i> , <i>A. caesaneura</i> , <i>A. tetragonophylla</i> low open woodland to low isolated trees over <i>Philotheca brucei</i> subsp. <i>brucei</i> , <i>Dodonaea lobulata</i> , <i>Eremophila latrobei</i> subsp. <i>latrobei</i> , <i>E. forrestii</i> subsp. <i>forrestii</i> , <i>Sida ectogama</i> open			

shrubland over *Eremophila latrobei* subsp. *latrobei*,
Ptilotus polystachyus, *Monachather paradoxus*, *Ptilotus*
obovatus var. *obovatus* low open shrubland



Acacia aptaneura
Acacia caesaneura
Acacia minyura
Acacia tetragonophylla
Casuarina pauper
Dodonaea lobulata
Eremophila forrestii subsp. *forrestii*
Eremophila latrobei subsp. *latrobei*

Monachather paradoxus
Philothea brucei subsp. *brucei*
Ptilotus obovatus var. *obovatus*
Ptilotus polystachyus
Sida ectogama

Site EDJ07 Relevé 3 rd December 2024			
GPS: 450140 E/ 6706529 N Elevation: 372 m		Landform: Valley; gentle slope; east aspect	
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; surface rock (siltstone, quartz, chert, gneiss/schist) > 50 %			
Condition: Poor			
Disturbance: Pastoral impacts; historic mining impacts			
NVIS 5: U1 [^] <i>Casuarina pauper</i> \Casuarina\^tree\6\bi; M1 [^] <i>Maireana sedifolia</i> , <i>M. pyramidata</i> \Maireana\^chenopod shrub\2\i; G1 [^] <i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Monachather paradoxus</i> , <i>Maireana sedifolia</i> \tussock grass, chenopod shrub\1\i			
Vegetation: <i>Casuarina pauper</i> low isolated trees over <i>Maireana sedifolia</i> , <i>M. pyramidata</i> low open chenopod shrubland over <i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Monachather paradoxus</i> , <i>Maireana sedifolia</i> low open tussock grassland			
Height (m)	Crown cover %	Habit	Species
3 – 7	< 2	T	<i>Casuarina pauper</i>
0.6 – 1	10 – 20	C	<i>Maireana sedifolia</i> , <i>M. pyramidata</i>
< 0.6	20 – 30	C, S, G	<i>Eriachne pulchella</i> subsp. <i>pulchella</i> , <i>Monachather paradoxus</i> , <i>Maireana sedifolia</i> , <i>M. pyramidata</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Sida calyxhymenia</i> , <i>Sclerolaena eriacantha</i> , <i>Enneapogon caerulescens</i> , <i>Solanum lasiophyllum</i>
<i>Casuarina pauper</i> <i>Enneapogon caerulescens</i> <i>Eriachne pulchella</i> subsp. <i>pulchella</i> <i>Maireana pyramidata</i> <i>Maireana sedifolia</i> <i>Monachather paradoxus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Sclerolaena eriacantha</i> <i>Sida calyxhymenia</i> <i>Solanum lasiophyllum</i>			

Site EDJ07b Relevé 3 rd December 2024	
GPS: 450230 E/ 6706582 N Elevation: 369 m	Landform: Valley, stony plain; south east area/ just outside survey area; drains to east
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; surface rock 30 – 40 %; litter 10 – 30 %; fallen timber < 2 %	
Condition: Good	
Disturbance: Pastoral impacts	
NVIS 5: U1+^ <i>Acacia aptaneura</i> , <i>A. ramulosa</i> var. <i>ramulosa</i> , <i>A. tetragonophylla</i> \Acacia\^tree, shrub\ 6\i; G1^ <i>Acacia aneura</i> , <i>Maireana triptera</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> \Acacia\^shrub, chenopod shrub\2\c	
Vegetation: <i>Acacia aptaneura</i> , <i>A. ramulosa</i> var. <i>ramulosa</i> , <i>A. tetragonophylla</i> , <i>A. aneura</i> low woodland patch in low open woodland over <i>Acacia aneura</i> , <i>Maireana triptera</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Solanum lasiophyllum</i> , <i>Monachather paradoxus</i> , <i>Sclerolaena obliquicuspis</i> , <i>Tribulus astrocarpus</i> , <i>Aristida contorta</i> low shrubland	
Other species: <i>Acacia burkittii</i> , <i>Atriplex vesicaria</i> , <i>Cheilanthes sieberi</i> , <i>Cratystylis subspinescens</i> , <i>Eremophila granitica</i> , <i>E. glabra</i> subsp. <i>glabra</i> , <i>Hakea recurva</i> subsp. <i>arida</i> , <i>Pittosporum angustifolium</i>	
<i>Acacia aneura</i> <i>Acacia aptaneura</i> <i>Acacia burkittii</i> <i>Acacia ramulosa</i> var. <i>ramulosa</i> <i>Acacia tetragonophylla</i> <i>Aristida contorta</i> <i>Atriplex vesicaria</i> <i>Cheilanthes sieberi</i> <i>Cratystylis subspinescens</i> <i>Eremophila glabra</i> subsp. <i>glabra</i> <i>Eremophila granitica</i> <i>Hakea recurva</i> subsp. <i>arida</i> <i>Maireana triptera</i> <i>Monachather paradoxus</i> <i>Pittosporum angustifolium</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Sclerolaena obliquicuspis</i> <i>Solanum lasiophyllum</i> <i>Tribulus astrocarpus</i>	

Site EDJ07c Relevé 3 rd December 2024	
GPS: 450122 E/ 6706697 N Elevation: 371 m	Landform: Stony plain; gentle slope; aspect east
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; surface rock (ironstone gravel, some larger rocks) 30 – 40 %; litter 10 – 15 %; fallen timber < 1 %	
Condition: Poor/ good; regrowth present; all strata not present; zebra finches in <i>Acacia tetragonophylla</i> near water	
Disturbance: Highly disturbed – historic mining impacts; excavations (holding water); rubbish; pastoral impacts	
NVIS 5: U1^ <i>Acacia aneura</i> \Acacia\ ^tree\6\bi; M1^ <i>Acacia tetragonophylla</i> , <i>A. aneura</i> \Acacia\ ^shrub\3\bi; G1+^ <i>Atriplex nummularia</i> , <i>A. vesicaria</i> , <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i>	
Vegetation: <i>Acacia aneura</i> low isolated trees or small patches of trees over <i>Acacia tetragonophylla</i> , <i>Acacia aneura</i> isolated shrubs over <i>Atriplex nummularia</i> , <i>A. vesicaria</i> , <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Pittosporum angustifolium</i> , <i>Sida calyxhymenia</i> , grasses, <i>Sclerolaena obliquicuspis</i> , <i>Calandrinia eremaea</i> low open chenopod shrubland	
<i>Acacia aneura</i> <i>Acacia tetragonophylla</i> <i>Atriplex nummularia</i> <i>Atriplex vesicaria</i> <i>Calandrinia eremaea</i> <i>Pittosporum angustifolium</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i> <i>Sclerolaena obliquicuspis</i> <i>Sida calyxhymenia</i>	

Site EDJ08 Relevé 3 rd December 2024			
GPS: 449162 E/ 6707454 N Elevation: 380 m		Landform: Low hills; lower outwash slope changing to plain; gentle slope; aspect east; minor incised drainage line	
Land surface: Yellowish red (5YR5/8) fine sandy clay loam;			
Condition: Very good; strata present, mainly intact			
Disturbance: Historic mining impacts low; pastoral impacts; minor erosion along creek			
NVIS 5: U1+ [^] <i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Brachychiton gregorii</i> \Acacia\^tree, shrub\6\c; M1 [^] <i>Sida ectogama</i> , <i>Scaevola spinescens</i> , <i>Sida calyxhymenia</i> \Sida\^shrub\2\c; G1 [^] <i>Maireana triptera</i> , <i>Solanum lasiophyllum</i> , <i>Sida ectogama</i> \Maireana\^chenopod shrub, shrub\1\i			
Vegetation: <i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Brachychiton gregorii</i> low open forest over <i>Sida ectogama</i> , <i>Scaevola spinescens</i> , <i>Sida calyxhymenia</i> low shrubland over <i>Maireana triptera</i> , <i>Solanum lasiophyllum</i> , <i>Sida ectogama</i> low chenopod shrubland			
Height (m)	Crown cover %	Habit	Species
4 – 9	30 – 40	T, S	<i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Brachychiton gregorii</i> , <i>Pittosporum angustifolium</i>
1.5 – 2.5	1 - 2	S	<i>Acacia tetragonophylla</i> , <i>Scaevola spinescens</i> , <i>Sida ectogama</i>
0.5 – 1.2	30 – 40	S, C	<i>Sida ectogama</i> , <i>Scaevola spinescens</i> , <i>Sida calyxhymenia</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Eriochiton sclerolaenoides</i> , <i>Eremophila latrobei</i> subsp. <i>latrobei</i> , <i>Acacia ramulosa</i> var. <i>ramulosa</i>
< 0.5	10 – 30	C, S, F	<i>Maireana triptera</i> , <i>Solanum lasiophyllum</i> , <i>Sida ectogama</i> , <i>Acacia tetragonophylla</i> , <i>Sida calyxhymenia</i> , <i>S. intricata</i> , <i>Euphorbia drummondii</i> , <i>Salvia verbenaca</i> *, <i>Senna artemisioides</i> subsp. <i>x artemisioides</i> , <i>Solanum cleistogamum</i>
Other species: <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i> , <i>Dodonaea lobulata</i> , <i>Maireana sedifolia</i> , <i>Cratystylis subspinescens</i> , <i>Austrostipa ?platychaeta</i> , <i>Maireana georgei</i> , <i>Atriplex vesicaria</i> , <i>Abutilon cryptopetalum</i> , <i>Convolvulus remotus</i>			
<i>Abutilon cryptopetalum</i> <i>Acacia aneura</i> <i>Acacia ramulosa</i> var. <i>ramulosa</i> <i>Acacia tetragonophylla</i> <i>Atriplex vesicaria</i> <i>Austrostipa ?platychaeta</i> <i>Brachychiton gregorii</i> <i>Casuarina pauper</i> <i>Convolvulus remotus</i> <i>Cratystylis subspinescens</i> <i>Dodonaea lobulata</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i> <i>Eriochiton sclerolaenoides</i> <i>Euphorbia drummondii</i> <i>Maireana georgei</i> <i>Maireana sedifolia</i> <i>Maireana triptera</i> <i>Pittosporum angustifolium</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Salvia verbenaca</i> * <i>Scaevola spinescens</i> <i>Senna artemisioides</i> subsp. <i>x artemisioides</i> <i>Sida calyxhymenia</i> <i>Sida ectogama</i> <i>Sida intricata</i> <i>Solanum cleistogamum</i>			

Solanum lasiophyllum

EDJ08b

GPS: 449122 E/ 6707407 N

Landform: outwash slope/ plain

Condition: Good; pastoral impacts; possible historic mining impacts – timber cutting

Acacia aneura, *Eremophila oldfieldii* subsp. *angustifolia*
patches of low trees over *Acacia oswaldii*, *Dodonaea lobulata*, *Sida calyxhymenia*, *Maireana sedifolia* sparse shrubland



Site EDJ09 Relevé 3 rd December 2024			
GPS: 449558 E/ 6707758 N Elevation: 377 m		Landform: Low rise, rocky ridge within stony undulating plain; aspect east/ west; moderate slope	
Land surface: Shallow pockets of yellowish red (5YR5/6) silty clay loam; surface rock (outcrop, quartz, metamorphic rocks; chert) > 90 %; litter 10 – 20 %; fallen timber < 2 %			
Condition: Good			
Disturbance: Pastoral and historic mining impacts			
NVIS 5: U1 [^] <i>Acacia oswaldii</i> , <i>Casuarina pauper</i> \Acacia\^shrub, tree\4\; M1 [^] <i>Dodonaea lobulata</i> , <i>Acacia tetragonophylla</i> , <i>Atriplex nummularia</i> \Dodonaea\^shrub, chenopod shrub\3\; G1 <i>Maireana sedifolia</i> , <i>Ptilotus exaltatus</i> , <i>P. obovatus</i> var. <i>obovatus</i> \Maireana\^chenopod shrub, forb, shrub\2\; i			
Vegetation: <i>Acacia oswaldii</i> , <i>Casuarina pauper</i> tall sparse shrubland over <i>Dodonaea lobulata</i> , <i>Acacia tetragonophylla</i> , <i>Atriplex nummularia</i> open shrubland over <i>Maireana sedifolia</i> , <i>Ptilotus exaltatus</i> , <i>P. obovatus</i> var. <i>obovatus</i> low open chenopod shrubland			
Height (m)	Crown cover %	Habit	Species
> 2	2 – 10	S, T	<i>Acacia oswaldii</i> , <i>Casuarina pauper</i>
1 – 2	10 – 30	S, C	<i>Dodonaea lobulata</i> , <i>Acacia tetragonophylla</i> , <i>Atriplex nummularia</i> , <i>Eremophila latrobei</i> subsp. <i>latrobei</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Casuarina pauper</i>
0.5 – 1	10 – 20	C, F, S	<i>Maireana sedifolia</i> , <i>Ptilotus exaltatus</i> , <i>P. obovatus</i> var. <i>obovatus</i> , <i>Atriplex vesicaria</i> , <i>Eremophila latrobei</i> subsp. <i>latrobei</i>
< 0.5	10 – 20	G	<i>Aristida contorta</i> , <i>Austrostipa</i> sp., <i>Senna artemisioides</i> subsp. <i>filifolia</i> , <i>Sclerolaena eriacantha</i>
Other species: <i>Acacia burkittii</i> , <i>Hakea recurva</i> subsp. <i>arida</i> , <i>Convolvulus remotus</i>			
<i>Acacia burkittii</i> <i>Acacia oswaldii</i> <i>Acacia tetragonophylla</i> <i>Aristida contorta</i> <i>Atriplex nummularia</i> <i>Atriplex vesicaria</i> <i>Austrostipa</i> sp. <i>Casuarina pauper</i> <i>Convolvulus remotus</i> <i>Dodonaea lobulata</i> <i>Eremophila latrobei</i> subsp. <i>latrobei</i> <i>Hakea recurva</i> subsp. <i>arida</i> <i>Maireana sedifolia</i> <i>Ptilotus exaltatus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Sclerolaena eriacantha</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i>			
Surrounding undulating plain – <i>Acacia oswaldii</i> isolated tall shrubs over <i>Maireana sedifolia</i> , <i>Atriplex vesicaria</i> , <i>Sclerolaena eriacantha</i> , <i>Cratystylis subspinescens</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> open chenopod shrubland			

Site EDJ10 Relevé 3 rd December 2024			
GPS: 449152 E/ 6708091 N Elevation:		Landform: Undulating stony plain; incised drainage line; gentle slope; aspect east	
Land surface: Yellowish red (5YR5/8) clay loam to fine sandy clay loam; sandy banks with patches of rocks between channels on west side; east side deeply incised channel			
Condition: Good, some areas approaching very good			
Disturbance: Erosion active; pastoral impacts higher on edges of woodland/ shrubland areas			
NVIS 5: U1 [^] <i>Casuarina pauper</i> \Casuarina\^tree\7\; U2+ [^] <i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Acacia tetragonophylla</i> \Acacia\^shrub, tree\4\; M1 [^] <i>Eremophila granitica</i> , <i>E. alternifolia</i> var. <i>alternifolia</i> , <i>Acacia tetragonophylla</i> \Eremophila\^shrub\3\; G1 [^] <i>Cratystylis subspinescens</i> , <i>Maireana sedifolia</i> , <i>Senna cardiosperma</i> \Cratystylis\^shrub, chenopod shrub\2\			
Vegetation: <i>Casuarina pauper</i> open woodland over <i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Acacia tetragonophylla</i> tall open shrubland over <i>Eremophila granitica</i> , <i>E. alternifolia</i> var. <i>alternifolia</i> , <i>Acacia tetragonophylla</i> open shrubland over <i>Cratystylis subspinescens</i> , <i>Maireana sedifolia</i> , <i>Senna cardiosperma</i> low open shrubland			
Height (m)	Crown cover %	Habit	Species
10 – 14	2 – 10	T	<i>Casuarina pauper</i>
2 – 10	10 – 20	S, T	<i>Acacia aneura</i> , <i>Casuarina pauper</i> , <i>Acacia tetragonophylla</i> , <i>A. burkittii</i> , <i>Senna artemisioides</i> subsp. <i>filifolia</i>
1 – 2	10 – 30	S, C, L	<i>Eremophila granitica</i> , <i>E. alternifolia</i> var. <i>alternifolia</i> , <i>Acacia tetragonophylla</i> , <i>A. burkittii</i> , <i>Senna cardiosperma</i> , <i>Atriplex nummularia</i> , <i>Convolvulus remotus</i>
< 1	10 – 30	S, C, L, F, G	<i>Cratystylis subspinescens</i> , <i>Maireana sedifolia</i> , <i>Senna cardiosperma</i> , <i>Atriplex vesicaria</i> , <i>Ptilotus obovatus</i> var. <i>obovatus</i> , <i>Tribulus astrocarpus</i> , <i>Brachyscome ciliaris</i> , <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i> , <i>Sida ectogama</i> , <i>S. intricata</i>
West side of road		East side of road	
			
<i>Acacia aneura</i> <i>Acacia burkittii</i> <i>Acacia tetragonophylla</i> <i>Amyema ?preissii</i> (on mulga at height; sterile) <i>Atriplex nummularia</i> <i>Atriplex vesicaria</i> <i>Austrostipa</i> sp. <i>Brachyscome ciliaris</i> <i>Casuarina pauper</i> <i>Convolvulus remotus</i> <i>Cratystylis subspinescens</i> <i>Eremophila alternifolia</i> var. <i>alternifolia</i> <i>Eremophila granitica</i>		<i>Euphorbia drummondii</i> <i>Iseilema membranaceum</i> (young plants; tentative) <i>Maireana sedifolia</i> <i>Monachather paradoxus</i> <i>Ptilotus obovatus</i> var. <i>obovatus</i> <i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i> <i>Senna artemisioides</i> subsp. <i>filifolia</i> <i>Senna cardiosperma</i> <i>Sida ectogama</i> <i>Sida intricata</i> <i>Solanum lasiophyllum</i> <i>Tribulus astrocarpus</i>	

Appendix 3

Flora taxa recorded

Edjudina Project

List of taxa, December 2024

Family	Scientific Name	Code	Notes
Amaranthaceae	<i>Ptilotus exaltatus</i>		
	<i>Ptilotus obovatus</i> var. <i>obovatus</i>		
	<i>Ptilotus polystachyus</i>		
Anacardiaceae	<i>Schinus molle</i> var. <i>areira</i>	Alien	Peppercorn
Asteraceae	<i>Brachyscome ciliaris</i>		
	<i>Centaurea melitensis</i> *	Alien	Maltese cockspur
	<i>Cratystylis subspinescens</i>		
Casuarinaceae	<i>Casuarina pauper</i>		
Chenopodiaceae	<i>Atriplex nummularia</i>		
	<i>Atriplex vesicaria</i>		
	<i>Chenopodium gaudichaudianum</i>		
	<i>Eriochiton sclerolaenoides</i>		
	<i>Maireana brevifolia</i>		
	<i>Maireana georgei</i>		
	<i>Maireana pyramidata</i>		
	<i>Maireana sedifolia</i>		
	<i>Maireana trichoptera</i>		
	<i>Maireana triptera</i>		
	<i>Rhagodia eremaea</i>		
	<i>Salsola australis</i>		
	<i>Sclerolaena diacantha</i>		
	<i>Sclerolaena eriacantha</i>		
<i>Sclerolaena obliquicuspis</i>			
Convolvulaceae	<i>Convolvulus remotus</i>		
Cucurbitaceae	<i>Citrullus amarus</i> *	Alien	Pie Melon, Bitter Melon
Euphorbiaceae	<i>Euphorbia drummondii</i>		
Fabaceae	<i>Acacia aneura</i>		
	<i>Acacia aptaneura</i>		
	<i>Acacia burkittii</i>		
	<i>Acacia caesaneura</i>		
	<i>Acacia hemiteles</i>		
	<i>Acacia jennerae</i>		
	<i>Acacia minyura</i>		
	<i>Acacia oswaldii</i>		
	<i>Acacia ramulosa</i> var. <i>ramulosa</i>		
	<i>Acacia tetragonophylla</i>		
	<i>Glycine canescens</i>		
	<i>Senna artemisioides</i> subsp. <i>filifolia</i>		
<i>Senna artemisioides</i> subsp. <i>x artemisioides</i>			

Family	Scientific Name	Code	Notes
Fabaceae	<i>Senna cardiosperma</i>		
	<i>Senna charlesiana</i>		
	<i>Senna glaucifolia</i>		South end of range
Goodeniaceae	<i>Goodenia</i> sp.		? <i>G. rosea</i> ; dried off
	<i>Scaevola spinescens</i>		
Gyrostemonaceae	<i>Codonocarpus cotinifolius</i>		
Lamiaceae	<i>Salvia verbenaca</i> *	Alien	Wild Sage
	<i>Teucrium disjunctum</i>		
Loranthaceae	<i>Amyema benthamii</i>		Host <i>Brachychiton gregorii</i>
	<i>Lysiana casuarinae</i>		Host <i>Casuarina pauper</i>
	<i>Lysiana murrayi</i>		Host <i>Acacia aneura</i>
Malvaceae	<i>Abutilon cryptopetalum</i>		
	<i>Brachychiton gregorii</i>		
	<i>Sida calyxhymenia</i>		
	<i>Sida ectogama</i>		
	<i>Sida intricata</i>		
Montiaceae	<i>Calandrinia eremaea</i>		
Pittosporaceae	<i>Pittosporum angustifolium</i>		
Poaceae	<i>Aristida contorta</i>		
	<i>Austrostipa ?platychaeta</i>		
	<i>Austrostipa elegantissima</i>		
	<i>Austrostipa scabra</i>		
	<i>Austrostipa</i> sp.		Grazed off or young plants
	<i>Enneapogon caerulescens</i>		
	<i>Eragrostis dielsii</i>		
	<i>Eriachne pulchella</i> subsp. <i>pulchella</i>		
	<i>Iseilema membranaceum</i>		Young plants; tentative ID
Proteaceae	<i>Hakea preissii</i>		
	<i>Hakea recurva</i> subsp. <i>arida</i>		
Pteridaceae	<i>Cheilanthes sieberi</i>		
Rutaceae	<i>Philotheca brucei</i> subsp. <i>brucei</i>		
Sapindaceae	<i>Alectryon oleifolius</i> subsp. <i>canescens</i>		
	<i>Dodonaea lobulata</i>		
Scrophulariaceae	<i>Eremophila alternifolia</i> var. <i>alternifolia</i>		
	<i>Eremophila forrestii</i> subsp. <i>forrestii</i>		
	<i>Eremophila glabra</i> subsp. <i>glabra</i>		
	<i>Eremophila granitica</i>		
	<i>Eremophila latrobei</i> subsp. <i>latrobei</i>		
	<i>Eremophila miniata</i>		

Family	Scientific Name	Code	Notes
Scrophulariaceae	<i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i>		
	<i>Eremophila pantonii</i>		
	<i>Eremophila pustulata</i>		
Solanaceae	<i>Solanum cleistogamum</i>		
	<i>Solanum lasiophyllum</i>		
	<i>Solanum nigrum</i> *	Alien	Blackberry Nightshade
Zygophyllaceae	<i>Roepera aurantiaca</i> subsp. <i>aurantiaca</i>		
	<i>Tribulus astrocarpus</i>		Range extension, south; few plants in flower

Appendix 4

Fauna habitat site descriptions

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ1	Date 2/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Scattered low trees	% veg cover: 50-75	Habitat quality: G to VG	Habitat description: Acacia shrubland	
Mid stratum Open shrubland	Position: Lower slope	Fire history: Long unburnt		
Lower stratum Tussock grass land / s	Aspect: North	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Flood plain				

Vegetation description: _____ **Corresponding veg/flora site:** _____

Site photo



Fauna observed:
White-winged fairy wren, Australian hobby; old cattle scats

Observations/Comments:
High percentage of grasses in the understorey - no recent grazing. Close to Yarri Rd and former Yarri townsite. Possibly historically cleared. Recovering from drought and grazing.

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ2	Date 2/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Scattered low trees	% veg cover: 25-50	Habitat quality: Degraded	Habitat description: Acacia woodland (Historic disturbance)	
Mid stratum Open shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Open tussock grassla	Landform: Stony plain	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter
			% cover:	25-50 0-25

Vegetation description:

Corresponding veg/flora site:

Site photo



Fauna observed:
Kangaroo scats; White-winged fairy wren

Observations/Comments:
Central area of survey area. High historic disturbance, likely fully cleared in the past. Historic ruins likely to provide habitat for reptiles and small mammals.

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ3	Date 2/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Scattered trees	% veg cover: 25-50	Habitat quality: Good (man made)	Habitat description: Water hole (Historic dam)	
Mid stratum Open shrubland	Position: Lower slope	Fire history: Long unburnt		
Lower stratum Open tussock grassla	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 0-25 0-25
Landform: Flood plain				

Vegetation description:

Corresponding veg/flora site:

Site photo



Fauna observed:
Kangaroo tracks; bronzewing pigeon; zebra finch; welcome swallow; crested pigeon; tadpoles

Observations/Comments:
Possibly an historic constructed dam in an ephemeral drainage line. Source water. Large sheoaks provide nesting and shelter. High weed abundance.

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ4	Date 2/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Open woodland	% veg cover: 25-50	Habitat quality: G - VG	Habitat description: Drainage line	
Mid stratum Open shrubland	Position: Lower slope	Fire history: Long unburnt		
Lower stratum Open tussock grassla	Aspect: North	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 0-25 0-25

Vegetation description: _____ **Corresponding veg/flora site:** _____

Site photo



Fauna observed:
Crested pigeon; kangaroo scats

Observations/Comments:
Trees and larger shrubs provide nesting and feeding habitat for a variety of birds. Shelter for kangas

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ5	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Low open woodland	% veg cover: 25-50	Habitat quality: VG	Habitat description: Acacia woodland	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Stony plain				

Vegetation description: _____ **Corresponding veg/flora site:** _____

Site photo



Fauna observed:
crow/raven; Australian hobby; weiros; brown falcon; white-winged fairy wren

Observations/Comments:
Small patches. Trees and larger shrubs provide nesting and feeding habitat for a variety of birds. Shelter for kangas. Understorey regenerating. No recent evidence of grazing. A lot of historic rubbish

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ6	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Low open woodland	% veg cover: 25-50	Habitat quality: VG	Habitat description: Acacia woodland	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Stony plain				

Vegetation description: _____ **Corresponding veg/flora site:** _____



Fauna observed:
bronzewing pigeon, butcher bird, budgies

Observations/Comments:
Small patches. Trees and larger shrubs provide nesting and feeding habitat for a variety of birds. Shelter for kangas. Understorey regenerating. No recent evidence of grazing. A lot of historic rubbish

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ7	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Low open woodland	% veg cover: 25-50	Habitat quality: VG	Habitat description: Acacia/Sheoak woodland	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Stony plain				

Vegetation description: _____ **Corresponding veg/flora site:** _____

Site photo



Fauna observed:
zebra finch; red-backed kingfisher; budgies; crested pigeon; welcome swallow

Observations/Comments:
Small patches. Trees and larger shrubs provide nesting and feeding habitat for a variety of birds. Shelter for kangas. Understorey regenerating. No recent evidence of grazing. A lot of historic rubbish

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ8	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Low open woodland	% veg cover: 25-50	Habitat quality: G - VG	Habitat description: Acacia/Sheoak woodland	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Stony plain				

Vegetation description:

Corresponding veg/flora site:

Site photo



Fauna observed:

zebra finch + nest, budgies

Observations/Comments:

Small patches. Trees and larger shrubs provide nesting and feeding habitat for a variety of birds. Shelter for kangas. Understorey regenerating. No recent evidence of grazing. A lot of historic rubbish

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ9	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Scattered trees	% veg cover: 25-50	Habitat quality: G - VG	Habitat description: Acacia/Sheoak woodland	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Rocky outcrop / breakaway				

Vegetation description:

Corresponding veg/flora site:

Site photo



Fauna observed:
zebra finch; white-backed fairy wren

Observations/Comments:
Evidence of having been historically heavily grazed. Recovering now with a variety of grasses present (evidence of no grazing)

Fauna Habitat Data Sheet

Project GRD Edjudina Project	Site ID EDJ10	Date 3/12/2024	Observer J Shepherdson	
Vegetation: Upper stratum Scattered trees	% veg cover: 75-100	Habitat quality: VG	Habitat description: Drainage line	
Mid stratum Shrubland	Position: Mid slope	Fire history: Long unburnt		
Lower stratum Annuals/Herbs	Aspect: East	Soil type: CL	Surface cover type: Pebbles/stones (0-50mm) Leaf litter	% cover: 25-50 0-25
Landform: Drainage line				

Vegetation description: _____ **Corresponding veg/flora site:** _____

Site photo



Fauna observed:
zebra finch

Observations/Comments:
same as previous creek comments